IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of:
DONALD J.P. PINTO ET AL.

Appln. No.: $10 / 245,122$
Filed: September 17, 2002
For: LACTAM-CONTAINING COMPOUNDS
AND DERIVATIVES THEREOF AS
FACTOR XA INHIBITORS
U.S. Patent No.: 6,967,208 B2

Issued: November 22, 2005

Examiner: B. Kifle
Group Art Unit: 1624
Confirmation No.: 6870
)
)

May 13, 2008

Commissioner for Patents
P.O. Box 1450

Alexandria, VA 22313-1450

## REQUEST FOR EXPEDITED ISSUANCE OF CERTIFICATE

OF CORRECTION UNDER M.P.E.P. 1480.01 AND RULE 322

Sir:
It is respectfully requested that a Certificate of Correction be issued by the
Patent and Trademark Office in an expedited manner in accordance with the attached Certificate of Correction Form PTO-1050. All errors in the printed patent for which the correction is requested are a result of Patent and Trademark Office mistakes.

To expedite review, Patentees note that it appears that most of the Patent and Trademark Office errors identified in the attached Form PTO-1050 resulted from printing the claims filed on November 19, 2003, rather than the claims filed on September 22, 2004, which
were subsequently allowed by the Examiner. Also, the printed patent does not reflect the information from (i) the petition to request correction of inventorship submitted on October 8, 2004 and subsequently granted by the Office Communication of August 17, 2005; and (ii) the amendment to the specification submitted on September 16, 2004 and subsequently entered by the Examiner.

In support of this expedited request, as required by M.P.E.P. 1480.01,
Patentees submit herewith copies of the following documents:

1. Amendment filed November 19, 2003
2. Amendment filed September 16, 2004
3. Amendment filed September 22, 2004
4. Petition and Fee Deleting Correctly Named Persons Who are Not Inventors of Invention Now Being Claimed (Under 37 C.F.R. § 1.48(b)) filed October 8, 2004
5. Notice of Allowance mailed October 13, 2004
6. Office Communication confirming deletion of inventors mailed August 17, 2005.

Patentees' undersigned attorney may be reached in our New York office by
telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,
/Jason M. Okun/
Jason M. Okun
Attorney for Patentees
Registration No. 48,512

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# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION 

PATENT NO. : US 6,967,208 B2
DATED : November 22, 2005
INVENTOR(S) : DONALD J. P. PINTO ET AL.
Page 1 of 17
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

ON THE TITLE PAGE [75]:
Inventors, "Yun-Long Li, Wilmington DE (US); Wei Han, Yardley, PA (US);" should be deleted.

## COLUMN 174:

Line 24, "piperidinyl)phenyl-4,5,6,7-tetrahydro-1H-pyrazole-" should read --piperidinyl)phenyl]-4,5,6,7-tetrahydro-1H- --;
Line 25, "[3,4-c]pyridine-3-caboxamide" should read --pyrazolo[3,4-c]pyridine-3-caboxamide--;

Line 47, "CDCl3" should read --CHCl ${ }_{3}--$; and
Line 49, "CDCl3" should read -- $\mathrm{CHCl}_{3}-$ -

## COLUMN 175:

Line 29, "1-(4-meyhoxyphenyl)-" should read --1-(4-methoxyphenyl)- --.

## COLUMN 237:

Lines 15-20, "


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Page 2 of 17
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:
$M_{1}$, and $M_{2}$, is substituted with $0-2 R^{1 a}$ and is


Lines 22-23, "ring $M$, including $P^{1}, P_{2}$, and $M_{1}$, and $M_{2}$ is substituted with $0-2 R^{1 a}$ and is" should be deleted;

$"$ should read --ring $P$, including $P_{1}, P_{2}$, and $P_{3}$,
is


Line 33, "ring $P$, including $P_{1}, P_{2}$, and $P_{3}$, is" should be deleted; and
Line 34, " $P_{4}$ is $-G_{1}-G$;" should read -- $M_{4}$ is -A -B;

$$
\mathrm{P}_{4} \text { is }-\mathrm{G}_{1}-\mathrm{G} ;--.
$$

$\qquad$
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# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION 

PATENT NO. : US 6,967,208 B2
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Page 3 of 17
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

COLUMN 238:
Line 1, "S(O) ${ }^{\mathrm{p}}$," should read --S(O) ${ }_{\mathrm{P}},--$;
Line 33, "6 4-8 membered" should read --6 membered--; and
Line 34 , " $0-2$ double bonds are" should read --0 double bond is--.

## COLUMN 239:

Line 18, " $\mathrm{NR}^{2 \mathrm{c}}(\mathrm{O}) \mathrm{NHR}^{2}$," should read -- $\mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NHR}^{2},--$.

## COLUMN 241:

Line 27, " $\left(\mathrm{CR}_{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{Cl}$," should read -- $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{Cl},--$

## COLUMN 242:

Line 21, "6;" should read --6; and--.

## COLUMN 243:

Line 30, " ${ }_{\mathrm{CH}} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$," should read -- $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$,--;
Line 38, " ${ }_{\mathrm{CH}} 2 \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$," should read -- $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$,--; and Line 62, "benzyl" should read --benzyl,--.

## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : US 6,967,208 B2
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Page 4 of 17
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

COLUMN 244:
Line 10, "benzyl phenyl;" should read --benzyl, and phenyl;--; and
Line 51, "alkyl $\mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}$," should read --alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}$,--.
COLUMN 246:
Lines 20-30,"


## COLUMN 248:



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PATENT NO. : US 6,967,208 B2
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Page 5 of 17
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

COLUMN 249:

Lines 5-10, "



Lines 15-20, "



Lines 25-30, "N


Line 35,


Line 65, "



## COLUMN 251:

Lines 15-20, "


## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : US 6,967,208 B2
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Page 6 of 17
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:


Lines 25-30, "


## COLUMN 252:

The first row should read --



Line 35, "



## COLUMN 253:

Line 41, "1-4 hetero " should read --1-4 hetero- --.

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION 

PATENT NO. : US 6,967,208 B2
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INVENTOR(S) : DONALD J. P. PINTO ET AL.
Page 7 of 17
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

## COLUMN 254:

Line 3, " $\mathrm{R}^{4 a \text { " }}$ should read --R $\mathrm{R}^{4 \mathrm{a}},--$; and
Line 24, " $\mathrm{C}(\mathrm{O}) \mathrm{R}^{\mathrm{c}}$ " should read --C(O) $\mathrm{R}^{2 \mathrm{c}}-\mathrm{-}$.

## COLUMN 255:



Line 65, "



## COLUMN 256:




## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : US 6,967,208 B2
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Page 8 of 17
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 15,


Lines 20-25,



Line 65, "

" should read --


COLUMN 258:

Line 5, "


Line 25, "



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PATENT NO. : US 6,967,208 B2
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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

## COLUMN 259:

Line 67, " $\mathrm{CH}_{2} \mathrm{c}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}$," should be deleted.

## COLUMN 261:



COLUMN 262:
Line 34, "and is" should read --and is:--;
Line 35, "selected from the group:" should be deleted;

Lines 43-53, "


" should be deleted.


MAILING ADDRESS OF SENDER:
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PATENT NO. : US 6,967,208 B2
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Page 10 of 17
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

COLUMN 263:
Line 38, " $\mathrm{S}(\mathrm{O})_{p}$-phenyl" should read --S(O) $)_{2}$-phenyl---; and
Line 43, " $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2} \mathrm{a}$." should read -- $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$.--.

## COLUMN 265:

Lines 20-25,"



Line 30, "is selected from:" should read --is--;

Line 35, "
 should be deleted; and

Line 66, "phenyl-4,5,6,7-tetrahydro-1H-pyrazole-[3,4-c]" should read --phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo-[3,4-c]--.

COLUMN 266:
Lines 21-23, "1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetra hydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide," should be deleted;

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PATENT NO. : US 6,967,208 B2
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Page 11 of 17
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Lines 27-29, "1-(4-methoxyphenyl)-6-(4-(2-oxo-1(2H)-pyridinyl)phenyl]-3-(2-pyridinyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;" should be deleted;
Lines 40-42, "1-(3-chlorophenyl)-7-oxo-6-[4-(2-oxo-1(2H)pyridinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide," should be deleted;
Lines 49-51, "1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetra hydro-1H-pyrazolo[3,4-c]pyridine-3-carbonitrile;" should be deleted;
Lines 58-60, "1-(2,3-dihydro-1H-indol-6-yl)-6-[4-(2-oxo-1(2H)-
pyridinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;" should be deleted; and
Lines 65-67, "1-(2,3-dihydro-1H-isoindol-5-yl)-6-[4-(2-oxo-2H-pyridin-
1-yl)phenyl]-3-trifluoromethyl-1,4,5,6-tetrahydropyrazolo[3,4-c]pyridin-7-one;" should be deleted.

## COLUMN 267:

Lines 4-15, "ethyl 1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl) phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxylate; 1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c] pyridine-3-carboxylic acid; 1-(4-methoxyphenyl)-N,N-dimethyl-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide; N -(\{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl) phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridin-3-yl\} carbonyl)methanesulfonamide;" should be deleted;

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PATENT NO. : US 6,967,208 B2
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Page 12 of 17
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Lines 19-25, "1-(4-methoxyphenyl)-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-3-(1H-tetraazol-5-yl)-1,4,5,6,-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one; 3-\{4-[dimethylamino)methyl]-1,3-oxazol-2-yl\}-1-(4-methoxyphenyl)-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-1,4,5,6,-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;" should be deleted;
Lines 32-40, "1-(4-methoxy-phenyl)-3-(4-methyl-oxazol-2-yl)-6-
[4-(2-oxo-2H-1-pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo [3,4-c]pyridin-7-one; 3-acetyl-1-(4-methoxy-phenyl)-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c] pyridin-7-one; 3-(4,5-dihydro-1H-imidazol-2-yl)-1-(4-methoxy-phenyl)-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-1,4,5,6-
tetrahydro-pyrazolo[3,4-c]pyridin-7-one;" should be deleted;
Lines 51-53, "3-hydroxymethyl-1-(4-methoxy-phenyl)-6-[4-(2-oxo-
2H-pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-
pyrazolo[3,4-c]pyridin-7-one;" should be deleted;
Lines 57-59, "3-(1-hydroxy-1-methyl-ethyl)-1-(4-methoxy-phenyl)-6-[4-
(2-oxo-2H-pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo
[3,4-c]pyridin-7-one;" should be deleted;
Line 61, "(2-oxopiperidin-1-yl)phenyl]-4,5,6,7-tetrahydro-1H-" should read --(2-oxo-piperidin-1-yl)phenyl]-4,5,6,7-tetrahydro-1H- --; and
Lines 65-67, "2-dimethylamino-N-\{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c] pyridin-3-ylmethyl $\}$ acetamide;" should be deleted.

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PATENT NO. : US 6,967,208 B2
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Page 13 of 17
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

COLUMN 268:
Line 1, "N-\{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxopiperidin-1-" should read --N-\{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-piperidin-1- --;
Line 4, "N-\{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxopiperidin-1-" should read --N-\{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-piperidin-1- --;
Lines 7-12, "N-hydroxy-3-\{7-oxo-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-3-
trifluoromethyl-4,5,6,7-tetrahydro-pyrazolo[3,4-c]
pyridin-1-yl $\}$-benzamidine; N-methoxy-3-\{7-oxo-6-[4-
(2-oxo-2H-pyridin-1-yl)-phenyl]-3-trifluoromethyl-4,5,6,7-
tetrahydro-pyrazolo[3,4-c]pyridin-1-yl\}-benzamidine;"
should be deleted;
Line 14, "piperidinyl)phenyl]-4,5,6,7-tetrahydro-pyrazolo[3,4-c]" should read --piperidinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]--;
Lines 22-27, " 2 -\{7-oxo-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-3-
trifluoromethyl-4,5,6,7-tetrahydro-pyrazolo[3,4-c]pyridin-
1 -yl \}-benzenesulfonamide; N -acetyl-2-\{7-oxo-6-[4-(2-oxo-
2H-pyridin-1-yl)-phenyl]-3-trifluoromethyl-4, 5,6,7-
tetrahydro-pyrazolo[3,4-c]pyridin-1-yl $\}$-benzenesulfonamide;"
should be deleted;
Line 30, "4-c]pyridin-7-one; should read --4-c]pyridin-7-one; and--;
Lines 31-33, "1-(3-chloro-phenyl)-3-methanesulfonyl-6-[4-(2-oxo-2H-
pyridin-1-yl)-phenyl]- 1,4,5,6-tetrahydro-pyrazolo[3,4-c]
pyridin-7-one;" should be deleted;
Line 36, "and," should be deleted; and
Lines 37-39, "3-\{7-oxo-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-3-trifluoromethyl-
4,5,6,7-tetrahydro-pyrazolo[3,4-c]pyridin-1-yl\}-benzamide;"
should be deleted.

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PATENT NO. : US 6,967,208 B2
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Page 14 of 17
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

COLUMN 269:
Line 4, "phenyl-4,5,6,7-tetrahydro-1H-pyrazole-[3,4-c]" should read --phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]--.
Lines 7-12, claim 14 should be deleted; and
Lines 25-43, claims 17 to 19 should be deleted.

## COLUMN 270:

Lines 9-12, claim 28 should be deleted; and
Lines 21-32, claims 31 to 33 should be deleted.

## COLUMN 273:

Lines $16-45$, claims 62 to 68 should be deleted.

## COLUMN 274:

Line 23, "arterial, embolism," should read --arterial embolism,--;
Lines 38-67, claims 83 to 89 should be deleted.
COLUMNS 275-276:
Lines 1-32 and 1-30, respectively, claims 90 to 103 should be deleted.

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION 

PATENT NO. : US 6,967,208 B2
DATED : November 22, 2005
INVENTOR(S) : DONALD J. P. PINTO ET AL.
Page 15 of 17
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

COLUMN 276:
Line 31, add claims 104 to 118 as follows:
--104 . A compound according to claim 13 is a crystalline compound.
105. A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of claim 104.
106. A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of claim 104.
107. A method according to claim 106, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.
108. A method according to claim 106, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION 

PATENT NO. : US 6,967,208 B2
DATED : November 22, 2005
INVENTOR(S) : DONALD J. P. PINTO ET AL.
Page 16 of 17
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:
109. A method according to claim 108, wherein the thromboembolic disorder is an acute coronary syndrome.
110. A method according to claim 108, wherein the thromboembolic disorder is stroke.
111. A method according to claim 108 , wherein the thromboembolic disorder is deep vein thrombosis.
112. A method according to claim 108, wherein the thromboembolic disorder is pulmonary embolism.
113. A process for the preparation of the crystalline compound according to claim 104, comprising recrystallization from isopropyl alcohol or $\mathrm{CH}_{2} \mathrm{Cl}_{2} / \mathrm{EtOAc}$.
114. A process for the preparation of the crystalline compound according to claim 104, comprising recrystallization from isopropyl alcohol.
115. A process for the preparation of the crystalline compound according to claim 104, comprising recrystallization from $\mathrm{CH}_{2} \mathrm{Cl}_{2} / \mathrm{EtOAc}$.
116. A compound according to claim 104 is prepared by a process comprising recrystallization from isopropyl alcohol or $\mathrm{CH}_{2} \mathrm{Cl}_{2} / \mathrm{EtOAc}$.
117. A compound according to claim 104 is prepared by a process comprising recrystallization from isopropyl alcohol.
118. A compound according to claim 104 is prepared by a process

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Page 17 of 17
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:
comprising recrystallization from $\mathrm{CH}_{2} \mathrm{Cl}_{2} / \mathrm{EtOAc}$.--.
 nited States Fatcin
P.O. Box 1450
P.O. Box 1450
Alexundria, Virginia 22313-1450
www.uspto.gov


Please find below and/or attached an Office communication concerning this application or proceeding.

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| APPLICATION NO.I <br> CONTROL NO. | FILING DATE | FIRST NAMED INVENTOR I <br> PATENT IN REEXAMINATION | ATTORNEY DOCKET NO. |
| :--- | :--- | :--- | :--- |

EXAMINER

| ART UNIT | PAPER |  |
| :--- | :--- | :---: |
| 20050816 |  |  |

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

## Commissioner for Patents

In view of the papers filed 10/08/04, the inventorship in this nonprovisional application has been changed by the deletion of Wei Han and Yun-Long Li.

The application will be forwarded to the Office of Initial Patent Examination (OIPE) for issuance of a corrected filing receipt, and correction of Office records to reflect the inventorship as corrected.


# NOTICE OF ALLOWANCE AND FEE(S) DUE 

$\quad 24348 \quad 7540$
BRISTOL-MYERS SQUIBB COMPANY
PATENT DEPARTMENT
P.O. BOX 4000
PRINCETON, NJ $08543-4000$


DATE MALED: 10/13/2004

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO) |
| :---: | :---: | :---: | :---: | :---: |
| $10 / 245,122$ | $09 / 17 / 2002$ | Donald J.P. Pinto | PH-7398 | 6870 |

TITLE OF INVENTION: LACTAM-CONTAINING COMPOUNDS AND DERIVATIVES THEREOF AS FACTOR XA INHIBITORS

| APPLN TYPE | SMALL ENTITY | ISSUE FEE | PUBLICATIONFEF | TOTAL FER(S) DLE | DATE DLE |
| :---: | :---: | :---: | :---: | :---: | :---: |
| nonprovisional | NO | $\$ 40$ | $\$ 0$ | $\$ 40$ | $01 / 13 / 2005$ |

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON IHE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.
THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WTTHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEF IS DUE OR THE APPLICATION WIII, BE REGARDED AS ABANDONED.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:
A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.
B. If the status above is to be removed, check box $5 b$ on Part B Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:
A. Pay TOTAL FEE(S) DUE shown above, or
B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5 a on Part B - Feers) Transmittal and pay the PUBLICATION FEE (if required) and $1 / 2$ the ISSUE FEE shown above.
II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. If you are charging the fee(s) to your deposit account, section " 4 b " of Part B - Fcc(s) Transmittal should be completed and an extra copy of the form should be submitted.
III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

Page 1 of 4
PTOL-85 (Rcv. 09/04) Approved for use through 04/30/2007.

## PART B - FEE(S) TRANSMITTAL

## Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSLE FEE <br> Commissioner for Patents <br> P.O. Box 1450 <br> Alexandria, Virginia 22313-1450 <br> or Eax (703) 746-4000

INSTRUCTIONS: This form should be used for transmiting the ISSUE FFE and PUBLICATION FFE (if requircd). Rlocks I through S should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be maited to the curent conrespondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address: and'or (b) indicating a separate "FEE ADDRESS" for
mainenance fee notifications.
CI:RRFNT CORRESPONDFNCFADNRFSS (Note: INE Rlock I for any change of addres; $\quad$ Note: A cerificate of mailing can only be used for domestic mailings of the
24378 7590 10:13/2004
BRISTOL-MYERS SQUIBB COMPANY
PATENT DEPARTMENT
P.O. BOX 4000
PRINCETON, NJ $08543-4000$
papers. Each additional paper, such as an assignment or formal drawing, musi have its own certificate of mailing or transmission.

## Certificate of Mailing or Transmission

hereby certify that this Fee(s) Transmiftal is being deposited with the United Statcs Postal Scrvice with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the LSPTO (703) 746.4000, on the date indicated below.

$\square$ (Depositor's name) |  | (Signature) |
| ---: | ---: |
| (Date) |  |


| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| :---: | :---: | :---: | :---: | :---: |
| $10 / 245,122$ | $09 / 17 / 2002$ | Donald J.P. Pinto | PII-7398 | 6870 |

TITLE OF INVENTION: LACTAM-CONTAINING COMPOUNDS AND DERIVATIVES TIIEREOF AS FACTOR XA INIHBITORS

| APPLN. TYPE | SMALL ENTITY | ISSUE FEE |  | PUBLICATION FEE | TOTAL | FEE(S) DUE | DATE DUF: |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| nonprovisional NO |  | \$40 |  | \$0 |  | \$40 | 01/13/2005 |
| EXAMINER |  | ART UNIT |  | CLASS-SUBClASS |  |  |  |
| KIFLE, BRUCK |  | 1624 |  | 514-212080 |  |  |  |
| 1. Change of enrrespondence address or indication of "Fec Address" (37 CFR 1.363). Change of correspondence address (or Change of Correspondence Address form PTO/SR/122) attached. <br> $\square$ "Fec Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required. |  |  | 2. For printing on the patent front page, list <br> (i) the names of up to 3 registered patent attomeys or agents OR, alternatively. |  |  |  |  |

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or typc)

PLEASE NOTE: Unless an assignee is identified bolow, no assignce data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing atriassignment.
(A) NAME OF ASSIGNEE
(B) RESIDENCE: (CITY and STATEOR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : $\square$ Individual Corporation or other private group entity $\square$

| 4a. The following fee(s) are enclosed: |
| :--- |
| $\square$ Issuc Fee |
| $\square$ Publication Fce (No small entity discount permitted) |
| $\square$ Advance Order - \# of Copies |
| 5. Change in Entity Status (from status indicated above) |
| $\square$ a. Applicant claims SMALL ENTITY status. Sce 37 CFR 1.27. |

The Director of the USPTO is requested to apply the Issuc Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above. NOTE: The Issue Fcc and Publication Fce (ifrequired) will not be accepted from anyone other than the applicant; a registered attomey or agent; or the assignce or other party in interest as shown by the records of the United States Patent and Trademark Office.


Date $\qquad$
Typed or printed name $\qquad$ Registration No $\qquad$
This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by $35 \mathrm{US} . \mathrm{C}$. 122 and 37 CFR 1.14 . This collection is estimated to take F minutes to complete, including gathering, preparing, and submiting the completed application fonm to the USPTO. Tine will vay depending upon the individual case. Any counincits on the amount of time you require to complate submiting the conpleted application fonin to the USPTO. Tink will var y depending upuntic individual case. Any counicits on the amount of time you require to completc
this form andor suggestions for reducing this burden, should be sent to the Chief Infomation Office, U.S. Patent and Trademark Office, U.S. Department of Commerce, P. O . Box 1450 , Alexandna, Virginia 22313-1450. DO NOT SFND FEFS OR COMPLFTED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450 , Alcxandria, Virginia 22313-1450.
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

United States Patent and Trademark Office


DATE MAILED: 10/13/2004

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

United States Patent and Trademark Office

> UNITEDSTATES DEPARTMENT OF COMMERCE United States Patent and Traderaark Ofice Addess: COMMISSIONER FOR PATFVI'S PO Box 1450 Alcxadria Viginia $22313-1450$ Wwwiupro gov

| APPLICATION NO. | FHING: DATE | FIRST NAMED INVEVTOR | AITORNEY CAKKET NO. | CONFIRMATION NO. |
| :---: | :---: | :---: | :---: | :---: |
| 10/245,122 | $09 / 172002$ | Donald J.P. Pinto | P11-7398 | 6870 |
| 24348 | 7590 10/13 |  | EXAMINER |  |
| BRISTOL-MYERS SQUIBB COMPANY |  |  | KIFLE: BRUCK |  |
| PATENT DEPARTMENT |  |  |  |  |
| P.O. BOX 4000 |  |  | ART UNIT | PAPER NUMBER |
| PRINCETON, NJ 08543-4000 |  |  | 1624 |  |

## Notice of Fee Increase on October 1, 2004

If a reply to a "Notice of Allowance and Fee(s) Due" is filed in the Office on or after October 1, 2004, then the amount due will be higher than that set forth in the "Notice of Allowance and Fee(s) Due" because some fees will increase effective October 1, 2004. See Revision of Patent Fees for Fiscal Year 2005; Final Rule, 69 Fed. Reg. 52604, 52606 (May 10, 2004).

The current fee schedule is accessible from WEB site (http://www.uspto.gov/main/howtofees.htm).
If the fee paid is the amount shown on the "Notice of Allowance and Fee(s) Due" but not the correct amount in view of the fee increase, a "Notice of Pay Balance of Issue Fee" will be mailed to applicant. In order to avoid processing delays associated with mailing of a "Notice of Pay Balance of Issue Fee," if the response to the Notice of Allowance is to be filed on or after October 1, 2004 (or mailed with a certificate of mailing on or after October 1, 2004), the issue fee paid should be the fee that is required at the time the fee is paid. See Manual of Patent Examining Procedure (MPEP), Section 1306 (Eighth Edition, Rev. 2, May 2004). If the issue fee was previously paid, and the response to the "Notice of Allowance and Fee(s) Due" includes a request to apply a previously-paid issue fee to the issue fee now due, then the difference between the issue fee amount at the time the response is filed and the previously-paid issue fee should be paid. See MPEP Section 1308.01.

Effective October $1,2004,37$ CFR 1.18 is amended by revising paragraphs (a) through (c) to read as set forth below.
Section 1.18 Patent post allowance (including issue) fees.
(a) Issue fee for issuing each original or reissue patent, except a design or plant patent:

By a small entity (Sec. 1.27(a))...................... $\$ 685.00$
By other than a small entity......................... $\$ 1,370.00$
(b) Issue fee for issuing a design patent:

By a small entity (Sec. 1.27(a))...................... \$245.00
By other than a small entity............................ $\$ 490.00$
(c) Issue fee for issuing a plant patent:

By a small entity (Sec. 1.27(a))...................... $\$ 330.00$
By other than a small entity............................ $\$ 660.00$

Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication al (703) 305-8283.

.- The MAILING DATE of this communication appears on the cover sheet with the correspondence address-All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. $\triangle$ This communication is responsive to amendments filed $9 / 16 / 04$ and $9 / 22 / 04$.
2. $\boxtimes$ The allowed claim(s) is/are 1-8,16-19,31,33,34,38-45,47,48,52-79,87-100 and 122-136.
3. $\square$ The drawings filed on $\qquad$ are accepted by the Examiner.
4. $\square$ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) $\square$ All All b) $\square$ Some* c)None of the:$\square$ Certified copies of the priority documents have been received.Certified copies of the priority documents have been received in Application No. $\qquad$ .
3.Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: $\qquad$ -.
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. $\square$ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. $\square$ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
(a) $\square$ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) $\square$ hereto or 2) $\square$ to Paper No./Mail Date $\qquad$
(b) $\square$ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date $\qquad$ _.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7.DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.
Attachment(s)
1. $\square$ Notice of References Cited (PTO-892)
2. $\square$ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. $\square$ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No/Mail Date
4. $\square$ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5.Notice of Informal Patent Application (PTO-152)
$6 . \square$Interview Summary (PTO-413), Paper No./Mail Date $\qquad$ .
7.Examiner's Amendment/Comment
8.Examiner's Statement of Reasons for Allowance 9.
$\qquad$ Other $\qquad$ .


under 37 CFR § 1.17 which may be required, or credit any overpayment, to Account No.
19-3880 in the name of Bristol-Myers Squibb Company.

Early notification of such action is earnestly solicited.

Date: October 8, 2004
Respectfully submitted,


- Bristol-Myers SquibbCompany

Patent Department

- P.O. Box 4000
- Princeton, NJ 08543-4000
(609) 252-3791 (phone) (609) 252-4526 (fax)



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: D. Pinto et al. Examiner: Kiffe, B.

Serial No.: 10/245,122
Filed:

Group Art Unit: 1624
Confirmation No. 6870
For: LACTAM-CONTAINING COMPOUNDS AND DERIVATIVES THEREOF AS

## FACTOR KA INHIBITORS

Mailstop: Amendment
Commissioner for Patents
P.O. Box 1450

Alexandria, VA 22313-1450
Dear Sir:

## SUPPLEMENTAL AMENDMENT

Applicants respectfully request entry of the following amendments to supplement the amendments filed September 16, 2004.

Amendment to the Specification begins on page 2 of this paper.

Amendments to the Claims are represented by the listing of claims which begins on page 3 of this paper.

Remarks begin on page. 58 of this paper.

## AMENDMENT

Subject matter to be added is in bold and underlined.
Subject matter to be deleted is in bold and strikethrough.

On page 2, amendment to the specification of September 16, 2004:

Please amend Example 89:

The title compound was made in Part A of Example 27. High Resolution Mass Spec (M+H)+ for $\mathrm{C}_{27} \mathrm{H}_{25} \mathrm{~N}_{4} \mathrm{O}_{5} 485.1827$.

## Amendment

USSN: 10/245,122

## In the Claims:

Please enter new claims 134-136 as follows.

This listing of claims will replace all prior versions and listings of claims in the application.

## Listing of Claims:

Claim 1. (Previously presented) A compound of Formula I:


I
or a stereoisomer or pharmaceutically acceptable salt thereof, wherein;
ring $M$, including $P_{1}, P_{2}, M_{1}$, and $M_{2}$, is substituted with $0-2 R^{1 a}$ and is

ring $P$, including $P_{1}, P_{2}$, and $P_{3}$, is

$\mathrm{M}_{4}$ is $-\mathrm{A}-\mathrm{B}$;
$P_{4}$ is $-G_{1}-G ;$

DOCKET NO.: PH-7398
Amendment
USSN: 10/245,122
G is a group of Formula IIa or IIb:


IIa


IIb
ring $D$, including the two atoms of Ring $E$ to which it is attached, is a 5-6 membered ring consisting of: carbon atoms and 0-2 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
ring $D$ is substituted with $0-2 R$ and there are $0-3$ ring double bonds;

E is selected from phenyl, pyridyl, pyrimidyl, pyrazinyl, and pyridazinyl, and is substituted with 1-2 R;
alternatively, ring $D$ is absent and ring $E$ is selected from phenyl, pyridyl, pyrimidyl, pyrazinyl, pyridazinyl, pyrrolyl, pyrazolyl, imidazolyl, isoxazolyl, oxazolyl, triazolyl, thienyl, and thiazolyl, and ring E is substituted with 1-2 R;
alternatively, ring $D$ is absent and ring $E$ is selected from phenyl, pyridyl, pyrimidyl, pyrazinyl, pyridazinyl, pyrrolyl, pyrazolyl, imidazolyl, isoxazolyl, oxazolyl, triazolyl, thienyl, and thiazolyl, and ring E is substituted with 1 R and with a 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, wherein the 5-6 membered heterocycle is substituted with 0-1 carbonyl and $1-2 \mathrm{R}$ and there are $0-3$ ring double bonds;

R is selected from $\mathrm{H}, \mathrm{C}_{1-4}$ alkyl, $\mathrm{F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I}, \mathrm{OH}, \mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{OCH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CN}, \mathrm{C}\left(=\mathrm{NR}^{8}\right) \mathrm{NR}^{7} \mathrm{R}^{9}$, $\mathrm{NHC}\left(=\mathrm{NR}^{8}\right) \mathrm{NR}^{7} \mathrm{R}^{9}, \mathrm{ONHC}\left(=\mathrm{NR}^{8}\right) \mathrm{NR}^{7} \mathrm{R}^{9}$, $\mathrm{NR}^{8} \mathrm{CH}\left(=\mathrm{NR}^{7}\right), \mathrm{NH}_{2}, \mathrm{NH}\left(\mathrm{C}_{1-3}\right.$ alkyl $), \mathrm{N}\left(\mathrm{C}_{1-3} \text { alkyl }\right)_{2}, \mathrm{C}(=\mathrm{NH}) \mathrm{NH}_{2}, \mathrm{CH}_{2} \mathrm{NH}_{2}$, $\mathrm{CH}_{2} \mathrm{NH}\left(\mathrm{C}_{1-3}\right.$ alkyl $, \mathrm{CH}_{2} \mathrm{~N}\left(\mathrm{C}_{1-3} \text { alkyl }\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{NH}_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{NH}\left(\mathrm{C}_{1-3}\right.$ alkyl),
$\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{~N}\left(\mathrm{C}_{1-3} \text { alkyl }\right)_{2},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{C}(\mathrm{O}) \mathrm{H},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}$, $\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{NR}^{7} \mathrm{R}^{8}$, $\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{h}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{7} \mathrm{R}^{8},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{l}} \mathrm{NR}^{7} \mathrm{C}(\mathrm{O}) \mathrm{R}^{7},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{OR}^{3},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{NR}^{7} \mathrm{R}^{8}$, $\left(C R^{8} R^{9}\right)_{t} N R^{7} S(O)_{p} R^{7},\left(C R^{8} R^{9}\right)_{t} S R^{3},\left(C R^{8} R^{9}\right)_{t} S(O) R^{3},\left(C R^{8} R^{9}\right)_{t} S(O)_{2} R^{3}$, and $O C F_{3} ;$
alternatively, when 2 R groups are attached to adjacent atoms; they combine to form methylenedioxy or ethylenedioxy;

A is selected from:
$\mathrm{C}_{3-10}$ carbocycle substituted with $0-2 \mathrm{R}^{4}$;


A-X-N moiety forms other than a $\mathrm{N}-\mathrm{N}-\mathrm{N}$ group;
$\mathrm{Q}_{1}$ is $\mathrm{C}=\mathrm{O}$;
ring Q is a 6 membered monocyclic ring, wherein:
0 double bond is present within the ring and the ring is substituted with $0-2 \mathrm{R}^{4 \mathrm{a}}$;

X is absent;
$\mathrm{G}_{1}$ is absent or is selected from $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{1-5},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{0-2} \mathrm{CR}^{3}=\mathrm{CR}^{3}\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{0-2}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{0-2} \mathrm{C} \equiv \mathrm{C}\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{0-2},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{O}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$,
$\left(C R^{3} R^{3 a}\right)_{u} O C(O)\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} O\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} N^{3 b}\left(C R^{3} R^{3 a}\right)_{w}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{N}^{3 \mathrm{~b}} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{OC}(\mathrm{O}) \mathrm{N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{N}^{3 \mathrm{~b}} \mathrm{C}(\mathrm{O}) \mathrm{O}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{N}^{3 \mathrm{~b}} \mathrm{C}(\mathrm{O}) \mathrm{N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{N}^{3 \mathrm{~b}} \mathrm{C}(\mathrm{S}) \mathrm{N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$,

## Amendment

USSN: 10/245,122
$\left(C R^{3} R^{3 a}\right)_{u} S\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} S(O)\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} S(O)_{2}\left(C R^{3} R^{3 a}\right)_{w}$,
$\left(C R^{3} R^{3 a}\right)_{u} S(O) N^{3 b}\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} N^{3 b} S(O)_{2}\left(C R^{3} R^{3 a}\right)_{w}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{S}(\mathrm{O})_{2} \mathrm{~N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{N}^{3 \mathrm{~b}} \mathrm{~S}(\mathrm{O})_{2} \mathrm{~N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$,
$\left(C R^{3} R^{3 a}\right)_{u} N R^{3 e}\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} C(O)\left(C R^{3} R^{3 a}\right)_{u} C(O)\left(C R^{3} R^{3 a}\right)_{w}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{NR}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{u}} \mathrm{NR}^{3 \mathrm{~b}} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{w}}$,
$\left(C^{3} R^{3 a}\right)_{u} C(O)\left(C R^{3} R^{3 a}\right)_{u} C(O) N R^{3 b}\left(C^{3} R^{3 a}\right)_{w}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{NR}^{3 \mathrm{~b}} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{w}}$,
$\left(C R^{3} R^{3 a}\right)_{u} S(O) N R^{3 b} C(O)\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} C(O) N R^{3 b} S(O)_{2}\left(C R^{3} R^{3 a}\right)_{w}$, and $\left.\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{S}(\mathrm{O})_{2} \mathrm{NR}^{3 b} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3 b} \mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$, wherein $\mathrm{u}+\mathrm{w}$ total $0,1,2,3$, or 4 , provided that $\mathrm{G}_{1}$ does not form an $\mathrm{N}-\mathrm{S}, \mathrm{NCH}_{2} \mathrm{~N}, \mathrm{NCH}_{2} \mathrm{O}$, or $\mathrm{NCH}_{2} \mathrm{~S}$ bond with either group to which it is attached;
$R^{1 a}$, at each occurrence, is selected from $H,-\left(C R^{3} R^{3 a}\right)_{-}-R^{1 b},-\left(C R^{3} R^{3 a}\right)_{r^{2}}-C^{3} R^{1 b} R^{1 b}$,
 $-\left(C^{3} R^{3 a}\right)_{r}-C\left(=N R R^{1 b}\right) N R^{3} R^{1 b}, N R^{3} C R^{3} R^{3 a} R^{1 c}, O C R{ }^{3} R^{3 a R}{ }^{1 c}, S C R^{3} R^{3 a} R^{1 c}$, $N^{3}\left(C R^{3} R^{3 a}\right)_{2}\left(C R^{3} R^{3 a}\right)_{t} R^{1 b}, C(O) N R^{2}\left(C R^{3} R^{3 a}\right)_{2}\left(C R^{3} R^{3 a}\right)_{t} R^{1 b}$, $\mathrm{CO}_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{t} \mathrm{R}^{1 \mathrm{~b}}, \mathrm{O}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{t}} \mathrm{R}^{1 \mathrm{~b}}, \mathrm{~S}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{t}} \mathrm{R}^{1 \mathrm{~b}}$, $S(O)_{p}\left(C R^{3} R^{3 a}\right)_{r} R^{1 d}, O\left(C R^{3} R^{3 a}\right)_{r} R^{1 d}, N R^{3}\left(C R^{3} R^{3 a}\right)_{r} R^{1 d}, O C(O) N R^{3}\left(C R^{3} R^{3 a}\right)_{r} R^{1 d}$, $N R^{3} C(O) N R^{3}\left(C R^{3} R^{3 a}\right)_{r} R^{1 d}, N R^{3} C(O) O\left(C R^{3} R^{3 a}\right)_{r} R^{1 d}$, and $N R^{3} C(O)\left(C R^{3} R^{3 a}\right)_{r} R^{1 d}$, provided that $\mathrm{R}^{\text {la }}$ forms other than an N -halo, $\mathrm{N}-\mathrm{S}, \mathrm{O}-\mathrm{O}$, or $\mathrm{N}-\mathrm{CN}$ bond;
alternatively, when two $R^{\text {la }}$ groups are attached to adjacent atoms, together with the atoms to which they are attached they form a 5-7 membered ring consisting of: carbon atoms and $0-2$ heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, this ring being substituted with $0-2 R^{4 b}$ and $0-3$ ring double bonds;
$\mathrm{R}^{1 \mathrm{~b}}$ is selected from $\mathrm{H}, \mathrm{C}_{1-3}$ alkyl, $\mathrm{F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I},-\mathrm{CN},-\mathrm{NO}_{2},-\mathrm{CHO},\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{OR}^{2}$,

$$
\mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{~b}}, \mathrm{OC}(\mathrm{O}) \mathrm{R}^{2},\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}
$$ $\mathrm{C}\left(=\mathrm{NR}^{2 \mathrm{c}}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NHR}^{2}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O})_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{OC}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{2}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{2}, \mathrm{C}_{3-6}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and 5-10 membered heterocycle consisting of carbon atoms and from 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, provided that $\mathrm{R}^{\mathbf{1 b}}$ forms other than an $\mathrm{O}-\mathrm{O}, \mathrm{N}$-halo, $\mathrm{N}-\mathrm{S}$, or $\mathrm{N}-\mathrm{CN}$ bond;

$\mathrm{R}^{1 \mathrm{c}}$ is selected from $\mathrm{H}, \mathrm{CH}\left(\mathrm{CH}_{2} \mathrm{OR}^{2}\right)_{2}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O}) \mathrm{R}^{2}, \mathrm{~S}(\mathrm{O})_{2} \mathrm{R}^{2}$, and $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}} ;$
$R^{1 d}$ is selected from $C_{3-6}$ carbocycle substituted with $0-2 R^{4 b}$ and $5-10$ membered heterocycle consisting of carbon atoms and from 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, provided that $\mathrm{R}^{1 \mathrm{~d}}$ forms other than an N-S bond;
$\mathrm{R}^{2}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{C}_{1-6}$ alkyl, benzyl, $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{C}_{3-10}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}$-5-10 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with 0-2 $R^{4 b}$;
$\mathrm{R}^{2 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{C}_{1-6}$ alkyl, benzyl, $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{C}_{3-10}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}$-5-10 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 \mathrm{R}^{4 b}$;

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alternatively, $\mathrm{R}^{2}$ and $\mathrm{R}^{2 \mathrm{a}}$, together with the atom to which they are attached, combine to form a 5 or 6 membered saturated, partially saturated or unsaturated ring substituted with $0-2 R^{4 b}$ and consisting of: $0-1$ additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{2 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{C}_{1-4}$ alkoxy substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}, \mathrm{C}_{1-6}$ alkyl substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}},-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{C}_{3}-10$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and $-\left(\mathrm{CH}_{2}\right)_{r}$-5-10 membered heterocycle consisting of: carbon atoms and $1-4$ heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 R^{4 b}$;
$\mathrm{R}^{2 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{OH}, \mathrm{C}_{1-4}$ alkoxy, $\mathrm{C}_{1-6}$ alkyl, $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{C}_{3-10}$ carbocycle substituted with $0-2 \mathrm{R}^{4 b}$, and $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-5-10$ membered heterocycle containing from 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$;
$\mathrm{R}^{3}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, and phenyl;
$\mathrm{R}^{3 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, and phenyl;
alternatively, $\mathrm{R}^{3}$ and $\mathrm{R}^{3 a}$, together with the nitrogen atom to which they are attached, combine to form a 5 or 6 membered saturated, partially unsaturated, or unsaturated ring consisting of: carbon atoms, the nitrogen atom to which $\mathrm{R}^{3}$ and $\mathrm{R}^{3 a}$ are attached, and 0-1 additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{3 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{C}_{1-6}$ alkyl substituted with $0-2 \mathrm{R}^{\mathrm{la}}, \mathrm{C}_{2-6}$ alkenyl substituted with 0-2 $\mathrm{R}^{1 \mathrm{a}}, \mathrm{C}_{2-6}$ alkynyl substituted with $0-2 \mathrm{R}^{1 \mathrm{a}}$,

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-( $\mathrm{C}_{0-4}$ alkyl)-5-10 membered carbocycle substituted with 0-3 $\mathrm{R}^{\text {la }}$, and -( $\mathrm{C}_{0-4}$ alkyl)-5-10 membered heterocycle substituted with $0-3 \mathrm{R}^{1 \mathrm{a}}$ and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{3 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, and phenyl;
$\mathrm{R}^{3 \mathrm{~d}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}_{1-4}$ alkyl-phenyl, and $\mathrm{C}(=\mathrm{O}) \mathrm{R}^{3 \mathrm{c}}$;
$\mathrm{R}^{3 \mathrm{e}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{SO}_{2} \mathrm{NHR}^{3}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{NHR}^{3}$, $\mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{f}}, \mathrm{S}(\mathrm{O}) \mathrm{R}^{3 \mathrm{f}}, \mathrm{S}(\mathrm{O})_{2} \mathrm{R}^{3 \mathrm{f}}, \mathrm{C}_{1-6}$ alkyl substituted with $0-2 \mathrm{R}^{\text {la }}, \mathrm{C}_{2-6}$ alkenyl substituted with 0-2 $R^{1 a}, C_{2-6}$ alkynyl substituted with 0-2 $R^{1 a},-\left(\mathrm{C}_{0-4}\right.$ alkyl)-5-10 membered carbocycle substituted with 0-3 R ${ }^{1 a}$, and -( $\mathrm{C}_{0}$-4 alkyl)-5-10 membered heterocycle substituted with $0-3 \mathrm{R}^{\text {la }}$ and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$R^{3 f}$, at each occurrence, is selected from: $C_{1-6}$ alkyl substituted with $0-2 R^{1 a}, C_{2-6}$ alkenyl substituted with 0-2 $R^{1 a}, C_{2-6}$ alkynyl substituted with 0-2 $R^{1 a}$, -( $\mathrm{C}_{0-4}$ alkyl)-5-10 membered carbocycle substituted with 0-3 $\mathrm{R}^{\mathrm{Ia}}$, and -( $\mathrm{C}_{0-4}$ alkyl)-5-10 membered heterocycle substituted with 0-3 $\mathrm{R}^{\text {la }}$ and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{4}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I}, \mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{CN},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r}} \mathrm{NO}_{2}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 b},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}\left(=\mathrm{NR}^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r}} \mathrm{C}\left(=\mathrm{NS}(\mathrm{O})_{2} R^{5}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$,

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$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NHC}\left(=\mathrm{NR}^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NHC}\left(=\mathrm{NR}^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, (CR $\left.{ }^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{5},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}}\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3}, \mathrm{NHCH}_{2} \mathrm{R}^{1 \mathrm{c}}$, $\mathrm{OCH}_{2} \mathrm{R}^{\mathrm{lc}}, \mathrm{SCH}_{2} \mathrm{R}^{\mathrm{lc}}, \mathrm{NH}\left(\mathrm{CH}_{2}\right)_{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{t}} \mathrm{R}^{\mathrm{lb}}, \mathrm{O}\left(\mathrm{CH}_{2}\right)_{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{t}} \mathrm{R}^{\mathrm{lb}}, \mathrm{S}\left(\mathrm{CH}_{2}\right)_{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{R}} \mathrm{R}^{\mathrm{lb}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r}}-5-6$ membered carbocycle substituted with $0-1 \mathrm{R}^{5}$, and a $\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r}}-5-6$ membered heterocycle consisting of: carbon atoms and $1-4$ heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{p}$, and substituted with $0-1 \mathrm{R}^{5}$;
$R^{4 a}$, at each occurrence, is selected from $H,=O,\left(C R^{3} R^{3 a}\right)_{r} O R^{2},\left(C R^{3} R^{3 a}\right)_{r} F,\left(C R^{3} R^{3 a}\right)_{r} B r$, $\left(C R^{3} R^{3 a}\right)_{\Gamma} C l, C_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} R^{3 a}\right)_{r} C N,\left(C R^{3} R^{3 a}\right)_{\Gamma} \mathrm{NO}_{2},\left(C R^{3} R^{3 a}\right)_{\Gamma} \mathrm{NR}^{2} R^{2 a}$, $\left(C R^{3} R^{3 a}\right)_{r} C(O) R^{2 c},\left(C R^{3} R^{3 a}\right)_{r} N R^{2} C(O) R^{2 b},\left(C R^{3} R^{3 a}\right)_{r} C(O) N R^{2} R^{2 a}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{N}=\mathrm{CHOR}^{3},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NH}\left(\mathrm{CH}_{2}\right)_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}{ }^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(C R^{3} R^{3 a}\right)_{r} \mathrm{C}\left(=N R^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NHC}\left(=\mathrm{NR}^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, (CR $\left.{ }^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}\left(\mathrm{O}_{2}\right) \mathrm{NHSO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right) \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{5}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}}\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}}-5-6$ membered carbocycle substituted with $0-1 R^{5}$, and a $\left(C R^{3} R^{3 a}\right)_{r}-5-6$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with 0-1 $R^{5}$;
$\mathrm{R}^{4 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{3},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{F},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{Cl},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{Br}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{I}, \mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{CN},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NO}_{2},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}}$ - $\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, and $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3}$;

## Amendment

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$R^{4 c}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{C}_{1-4}$ alkyl $\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{r 1} \mathrm{OR}^{2},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r}} \mathrm{F}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r} 1} \mathrm{Br},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r}} \mathrm{Cl},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r} 1} \mathrm{CN},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r}} \mathrm{NO}_{2},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{r_{1}} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(C R^{3} R^{3 a}\right)_{r} C(O) R^{2 c},\left(C R^{3} R^{3 a}\right)_{r 1} N R^{2} C(O) R^{2 b},\left(C R^{3} R^{3 a}\right)_{r} C(O) N R^{2} R^{2 a}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{~N}=\mathrm{CHOR}^{3},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NH}\left(\mathrm{CH}_{2}\right)_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(C^{2} R^{3 a}\right)_{r 1} C\left(=N R^{2}\right) N R^{2} R^{2 a},\left(C R^{3} R^{3 a}\right)_{r 1} N H C\left(=N R^{2}\right) N R^{2} R^{2 a},\left(C R^{3} R^{3 a}\right)_{r} S O_{2} N R^{2} R^{2 a}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{NR}^{2} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NHSO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{5},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}$, $\left(C R^{3}{ }^{3}{ }^{3 a}\right)_{r}\left(C F_{2}\right)_{r} C F_{3},\left(C R^{3} R^{3 a}\right)_{r}-5-6$ membered carbocycle substituted with 0-1 $R^{5}$, and a $\left(C R^{3} R^{3 a}\right)_{r}-5-6$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with 0-1 $R^{5}$;
$\mathrm{R}^{5}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{C}_{1-6}$ alkyl, $=\mathrm{O},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I},-\mathrm{CN}, \mathrm{NO}_{2}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}$, $\left.\left(\mathrm{CH}_{2}\right)\right)_{\mathrm{C}}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{33},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}_{( }(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right) \mathrm{CH}\left(=\mathrm{NOR}^{3 \mathrm{~d}}\right)$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3}$, phenyl substituted with $0-2 \mathrm{R}^{6}$, naphthyl substituted with $0-2 R^{6}$, and benzyl substituted with $0-2 R^{6}$;
$\mathrm{R}^{5 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{C}_{1-6}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{3},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3}$, phenyl substituted with $0-2 R^{6}$, naphthyl substituted with $0-2 R^{6}$, and benzyl substituted with $0-2$ $\mathrm{R}^{6}$, provided that $\mathrm{R}^{5 \text { a }}$ does not form a $\mathrm{S}-\mathrm{N}$ or $\mathrm{S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}(\mathrm{O})$ bond;

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$\mathrm{R}^{6}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}$, halo, $\mathrm{C}_{1-4}$ alkyl, $\mathrm{CN}, \mathrm{NO}_{2}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(=\mathrm{NH}) \mathrm{NH}_{2}$, $\mathrm{NHC}(=\mathrm{NH}) \mathrm{NH}_{2}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, and $\mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{C}_{1-4}$ alkyl;
$\mathrm{R}^{7}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH}, \mathrm{C}_{1-6}$ alkyl, $\mathrm{C}_{1-6}$ alkyl- $\mathrm{C}(\mathrm{O})-, \mathrm{C}_{1-6}$ alkyl-O-, $\left(\mathrm{CH}_{2}\right)_{\mathrm{n}}$-phenyl, $\mathrm{C}_{1-4}$ alkyl- $\mathrm{OC}(\mathrm{O})$-, $\mathrm{C}_{6-10}$ aryl-O-, $\mathrm{C}_{6-10}$ aryl- $\mathrm{OC}(\mathrm{O})$-, $\mathrm{C}_{6-10}$ aryl- $\mathrm{CH}_{2}-\mathrm{C}(\mathrm{O})-, \mathrm{C}_{1-4}$ alkyl-C(O)O- $\mathrm{C}_{1-4}$ alkyl- $\mathrm{OC}(\mathrm{O})$-, $\mathrm{C}_{6-10}$ aryl- $\mathrm{C}(\mathrm{O}) \mathrm{O}-\mathrm{C}_{1-4}$ alkyl- $\mathrm{OC}(\mathrm{O})_{-}, \mathrm{C}_{1-6}$ alkyl- $\mathrm{NH}_{2}-\mathrm{C}(\mathrm{O})-$, phenyl- $\mathrm{NH}_{2}-\mathrm{C}(\mathrm{O})$-, and phenyl- $\mathrm{C}_{1-4}$ alkyl-C(O)-;
$\mathrm{R}^{8}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{C}_{1-6}$ alkyl, and $\left(\mathrm{CH}_{2}\right)_{\mathrm{n}}$-phenyl;
alternatively, $R^{7}$ and $R^{8}$, when attached to the same nitrogen, combine to form a 5-10 membered heterocyclic ring consisting of carbon atoms and 0-2 additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{9}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{C}_{1-6}$ alkyl, and $\left(\mathrm{CH}_{2}\right)_{\mathrm{n}}$-phenyl;
n , at each occurrence, is selected from $0,1,2$, and 3 ;
p, at each occurrence, is selected from 0,1 , and 2 ;
r , at each occurrence, is selected from $0,1,2,3,4,5$, and 6 ;
r1, at each occurrence, is selected from $1,2,3,4,5$, and 6 ; and
t , at each occurrence, is selected from $0,1,2$, and 3 .

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Claim 2. (Previously presented) A compound according to Claim 1, wherein:

G is a group of Formula IIa or IIb:


Ia


IIb
ring D, including the two atoms of Ring E to which it is attached, is a $5-6$ membered ring consisting of: carbon atoms and 0-2 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
ring D is substituted with $0-2 \mathrm{R}$ and there are $0-3$ ring double bonds;

E is selected from phenyl, pyridyl, pyrimidyl, pyrazinyl, and pyridazinyl, and is substituted with 1-2 R;
alternatively, ring $D$ is absent, and ring $E$ is selected from phenyl, pyridyl, pyrimidyl, and thienyl, and ring E is substituted with 1-2 R;
alternatively, ring $D$ is absent, ring E is selected from phenyl, pyridyl, and thienyl, and ring $E$ is substituted with $1 R$ and substituted with a 5 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{p}$, wherein the 5 membered heterocycle is substituted with 0-1 carbonyl and 1-2 R and there are 0-3 ring double bonds;

R is selected from $\mathrm{H}, \mathrm{C}_{1-4}$ alkyl, $\mathrm{F}, \mathrm{Cl}, \mathrm{OH}, \mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CN}, \mathrm{C}(=\mathrm{NH}) \mathrm{NH}_{2}$, $\mathrm{C}(=\mathrm{NH}) \mathrm{NHOH}, \mathrm{C}(=\mathrm{NH}) \mathrm{NHOCH}_{3}, \mathrm{NH}_{2}, \mathrm{NH}\left(\mathrm{C}_{1-3}\right.$ alkyl $), \mathrm{N}\left(\mathrm{C}_{1-3} \text { alkyl }\right)_{2}, \mathrm{C}(=\mathrm{NH}) \mathrm{NH}_{2}$,
$\mathrm{CH}_{2} \mathrm{NH}_{2}, \mathrm{CH}_{2} \mathrm{NH}\left(\mathrm{C}_{1-3}\right.$ alkyl $), \mathrm{CH}_{2} \mathrm{~N}\left(\mathrm{C}_{1-3} \text { alkyl }\right)_{2},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{NR}^{7} \mathrm{R}^{8}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{7} \mathrm{R}^{8}$, $\mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{7} \mathrm{R}^{8}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{NR}^{7} \mathrm{R}^{8}, \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{NR}^{7} \mathrm{R}^{8}, \mathrm{SO}_{2} \mathrm{R}^{3}$, and $\mathrm{OCF}_{3} ;$
alternatively, when 2 R groups are attached to adjacent atoms, they combine to form methylenedioxy or ethylenedioxy;

A is selected from:
$\mathrm{C}_{5-10}$ carbocycle substituted with $0-2 \mathrm{R}^{4}$;
$\mathrm{R}^{1 \mathrm{a}}$ is selected from $\mathrm{H},-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{R}^{1 \mathrm{~b}},-\left(\mathrm{CH}\left(\mathrm{CH}_{3}\right)\right)_{\mathrm{r}}-\mathrm{R}^{\mathrm{lb}},-\left(\mathrm{C}\left(\mathrm{CH}_{3}\right)_{2}\right)_{\mathrm{r}}-\mathrm{R}^{1 \mathrm{~b}}, \mathrm{NHCH}_{2} \mathrm{R}^{1 \mathrm{c}}, \mathrm{OCH}_{2} \mathrm{R}^{1 \mathrm{c}}$, $\mathrm{SCH}_{2} \mathrm{R}^{\mathrm{lc}}, \mathrm{NH}\left(\mathrm{CH}_{2}\right)_{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{t}} \mathrm{R}^{\mathrm{lb}}$, and $\mathrm{O}\left(\mathrm{CH}_{2}\right)_{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{t}} \mathrm{R}^{\mathrm{lb}}$, provided that $\mathrm{R}^{\text {la }}$ forms other than an N -halo, $\mathrm{N}-\mathrm{S}$, or $\mathrm{N}-\mathrm{CN}$ bond;
alternatively, when two R ${ }^{l a}$ groups are attached to adjacent atoms, together with the atoms to which they are attached they form a 5-7 membered ring consisting of: carbon atoms and $0-2$ heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, this ring being substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$ and 0-3 ring double bonds;
$\mathrm{R}^{1 \mathrm{~b}}$ is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I},-\mathrm{CN},-\mathrm{CHO}, \mathrm{CF}_{3}$, $\mathrm{OR}^{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{~b}}, \mathrm{OC}(\mathrm{O}) \mathrm{R}^{2}, \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{2}, \mathrm{NR}^{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}$, $\mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NHR}^{2}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O})_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{OC}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{C}(\mathrm{O}) \mathrm{NR}^{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{2}$,
$\mathrm{C}_{5-6}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and
5-6 membered heterocycle consisting of carbon atoms and from 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 R^{4 b}$, provided that $\mathrm{R}^{\mathrm{Ib}}$ forms other than an $\mathrm{O}-\mathrm{O}, \mathrm{N}$-halo, $\mathrm{N}-\mathrm{S}$, or $\mathrm{N}-\mathrm{CN}$ bond;
$\mathrm{R}^{1 \mathrm{c}}$ is selected from $\mathrm{H}, \mathrm{CH}\left(\mathrm{CH}_{2} \mathrm{OR}^{2}\right)_{2}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O}) \mathrm{R}^{2}, \mathrm{~S}(\mathrm{O})_{2} \mathrm{R}^{2}$, and $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}} ;$
$\mathrm{R}^{2}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, $\mathrm{C}_{5-6}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, a $\mathrm{C}_{5-6}$ carbocyclic- $\mathrm{CH}_{2}$-group substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$;
$\mathrm{R}^{2 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, C 5 -6 carbocycle substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$;
alternatively, $\mathrm{R}^{2}$ and $\mathrm{R}^{2 \mathrm{a}}$, together with the atom to which they are attached, combine to form a 5 or 6 membered saturated, partially saturated or unsaturated ring substituted with $0-2 R^{4 b}$ and consisting of: 0-1 additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{2 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{C}_{1-4}$ alkoxy, $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, $\mathrm{C}_{5-6}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 R^{4 b}$;
$\mathrm{R}^{2 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{OH}, \mathrm{C}_{1-4}$ alkoxy, $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, $\mathrm{C}_{5-6}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered heterocycle containing from 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 \mathrm{R}^{\mathbf{4 b}}$;
$\mathrm{R}^{3}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, and phenyl;
$\mathrm{R}^{3 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, and phenyl;
alternatively, $R^{3}$ and $R^{3 a}$, together with the nitrogen atom to which they are attached, combine to form a 5 or 6 membered saturated, partially unsaturated, or unsaturated ring consisting of: carbon atoms and the nitrogen atom to which $R^{3}$ and $R^{3 a}$ are attached;
$\mathrm{R}^{3 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, and phenyl;
$\mathrm{R}^{3 \mathrm{~d}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2}$-phenyl, $\mathrm{CH}_{2} \mathrm{CH}_{2}$-phenyl, and $\mathrm{C}(=\mathrm{O}) \mathrm{R}^{3 \mathrm{c}}$;
' $\mathrm{R}^{4}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{OR}^{2}, \mathrm{CH}_{2} \mathrm{OR}^{2},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I}$, $\mathrm{C}_{1-4}$ alkyl, $-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}$, $\mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}, \mathrm{CF}_{3}, \mathrm{CF}_{2} \mathrm{CF}_{3}, 5-6$ membered carbocycle substituted with 0-1 $\mathrm{R}^{5}$, and a 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with 0-1 $\mathrm{R}^{5}$;
$\mathrm{R}^{4 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{2} \mathrm{OR}^{2}, \mathrm{OR}^{2}, \mathrm{CH}_{2} \mathrm{~F}, \mathrm{~F}, \mathrm{CH}_{2} \mathrm{Br}, \mathrm{Br}, \mathrm{CH}_{2} \mathrm{Cl}$, $\mathrm{Cl}, \mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2}-\mathrm{CN},-\mathrm{CN}, \mathrm{CH}_{2} \mathrm{NO}_{2}, \mathrm{NO}_{2}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2}-\mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}$, $\mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{5},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{CF}_{3}, \mathrm{CF}_{3}$, $\mathrm{CH}_{2}$-5-6 membered carbocycle substituted with 0-1 $\mathrm{R}^{5}, 5-6$ membered carbocycle substituted with 0-1 $\mathrm{R}^{5}$, and a $\mathrm{CH}_{2}-5-6$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-1 \mathrm{R}^{5}$, and $5-6$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with 0-1 $R^{5}$;
$\mathrm{R}^{4 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}^{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{C}\left(\mathrm{CH}_{3}\right)_{3},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{CH}_{2}-\mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}$, $\mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}, \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}$, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}}$ - $\mathrm{C}_{1-4}$ alkyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{CF}_{3}$, and $\mathrm{CH}_{2}-\mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{CH}_{2} \mathrm{OR}^{2}, \mathrm{CH}_{2} \mathrm{~F}$, $\mathrm{CH}_{2} \mathrm{Br}, \mathrm{CH}_{2} \mathrm{Cl}, \mathrm{CH}_{2} \mathrm{CN}, \mathrm{CH}_{2} \mathrm{NO}_{2}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}$,

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$\mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{CH}_{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{C}(\mathrm{O}) \mathrm{NHSO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NHSO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{5}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{\mathrm{Sa}}$, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}, \mathrm{CF}_{3}, \mathrm{CH}_{2} \mathrm{CF}_{3}$, 5-6 membered carbocycle substituted with 0-1 $\mathrm{R}^{5}$, $\mathrm{CH}_{2}-5-6$ membered carbocycle substituted with $0-1 \mathrm{R}^{5}, 5-6$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-1 \mathrm{R}^{5}$, and a $\mathrm{CH}_{2}-5-6$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-1 \mathrm{R}^{5}$;
$\mathrm{R}^{5}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}$, $-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}$, $\mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}\left(=\mathrm{NOR}^{3 \mathrm{j}}\right), \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}$, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}}$ - $\mathrm{C}_{1-4}$ alkyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{CF}_{3}$, phenyl substituted with $0-2 R^{6}$, naphthyl substituted with $0-2 R^{6}$, and benzyl substituted with $0-2 R^{6}$; and,
$\mathrm{R}^{6}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{CN}, \mathrm{NO}_{2}$, $\mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{C}(=\mathrm{NH}) \mathrm{NH}_{2}, \mathrm{NHC}(=\mathrm{NH}) \mathrm{NH}_{2}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, and $\mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{C}_{\mathrm{l}-4}$ alkyl.

Claim 3. (Previously presented) A compound according to Claim 2, wherein;

G is selected from the group:











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$\mathrm{G}_{1}$ is absent or is selected from $\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{1-3},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{w}}$,
$\left(C R^{3} R^{3 a}\right)_{u} O\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} N R^{3 b}\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} C(O) N^{3 b}\left(C R^{3} R^{3 a}\right)_{w}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{NR}^{3 b} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{NR}^{3 b} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3 b}\left(\mathrm{CR}^{3} R^{3 a}\right)_{\mathrm{w}}$,

$\left(C R^{3} R^{3 a}\right)_{U} S(O) N^{3 b}\left(C R^{3} R^{3 a}\right)_{W},\left(R^{3} R^{3 a}\right)_{u} N R^{3 b} S(O)_{2}\left(C R^{3} R^{3 a}\right)_{W}$, and
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{S}(\mathrm{O})_{2} \mathrm{NR}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$, wherein $\mathrm{u}+\mathrm{w}$ total 0 , 1 , or 2 , provided that $\mathrm{G}_{1}$ does
not form a $\mathrm{N}-\mathrm{S}, \mathrm{NCH}_{2} \mathrm{~N}, \mathrm{NCH}_{2} \mathrm{O}$, or $\mathrm{NCH}_{2} \mathrm{~S}$ bond with either group to which it is attached;

A is phenyl substituted with $0-2 R^{4}$;
$\mathrm{R}^{\text {la }}$ is selected from $\mathrm{H}, \mathrm{R}^{\mathrm{lb}}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{R}^{\mathrm{lb}}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{2} \mathrm{R}^{\mathrm{lb}}, \mathrm{CH}_{2} \mathrm{R}^{\mathrm{lb}}$, and $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{R}^{\mathrm{Ib}}$, provided that $\mathrm{R}^{1 \mathrm{a}}$ forms other than an N -halo, $\mathrm{N}-\mathrm{S}$, or $\mathrm{N}-\mathrm{CN}$ bond;
alternatively, when two $\mathrm{R}^{1 \mathrm{a}}$ groups are attached to adjacent atoms, together with the atoms to which they are attached they form a 5-6 membered ring consisting of: carbon atoms and $0-2$ heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, this ring being substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$ and $0-3$ ring double bonds;
$\mathrm{R}^{1 \mathrm{~b}}$ is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br},-\mathrm{CN},-\mathrm{CHO}, \mathrm{CF}_{3}, \mathrm{OR}^{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 b}$, $\mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{~b}}, \mathrm{OC}(\mathrm{O}) \mathrm{R}^{2}, \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{2}, \mathrm{NR}^{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{2}$, phenyl substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle consisting of carbon atoms and from 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, provided that $\mathrm{R}^{1 \mathrm{~b}}$ forms other than an $\mathrm{O}-\mathrm{O}, \mathrm{N}$-halo, $\mathrm{N}-\mathrm{S}$, or $\mathrm{N}-\mathrm{CN}$ bond;
$\mathrm{R}^{2}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, phenyl substituted with $0-2 R^{4 b}$, a benzyl substituted with $0-2 R^{4 b}$, and a 5-6 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 R^{4 b}$;
$\mathrm{R}^{2 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 R^{4 b}$;
alternatively, $\mathrm{R}^{2}$ and $\mathrm{R}^{2 \mathrm{a}}$, together with the atom to which they are attached, combine to form a 5 or 6 membered saturated, partially saturated or unsaturated ring substituted with $0-2 R^{4 b}$
and consisting of: 0-1 additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{2 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{C}_{1-4}$ alkoxy, $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and $5-6$ membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$;
$\mathrm{R}^{2 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{OH}, \mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{OCH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle containing from 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 R^{4 b}$;
$\mathrm{R}^{4}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{2} \mathrm{OR}^{2},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{OR}^{2}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I}, \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CF}_{3}$, and $\mathrm{CF}_{2} \mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{2} \mathrm{OR}^{2}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Br}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{C}\left(\mathrm{CH}_{3}\right)_{3},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}} ; \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, and $-\mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{CH}_{2}-\mathrm{C}(\mathrm{O}) \mathrm{R}^{3}$, $\mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{CH}_{2}-\mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$,
$\mathrm{CH}_{2}-\mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}$, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}}$-phenyl, and $\mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{CH}_{2} \mathrm{OR}^{2}, \mathrm{CH}_{2} \mathrm{~F}$, $\mathrm{CH}_{2} \mathrm{Br}, \mathrm{CH}_{2} \mathrm{Cl}, \mathrm{CH}_{2} \mathrm{CN}, \mathrm{CH}_{2} \mathrm{NO}_{2}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}$, $\mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}, \mathrm{CF}_{3}$, phenyl substituted with $0-1 \mathrm{R}^{5}$, and benzyl substituted with $0-1 \mathrm{R}^{5}$;
$\mathrm{R}^{5}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{OR}^{3}$, $\mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 a}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3}{ }^{3}$, $\mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}, \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{CF}_{3}$, phenyl substituted with 0-2 $R^{6}$, naphthyl substituted with 0-2 $R^{6}$, and benzyl substituted with 0-2 $\mathrm{R}^{6}$; and,
$\mathrm{R}^{6}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}$, $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, and $\mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{C}_{1-4}$ alkyl.

Claim 4 (Previously presented) A compound according to Claim 3, wherein;
$G$ is selected from the group:









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## Amendment


















$\mathrm{G}_{1}$ is absent or is selected from $\mathrm{CH}_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2}, \mathrm{CH}_{2} \mathrm{O}, \mathrm{OCH}_{2}, \mathrm{NH}, \mathrm{CH}_{2} \mathrm{NH}, \mathrm{NHCH}_{2}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O})$, $\mathrm{C}(\mathrm{O}) \mathrm{CH}_{2}, \mathrm{C}(\mathrm{O}) \mathrm{NH}, \mathrm{NHC}(\mathrm{O}), \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{2}, \mathrm{~S}(\mathrm{O})_{2}\left(\mathrm{CH}_{2}\right), \mathrm{SO}_{2} \mathrm{NH}$, and $\mathrm{NHSO}_{2}$, provided that $\mathrm{G}_{1}$ does not form a $\mathrm{N}-\mathrm{S}, \mathrm{NCH}_{2} \mathrm{~N}, \mathrm{NCH}_{2} \mathrm{O}$, or $\mathrm{NCH}_{2} \mathrm{~S}$ bond with either group to which it is attached;
$\mathrm{R}^{1 \mathrm{a}}$ is selected from $\mathrm{H}, \mathrm{R}^{1 \mathrm{~b}}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{2} \mathrm{R}^{\mathrm{lb}}$, and $\mathrm{CH}_{2} \mathrm{R}^{\mathrm{lb}}$, provided that $\mathrm{R}^{\mathrm{la}}$ forms other than an N -halo, $\mathrm{N}-\mathrm{S}$, or $\mathrm{N}-\mathrm{CN}$ bond;
$\mathrm{R}^{1 \mathrm{~b}}$ is selected from $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br},-\mathrm{CN}, \mathrm{CF}_{3}, \mathrm{OR}^{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{~b}}$, $\mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{2}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{2}$, and 5-6 membered aromatic heterocycle consisting of carbon atoms and from 1-4 heteroatoms selected from the group

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consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 \mathrm{R}^{4 b}$, provided that $\mathrm{R}^{1 \mathrm{~b}}$ forms other than an $\mathrm{O}-\mathrm{O}, \mathrm{N}$-halo, $\mathrm{N}-\mathrm{S}$, or $\mathrm{N}-\mathrm{CN}$ bond;
$\mathrm{R}^{2}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, phenyl substituted with $0-1 \mathrm{R}^{4 \mathrm{~b}}$, benzyl substituted with $0-1 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-1 R^{4 b}$;
$\mathrm{R}^{2 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with $0-1 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-1 R^{4 b}$;
alternatively, $\mathbf{R}^{2}$ and $\mathbf{R}^{2 a}$, together with the atom to which they are attached, combine to form a 5 or 6 membered saturated, partially saturated or unsaturated ring substituted with $0-1 R^{4 b}$ and consisting of: 0-1 additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{2 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with $0-1 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-1 R^{4 b}$;
$\mathrm{R}^{2 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{OH}, \mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with $0-1 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle containing from 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-1 \mathrm{R}^{4 \mathrm{~b}}$;

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$\mathrm{R}^{4}$, at each occurrence, is selected from $\mathrm{OH}, \mathrm{OR}^{2}, \mathrm{CH}_{2} \mathrm{OR}^{2},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Br}, \mathrm{Cl}, \mathrm{I}, \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CF}_{3}$, and $\mathrm{CF}_{2} \mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{2} \mathrm{OR}^{2}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Br}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, and $\mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}$, $\mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, and $\mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, phenyl substituted with 0-1 $\mathrm{R}^{5}$, and benzyl substituted with 0-1 $R^{5}$;
$\mathrm{R}^{5}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{OR}^{3}$, $\mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}$ - $\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$ - $\mathrm{C}_{1-4}$ alkyl, $S(O)_{p}$-phenyl, $C F_{3}$, phenyl substituted with $0-2 R^{6}$, naphthyl substituted with $0-2 R^{6}$, and benzyl substituted with 0-2 $\mathrm{R}^{6}$; and,
$\mathrm{R}^{6}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}$, and $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$.

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Claim 5. (Previously presented) A compound according to Çlaim 4, wherein;
$G$ is selected from:






























A is selected from the group: phenyl, 2-Cl-phenyl, 3-Cl-phenyl, 2-F-phenyl, 3-F-phenyl, 2methylphenyl, 2-aminophenyl, and 2-methoxyphenyl;
$B$ is attached to a different atom on $A$ than $M$ and is:

$\mathrm{R}^{1 \mathrm{la}}$ is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{~F}, \mathrm{CH}_{2} \mathrm{Cl}, \mathrm{Br}, \mathrm{CH}_{2} \mathrm{Br},-\mathrm{CN}, \mathrm{CH}_{2} \mathrm{CN}$, $\mathrm{CF}_{3}, \mathrm{CH}_{2} \mathrm{CF}_{3}, \mathrm{OCH}_{3}, \mathrm{CH}_{2} \mathrm{OH}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{2} \mathrm{OH}, \mathrm{CH}_{2} \mathrm{OCH}_{3}, \mathrm{NH}_{2}, \mathrm{CH}_{2} \mathrm{NH}_{2}, \mathrm{NHCH}_{3}$, $\mathrm{CH}_{2} \mathrm{NHCH}_{3}, \mathrm{~N}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{~N}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CO}_{2} \mathrm{H}, \mathrm{COCH}_{3}, \mathrm{CO}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CO}_{2} \mathrm{CH}_{3}, \mathrm{SCH}_{3}$, $\mathrm{CH}_{2} \mathrm{SCH}_{3}, \mathrm{~S}(\mathrm{O}) \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O}) \mathrm{CH}_{3}, \mathrm{~S}(\mathrm{O})_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{2} \mathrm{CH}_{3}, \mathrm{C}(\mathrm{O}) \mathrm{NH}_{2}$,
$\mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NH}_{2}, \mathrm{SO}_{2} \mathrm{NH}_{2}, \mathrm{CH}_{2} \mathrm{SO}_{2} \mathrm{NH}_{2}, \mathrm{NHSO}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{NHSO}_{2} \mathrm{CH}_{3}$, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyridin-2-yl-N-oxide, pyridin-3-yl-N-oxide, pyridin-4-yl-Noxide, imidazol-1-yl, $\mathrm{CH}_{2}$-imidazol-1-yl, 4-methyl-oxazol-2-yl, 4-N,N-dimethylaminomethyl-oxazol-2-yl, 1,2,3,4-tetrazol-1-yl, 1,2,3,4-tetrazol-5-yl, $\mathrm{CH}_{2}{ }^{-}$ 1,2,3,4-tetrazol-1-yl, and $\mathrm{CH}_{2}$-1,2,3,4-tetrazol-5-yl, provided that $\mathrm{R}^{\text {la }}$ forms other than an N -halo, $\mathrm{N}-\mathrm{S}$, or $\mathrm{N}-\mathrm{CN}$ bond;
$\mathrm{R}^{2}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, phenyl substituted with $0-1 \mathrm{R}^{4 \mathrm{~b}}$, benzyl substituted with $0-1 \mathrm{R}^{4 \mathrm{~b}}$, and 5 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-1 R^{4 b}$;
$\mathrm{R}^{2 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}$, and $\mathrm{CH}_{2} \mathrm{CH}_{3}$;
alternatively, $\mathrm{R}^{2}$ and $\mathrm{R}^{2 \mathrm{a}}$, together with the atom to which they are attached, combine to form a 5 or 6 membered saturated, partially saturated or unsaturated ring substituted with $0-1 R^{4 b}$ and consisting of: $0-1$ additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{2 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{3}$, and $\mathrm{CH}_{2} \mathrm{CH}_{3}$;
$\mathrm{R}^{2 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{OH}, \mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{3}$, and $\mathrm{CH}_{2} \mathrm{CH}_{3}$;
$\mathrm{R}^{4 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}$, and $\mathrm{C}\left(\mathrm{CH}_{3}\right)_{3} ;$
$\mathrm{R}^{4 b}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{2} \mathrm{CH}_{3}, \mathrm{~S}(\mathrm{O})_{2}$-phenyl, and $\mathrm{CF}_{3}$;
$\mathrm{R}^{5}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 c}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{2}-\mathrm{CH}_{3}, \mathrm{~S}(\mathrm{O})_{2}$-phenyl, $\mathrm{CF}_{3}$, phenyl substituted with 0-2 $R^{6}$, naphthyl substituted with $0-2 R^{6}$, and benzyl substituted with $0-2 R^{6}$; and
$\mathrm{R}^{6}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 a}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 b}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 b}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 b}$, and $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 a}$.

Claim 6. (Previously presented) A compound according to Claim 5, wherein the compound is:

$P_{4}$ is -G;
$G$ is selected from:

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and,

A-B is selected from:



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Claim 7. (Previously presented) A compound according to Claim 6, wherein:
$\mathrm{A}-\mathrm{B}$ is

8. (Previously presented) A compound according to Claim 1, wherein the compound is selected from the group:

3-methoxy-1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-1,4,5,6-tetrahydro-7-H-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-3-[(methylamino)methyl]-6-[4-(2-oxo-1-piperidinyl)phenyl]-1,4,5,6-tetrahydro- 7 H -pyrazolo[3,4-c]pyridin-7-one;

1-(3-chloro-4-fluorophenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro- 7 H -pyrazolo[3,4-c]pyridine-7-one;

1-[3-(aminomethyl)-4-fluorophenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridine-7-one;

1-(3-amino-1,2-benzisoxazol-5-yl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridine-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro$7 H$-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carbonitrile;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(1 H -tetraazol-5-yl)-1,4,5,6-tetrahydro- $7 H$-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro- 1 H -pyrazolo[3,4-c]pyridine-3-carboxamide;

3-bromo-1-(4-methoxyphenyl)-6-[4-(2-oxo-1-pipcridinyl) phenyl]1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(4-pyridinyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(4-pyridinyl-N-oxide)-1,4,5,6-tetrahydro- 7 H -pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(3-pyridinyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(3-pyridinyl-N-oxide)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(2-pyridinyl)-1,4,5,6-tetrahydro-7 H -pyrazolo[3,4-c]-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl) phenyl] 1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

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1-(4-methoxyphenyl)-3-(methylsulfonyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

1-[3-(aminomethyl)phenyl]-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro- 7 H -pyrazolo $3,4-c$ ]pyridin- 7 -one;

3-17-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridin-1-yl]benzamide;

1-(3-chlorophenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(3-chlorophenyl)-N,N-dimethyl-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro1 H -pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(3-chloro-4-fluorophenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro- 1 H -pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(3-amino-1H-indazol-5-yl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(3-amino-1,2-benzisoxazol-5-yl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro1 H -pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(2,3-dihydro-1 H -indol-6-yl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro- 7 H -pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-3-(2-pyrrolidin-1-ylmethyl-phenyl)-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

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 USSN: 10/245,1221-(4-hydroxy-phenyl)-7-oxo-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxylic acid amide;

3-\{4-[dimethylamino)methyl]-1,3-oxazol-2-yl\}-1-(4-methox yphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-1,4,5,6,-tetrahydro-7 H -pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxy-phenyl)-3-(4-methyl-oxazol-2-yl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxy-phenyl)-3-(1-methyl-4,5-dihydro-1H-imidazol-2-yl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxy-phenyl)-3-(1-methyl-1H-imidazol-2-yl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxy-phenyl)-3-methyl-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

3-(1-hydroxy-1-methyl-ethyl)-1-(4-methoxy-phenyl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydropyrazolo[3,4-c]pyridin-7-one;

2-dimethylamino- N - $\{1$-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-piperidin-1-yl)phenyl]-4,5,6,7-tetrahydro- 1 H -pyrazolo[3,4-c]pyridin-3-ylmethyl $\}$ - N -methylacetamide;
$N$ - \{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-piperidin-1-yl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridin-3-ylmethyl\}-2-pyridin-2-yl-acetamide;
$N$-\{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-piperidin-1-yl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridin-3-ylmethyl \}-2-(1-oxypyridin-2-yl)acetamide;

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1-(3-cyano-4-fluorophenyl-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(3-aminomethyl-4-fluoro-phenyl)-7-oxo-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxylic acid amide;

2-\{7-oxo-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-3-trifluoromethyl-4,5,6,7-tetrahydro-pyrazolo[3,4-c]pyridin-1-yl\}-benzenesulfonamide;

1-(3-chloro-phenyl)-3-methanesulfonyl-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one; and

1-(3-chloro-phenyl)-3-(1-hydroxy-1-methyl-cthyl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;
or a pharmaceutically acceptable salt form thereof.

Claims 9-15 (Previously canceled)

Claim 16. (Original) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 1 or a pharmaceutically acceptable salt form thereof.

Claim 17. (Original) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 1 or a pharmaceutically acceptable salt form thereof.

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Claim 19. (Original) A method according to Claim 17, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claims 20-30 (Previously canceled)

Claim 31. (Previously presented) A compound according to Claim 8, wherein the compound is:

1-(4-methox yphenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide
or a pharmaceutically acceptable salt form thereof.

Claim 32. (Canceled)

Claim 33. (Previously presented) A compound according to Claim 8, wherein the compound is:

1-(4-methoxyphenyl)-3-(methylsulfonyl)-6-[4-(2-oxo-1-piperidinyl)phenyl] 1,4,5,6-tetrahydro$7 H$-pyrazolo[3,4-c]pyridin-7-one
or a pharmaceutically acceptable salt form thereof.

Claim 34. (Previously presented) A compound according to Claim 8, wherein the compound is:

1-(3-chlorophenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1 H -
pyrazolo[3,4-c]pyridine-3-carboxamide
or a pharmaceutically acceptable salt form thereof.

Claims 35-37. (Canceled)

Claim 38. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 2 or a pharmaceutically acceptable salt form thereof.

Claim 39. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 3 or a pharmaceutically acceptable salt form thereof.

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Claim 40. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 4 or a pharmaceutically acceptable salt form thereof.

Claim 41. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 5 or a pharmaceutically acceptable salt form thereof.

Claim 42. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 6 or a pharmaceutically acceptable salt form thereof.

Claim 43. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 7 or a pharmaceutically acceptable salt form thereof.

Claim 44. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 8 or a pharmaceutically acceptable salt form thereof.

Claim 45. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 31 or a pharmaceutically acceptable salt form thereof.

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Claim 46. (Canceled)

Claim 47. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 33 or a pharmaceutically acceptable salt form thereof.

Claim 48. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 34 or a pharmaceutically acceptable salt form thereof.

Claims 49-51. (Canceled)

Claim 52. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 2 or a pharmaceutically acceptable salt form thereof.

Claim 53. (Previously presented) A method according to Claim 52, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 54. (Previously presented) A method according to Claim 52, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial

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infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (è) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 55. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 3 or a pharmaceutically acceptable salt form thereof.

Claim 56. (Previously presented) A method according to Claim 55, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 57. (Previously presented) A method according to Claim 55, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

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 USSN: 10/245,122Claim 58. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 4 or a pharmaceutically acceptable salt form thereof.

Claim 59. (Previously presented) A method according to Claim 58, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 60. (Previously presented) A method according to Claim 58, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 61. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 5 or a pharmaceutically acceptable salt form thereof.

Claim 62. (Previously presented) A method according to Claim 61, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic

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Claim 63. (Previously presented) A method according to Claim 61, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwclling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 64. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 6 or a pharmaceutically acceptable salt form thereof.

Claim 65. (Previously presented) A method according to Claim 64, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 66. (Previously presented) A method according to Claim 64, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein

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thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 67. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 7 or a pharmaceutically acceptable salt form thereof.

Claim 68. (Previously presented) A method according to Claim 67, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 69. (Previously presented) A method according to Claim 67, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

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Claim 70. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 8 or a pharmaceutically acceptable salt form thereof.

Claim 71. (Previously presented) A method according to Claim 70, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 72. (Previously presented) A method according to Claim 70 wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 73. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 31 or a pharmaceutically acceptable salt form thereof.

Claim 74. (Previously presented) A method according to Claim 73, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic

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disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 75. (Previously presented) A method according to Claim 73, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney cmbolism, pulmonary cmbolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 76. (Previously presented) A method according to Claim 73, wherein the thromboembolic disorder is an acute coronary syndrome.

Claim 77. (Previously presented) A method according to Claim 73, wherein the thromboembolic disorder is stroke.

Claim 78. (Previously presented) A method according to Claim 73, wherein the thromboembolic disorder is deep vein thrombosis.

Claim 79. (Previously presented) A method according to Claim 73, wherein the thromboembolic disorder is pulmonary embolism.

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Claims 80-86. (Canceled)

Claim 87. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 33 or a pharmaceutically acceptable salt form thereof.

Claim 88. (Previously presented) A method according to Claim 87, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 89. (Previously presented) A method according to Claim 87, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 90. (Previously presented) A method according to Claim 87, wherein the thromboembolic disorder is an acute coronary syndrome.

Claim 91. (Previously presented) A method according to Claim 87, wherein the thromboembolic disorder is stroke.

Claim 92. (Previously presented) A method according to Claim 87, wherein the thromboembolic disorder is deep vein thrombosis.

Claim 93. (Previously presented) A method according to Claim 87, wherein the thromboembolic disorder is pulmonary embolism.

Claim 94. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 34 or a pharmaceutically acceptable salt form thereof.

Claim 95. (Previously presented) A method according to Claim 94, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 96. (Previously presented) A method according to Claim 94, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d)

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cardiopulmonary bypass, (e) hemodialysis, or ( $f$ ) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 97. (Previously presented) A method according to Claim 94, wherein the thromboembolic disorder is an acute coronary syndrome.

Claim 98. (Previously presented) A method according to Claim 94, wherein the thromboembolic disorder is stroke.

Claim 99. (Previously presented) A method according to Claim 94, wherein the thromboembolic disorder is deep vein thrombosis.

Claim 100. (Previously presented) A method according to Claim 94, wherein the thromboembolic disorder is pulmonary embolism.

Claims 101-121. (Canceled)

Claim 122. (Prcviously presented) A compound according to Claim 31 is a crystalline compound.

Claim 123. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 122.

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Claim 124. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 122.

Claim 125. (Previously presented) A method according to Claim 124, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 126. (Previously presented) A method according to Claim 124, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 127. (Previously presented) A method according to Claim 126, wherein the thromboembolic disorder is an acute coronary syndrome.

Claim 128. (Previously presented) A method according to Claim 126, wherein the thromboembolic disorder is stroke.

Claim 129. (Previously presented) A method according to Claim 126, wherein the thromboembolic disorder is deep vein thrombosis.

Claim 130. (Previously presented) A method according to Claim 126, wherein the thromboembolic disorder is pulmonary embolism.

Claim 131. (Previously presented) A process for the preparation of the crystalline compound according to Claim 122, comprising recrystallization from isopropyl alcohol or $\mathrm{CH}_{2} \mathrm{Cl}_{2}$ / EtOAc .

Claim 132. (Previously presented) A process for the preparation of the crystalline compound according to Claim 122, comprising recrystallization from isopropyl alcohol.

Claim 133. (Previously presented) A process for the preparation of the crystalline compound according to Claim 122, comprising recrystallization from $\mathrm{CH}_{2} \mathrm{Cl}_{2} / \mathrm{EtOAc}$.

Claim 134. (New) A compound according to Claim 122 is prepared by a process comprising recrystallization from isopropyl alcohol or $\mathrm{CH}_{2} \mathrm{Cl}_{2} / \mathrm{EtOAc}$.

Claim 135. (New) A compound according to Claim 122 is prepared by a process comprising recrystallization from isopropyl alcohol.

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Claim 136. (New) A compound according to Claim 122 is prepared by a process comprising recrystallization from $\mathrm{CH}_{2} \mathrm{Cl}_{2} / \mathrm{EtOAc}$.

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## REMARKS

## Status

Claims 1-8, 16-19, 31, 33-34, 38-45, 47-48, 52-79, 87-100 and 122-136 will be pending upon entry of the present amendments. Support for new Claims 134-136 can be found in Example 18. No new matter will be added upon entry of the present amendments.

In view of the foregoing, Applicants submit that the application is now in condition for allowance. Early notification of such action is earnestly solicited. If the Examiner has any questions or believes further discussion will aid examination and advance prosecution of the application, a telephone call to the undersigned is invited.

Respectfully submitted,

Date: September 22, 2004


Agent for Applicants
Registration No. 45,914

Bristol-Myers SquibbCompany<br>Patent Department<br>P.O. Box 4000<br>Princeton, NJ 08543-4000<br>(609) 252-3791 (phone)<br>(609) 252-4526 (fax)

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



Commissioner for Patents
P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

## AMENDMENT AND REQUEST FOR CONTINUED EXAMINATION

Applicants respectfully request continued examination in view of the following amendments and remarks.

Amendment to the Specification begins on page 2 of this paper.

Amendments to the Claims are represented by the listing of claims which begins on page 4 of this paper.

Remarks begin on page 61 of this paper.

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## AMENDMENT

Subject matter to be added is in bold and underlined.
Subject matter to be deleted is in bold and strikethrough.

## In the Specification:

## Please amend Example 18:

## From line 3 to line 5 on page 220:

1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyll-4,5,6,7-tetrahydro-1H-pyrazole-o[3,4-c]pyridine-3-carboxamide

## From line 1 to linc 14 on page 222:

Part E. To iodo compound from Part $\mathrm{D}(25 \mathrm{~g}, 0.048 \mathrm{~mol})$ was added $\gamma$-valerolactam ( 6.7 g , $0.067 \mathrm{~mol}), \mathrm{K}_{2} \mathrm{CO}_{3}(8 \mathrm{~g}, 0.058 \mathrm{~mol})$, degassed DMSO $(100 \mathrm{~mL})$ and $\mathrm{CuI}(1.84 \mathrm{~g}, 0.009 \mathrm{~mol})$. The reaction was heated to $130^{\circ} \mathrm{C}$ for 24 h . The reaction was cooled, partitioned with $\mathrm{EtOAc} / \mathrm{H}_{2} \mathrm{O}$, extracted and dried $\left(\mathrm{MgSO}_{4}\right)$. Purification by silica gel chromatography using 0 $10 \% \mathrm{MeOH} / \mathrm{CH}_{2} \mathrm{Cl}_{2}$ as eluent afforded $5 \mathrm{~g}(21 \%)$ of ethyl 1-(4-metyhoxyphenyl)-7-oxo-6[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridine-3-carboxylate as a tan foam; ${ }^{1} \mathrm{H} \operatorname{NMR}\left(\mathrm{CDCl}_{3}\right) \delta 7.49(\mathrm{~d}, \mathrm{j}=9.2 \mathrm{~Hz}, 2 \mathrm{H}), 7.35(\mathrm{~d} . \mathrm{j}=8.8 \mathrm{~Hz}, 2 \mathrm{H}), 7.26(\mathrm{~d}, \mathrm{j}=8.1 \mathrm{~Hz}, 2 \mathrm{H})$, $6.92(\mathrm{~d}, \mathrm{j}=8.8 \mathrm{~Hz}, 2 \mathrm{H}), 4.49(\mathrm{q} . \mathrm{j}=7.3 \mathrm{~Hz}, 2 \mathrm{H}), 4.13(\mathrm{t}, \mathrm{j}=6.6 \mathrm{~Hz}, 2 \mathrm{H}), 3.81(\mathrm{~s}, 3 \mathrm{H}), 3.59(\mathrm{~m}, 2 \mathrm{H}), 3.39$ $(\mathrm{t}, \mathrm{j}=6.6 \mathrm{~Hz}, 2 \mathrm{H}), 2.55(\mathrm{~m}, 2 \mathrm{H}), 1.91(\mathrm{~m}, 4 \mathrm{H}), 1.45(\mathrm{t}, \mathrm{j}=7.3 \mathrm{~Hz}, 3 \mathrm{H}) \mathrm{ppm}$.

Please amend Example 27:

From line 6 to line 16 on page 230

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Part A. Ethyl 6-(4-iodophenyl)-1-(4-methoxyphenyl)-7-oxo-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4$c$ ]pyridinc-3-carboxylate $(0.57 \mathrm{~g}, 1.1 \mathrm{mmol})$, 2-hydroxypyridine $(0.125 \mathrm{~g}, 1.3 \mathrm{mmol}), \mathrm{K}_{2} \mathrm{CO}_{3}$ ( $0.18 \mathrm{~g}, 1.3 \mathrm{mmol}$ ) were combined in DMSO ( 5 mL ) and degassed with $\mathrm{N}_{2}$. Copper (I) iodide ( $41 \mathrm{mg}, 0.21 \mathrm{mmol}$ ) was added and the reaction was heated to $130^{\circ} \mathrm{C}$ for 24 h . The reaction was quenched with dilute $\mathrm{NH}_{4} \mathrm{OH}$ solution and filtered. The filtrate was extracted with EtOAc and dried $\left(\mathrm{MgSO}_{4}\right)$. Purification on silica gel using $0-5 \% \mathrm{MeOH} / \mathrm{CH}_{2} \mathrm{Cl}_{2}$ as eluent afforded 70 mg $(13 \%)$ of the ester; Mass Spec $(M+\dot{H})+485.2$.

Please amend Example 89:

## From line 6 to line 7 on page 273

The title compound was made in $£ \mathbf{A}$ of Example $\mathbf{1 8} \mathbf{2 7}$. High Resolution Mass Spec $(M+H)^{+}$ for $\mathrm{C}_{27} \mathrm{H}_{25} \mathrm{~N}_{4} \mathrm{O}_{5} 485.1827$.

## Please amend Example 108:

## From line 7 to line 8 on page 283

The title compound was prepared following the procedure employed for Example 107 using the product of Part A of Example 27. ESI MS $m / z 471(\mathrm{M}+\mathrm{H})$.
$i$

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## In the Claims:

Please cancel Claims $32,35-37,46,49-51,80-86$ and 101-121, without prejudice to their presentation in a continuing or divisional application.

Please enter rewritten Claims 1, 6-8 and 31 and new claims 122-133 as follows.

This listing of claims will replace all prior versions and listings of claims in the application.

## Listing of Claims:

Claim 1. (Currently Amended) A compound of Formula I:

. I
or a stereoisomer or pharmaceutically acceptable salt thereof, wherein;
ring $M$, including $P_{1}, P_{2}, M_{1}$, and $M_{2}$, is substituted with $0-2 R^{\text {la }}$ and is

ring $P$, including $P_{1}, P_{2}$, and $P_{3}$, is $P_{4} \quad i$
$\mathrm{M}_{4}$ is -A-B;
$\mathrm{P}_{4}$ is $-\mathrm{G}_{1}-\mathrm{G}$;

G is a group of Formula IIa or IIb :


IIa


IIb
ring D , including the two atoms of Ring E to which it is attached, is a 5-6 membered ring
consisting of: carbon atoms and $0-2$ heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
ring D is substituted with $0-2 \mathrm{R}$ and there are $0-3$ ring double boids;
$E$ is selected from phenyl, pyridyl, pyrimidyl, pyrazinyl, and pyridazinyl, and is substituted with 1-2 R;
alternatively, ring D is absent and ring E is selected from phenyl, pyridyl, pyrimidyl, pyrazinyl, pyridazinyl, pyrrolyl, pyrazolyl, imidazolyl, isoxazolyl, oxazolyl, triazolyl, thienyl, and thiazolyl, and ring E is substituted with 1-2 R;
alternatively, ring D is absent and ring E is selected from phenyl, pyridyl, pyrimidyl, pyrazinyl, pyridazinyl, pyrrolyl, pyrazolyl, imidazolyl, isoxazolyl, oxazolyl, triazolyl, thienyl, and thiazolyl, and ring E is substituted with 1 R and with a 5-6 membercd hetcrocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, wherein the 5-6 membered heterocycle is substituted with 0-1 carbonyl and $1-2 \mathrm{R}$ and there are $0-3$ ring double bonds;

R is selected from $\mathrm{H}, \mathrm{C}_{1-4}$ alkyl, $\mathrm{F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I}, \mathrm{OH}, \mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{OCH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CN}, \mathrm{C}\left(=\mathrm{NR}^{8}\right) \mathrm{NR}^{7} \mathrm{R}^{9}, \mathrm{NHC}\left(=\mathrm{NR}^{8}\right) \mathrm{NR}^{7} \mathrm{R}^{9}, \mathrm{ONHC}\left(=\mathrm{NR}^{8}\right) \mathrm{NR}^{7} \mathrm{R}^{9}$,
$\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{7} \mathrm{R}^{8},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{NR}^{7} \mathrm{C}(\mathrm{O}) \mathrm{R}^{7},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{OR}^{3},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{NR}^{7} \mathrm{R}^{8}$,
$\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{NR}^{7} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{7},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{t} \mathrm{SR}^{3},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{t} \mathrm{~S}(\mathrm{O}) \mathrm{R}^{3},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{t} \mathrm{~S}(\mathrm{O})_{2} \mathrm{R}^{3}$, and $\mathrm{OCF}_{3} ;$
alternatively, when 2 R groups are attached to adjacent atoms, they combine to form methylenedioxy or ethylenedioxy;

A is selected from:
$\mathrm{C}_{3-10}$ carbocycle substituted with 0-2 $\mathrm{R}^{4}$;
$B$ is
 ; provided that Z and B are attached to different atoms on A and that the A-X-N moiety forms other than a $\mathrm{N}-\mathrm{N}-\mathrm{N}$ group;
$\mathrm{Q}_{1}$ is $\mathrm{C}=\mathrm{O}$;
ring $Q$ is a 6 membered monocyclic ring, wherein:
$0-2$ double bends are 0 double bond is present within the ring and the ring is substituted with 0-2 $R^{4 a}$;

X is absent;
$\mathrm{G}_{1}$ is absent or is selected from $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{1-5},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{0-2} \mathrm{CR}^{3}=\mathrm{CR}^{3}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{0-2}$;
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{0-2} \mathrm{C}=\mathrm{C}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{0-2},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{O}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{OC}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{W}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{O}\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{u}} \mathrm{N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{W}}$,

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$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{W}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{N}^{3 \mathrm{~b}} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{W}}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{OC}(\mathrm{O}) \mathrm{N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{N}^{3 \mathrm{~b}} \mathrm{C}(\mathrm{O}) \mathrm{O}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{N}^{3 \mathrm{~b}} \mathrm{C}(\mathrm{O}) \mathrm{N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{N}^{3 \mathrm{~b}} \mathrm{C}(\mathrm{S}) \mathrm{N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$,

$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{S}(\mathrm{O}) \mathrm{N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}^{2}} \mathrm{~N}^{3 \mathrm{~b}} \mathrm{~S}(\mathrm{O})_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{S}(\mathrm{O})_{2} \mathrm{~N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{N}^{3 \mathrm{~b}} \mathrm{~S}(\mathrm{O})_{2} \mathrm{~N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{W}}$,
$\left(C R^{3} R^{3 a}\right)_{u} N R^{3 e}\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} C(O)\left(C R^{3} R^{3 a}\right){ }_{u} C(O)\left(C R^{3} R^{3 a}\right)_{w}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}^{2}} \mathrm{NR}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{NR}^{3 b} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$,
$\left(C R^{3} R^{3 a}\right)_{u} N^{3 b} C(O)\left(C R^{3} R^{3 a}\right)_{u} C(O) N R^{3 b}\left(C R^{3} R^{3 a}\right)_{W}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{S}(\mathrm{O}) \mathrm{NR}^{3 \mathrm{~b}} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3 \mathrm{~b}} \mathrm{~S}(\mathrm{O})_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$, and $\left.\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{S}(\mathrm{O})_{2} \mathrm{NR}^{3 \mathrm{~b}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3 \mathrm{~b}} \mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$, wherein $\mathrm{u}+\mathrm{w}$ total $0,1,2,3$, or 4 , provided that $\mathrm{G}_{1}$ does not form an $\mathrm{N}-\mathrm{S}, \mathrm{NCH}_{2} \mathrm{~N}, \mathrm{NCH}_{2} \mathrm{O}$, or $\mathrm{NCH}_{2} \mathrm{~S}$ bond with either group to which it is attached;
$R^{1 a}$, at each occurrence, is selected from $H,-\left(C R^{3} R^{3 a}\right)_{-}-R^{1 b},-\left(C R^{3} R^{3 a}\right)_{r}-C^{3} R^{1 b} R^{1 b}$, $-\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r}^{-}} \mathrm{O}-\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r}^{-}} \mathrm{R}^{\mathrm{Ib}},-\mathrm{C}_{2-6}$ alkenylene- $\mathrm{R}^{1 \mathrm{~b}},-\mathrm{C}_{2-6}$ alkynylene- $\mathrm{R}^{1 \mathrm{~b}}$, $-\left(C R^{3} R^{3 a}\right)_{r}-C\left(=N R{ }^{1 b}\right) N R^{3} R^{1 b}, N R^{3} C R^{3} R^{3 a R}{ }^{1 c}, O C R{ }^{3} R^{3 a} R^{1 c}, S C R^{3} R^{3 a} R^{1 c}$, $\mathrm{NR}^{3}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{t}} \mathrm{R}^{1 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{t}} \mathrm{R}^{1 \mathrm{~b}}$, $\mathrm{CO}_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{t}} \mathrm{R}^{1 \mathrm{~b}}, \mathrm{O}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{t}} \mathrm{R}^{1 \mathrm{~b}}, \mathrm{~S}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{t}} \mathrm{R}^{1 \mathrm{~b}}$, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{T}} \mathrm{R}^{1 \mathrm{~d}}, \mathrm{O}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{R}^{1 \mathrm{~d}}, \mathrm{NR}^{3}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{R}^{1 \mathrm{~d}}, \mathrm{OC}(\mathrm{O}) \mathrm{NR}^{3}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{R}^{1 \mathrm{dd}}$, $\mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{R}^{1 \mathrm{~d}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{O}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{R}^{1 \mathrm{~d}}$, and $\mathrm{NR}^{3} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{~d}}\right)_{\mathrm{r}} \mathrm{R}^{1 \mathrm{~d}}$, provided that $\mathrm{R}^{\text {la }}$ forms other than an N -halo, $\mathrm{N}-\mathrm{S}, \mathrm{O}-\mathrm{O}$, or $\mathrm{N}-\mathrm{CN}$ bond;
alternatively, when two $\mathrm{R}^{\text {la }}$ groups are attached to adjacent atoms, together with the atoms to which they are attached they form a 5-7 membered ring consisting of: carbon atoms and
$0-2$ heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, this ring being substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$ and $0-3$ ring double bonds;
$\mathrm{R}^{\mathrm{lb}}$ is selected from $\mathrm{H}, \mathrm{C}_{1-3}$ alkyl, $\mathrm{F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I},-\mathrm{CN},-\mathrm{NO}_{2},-\mathrm{CHO},\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{OR}^{2}$, $\mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{~b}}, \mathrm{OC}(\mathrm{O}) \mathrm{R}^{2},\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}$, $\mathrm{C}\left(=\mathrm{NR}^{2 c}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NHR}^{2}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O})_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{OC}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{2}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{2}, \mathrm{C}_{3-6}$ carbocycle substituted with 0-2 $\mathrm{R}^{4 b}$, and 5-10 membered heterocycle consisling of carbon atoms and from 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 \mathrm{R}^{\mathbf{4 b}}$, provided that $\mathrm{R}^{1 \mathrm{~b}}$ forms other than an $\mathrm{O}-\mathrm{O}$, N -halo, $\mathrm{N}-\mathrm{S}$, or N-CN bond;
$\mathrm{R}^{1 \mathrm{c}}$ is selected from $\mathrm{H}, \mathrm{CH}\left(\mathrm{CH}_{2} \mathrm{OR}^{2}\right)_{2}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O}) \mathrm{R}^{2}, \mathrm{~S}(\mathrm{O})_{2} \mathrm{R}^{2}$, and $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}} ;$
$R^{1 d}$ is selected from $C_{3-6}$ carbocycle substituted with $0-2 R^{4 b}$ and $5-10$ membered heterocycle consisting of carbon atoms and from 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{p}$, and substituted with $0-2 R^{4 b}$, provided that $R^{1 d}$ forms other than an N-S bond;
$\mathrm{R}^{2}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{C}_{1-6}$ alkyl, benzyl, $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{C}_{3-10}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-5-10$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 R^{4 b}$;
$\mathrm{R}^{2 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{C}_{1-6}$ alkyl, benzyl, $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{C}_{3-10}$ carbocycle substituted with $0-2 \mathrm{R}^{4 b}$, and $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-5-10$ membered heterocycle consisting of: carbon

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atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$;
alternatively, $\mathrm{R}^{2}$ and $\mathrm{R}^{2 \mathrm{a}}$, together with the atom to which they are attached, combine to form a 5 or 6 membered saturated, partially saturated or unsaturated ring substituted with $0-2 R^{4 b}$ and consisting of: $0-1$ additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$R^{2 b}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{C}_{1-4}$ alkoxy substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}, \mathrm{C}_{1-6}$ alkyl substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}},-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{C}_{3-10}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and -( $\left.\mathrm{CH}_{2}\right)_{\mathrm{r}}$-5-10 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituled with $0-2 \mathrm{R}^{4 b}$;
$\mathrm{R}^{2 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{OH}, \mathrm{C}_{1-4}$ alkoxy, $\mathrm{C}_{1-6}$ alkyl, $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{C}_{3-10}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-5-10$ membered heterocycle containing from 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 \mathrm{R}^{\mathbf{4 b}}$;

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$\mathrm{R}^{3}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, and phenyl;
$\mathrm{R}^{3 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, and phenyl;
alternatively, $\mathrm{R}^{3}$ and $\mathrm{R}^{3 \mathrm{a}}$, together with the nitrogen atom to which they are attached, combine to form a 5 or 6 membered saturated, partially unsaturated, or unsaturated ring consisting of: carbon atoms, the nitrogen atom to which $\mathrm{R}^{3}$ and $\mathrm{R}^{3 \mathrm{a}}$ are attached, and $0-1$ additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{3 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{C}_{1-6}$ alkyl substituted with $0-2 \mathrm{R}$ la, $\mathrm{C}_{2-6}$ alkenyl substituted with 0-2 $\mathrm{R}^{\text {la }}, \mathrm{C}_{2-6}$ alkynyl substituted with 0-2 $\mathrm{R}^{1 \mathrm{a}}$, -( $\mathrm{C}_{0-4}$ alkyl)-5-10 membered carbocycle substituted with $0-3 \mathrm{R}^{1 \mathrm{a}}$, and -( $\mathrm{C}_{0-4}$ alkyl)-5-10 membered heterocycle substituted with $0-3 \mathrm{R}^{1 \mathrm{a}}$ and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$;
$\mathrm{R}^{3 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, and phenyl;
$\mathrm{R}^{3 \mathrm{~d}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}_{1-4}$ alkyl-phenyl, and $\mathrm{C}(=\mathrm{O}) \mathrm{R}^{3 \mathrm{c}}$;
$\mathrm{R}^{3 \mathrm{e}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{SO}_{2} \mathrm{NHR}^{3}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{NHR}^{3}$, $\mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{f}}, \mathrm{S}(\mathrm{O}) \mathrm{R}^{3 \mathrm{f}}, \mathrm{S}(\mathrm{O})_{2} \mathrm{R}^{3 \mathrm{f}}, \mathrm{C}_{1-6}$ alkyl substituted with $0-2 \mathrm{R}^{\text {la }}, \mathrm{C}_{2-6}$ alkenyl substituted with $0-2 \mathrm{R}^{\text {la }}, \mathrm{C}_{2-6}$ alkynyl substituted with $0-2 \mathrm{R}^{1 \mathrm{a}},-\left(\mathrm{C}_{0-4}\right.$ alkyl)-5-10 membered carbocycle substituted with 0-3 $\mathrm{R}^{1 \mathrm{a}}$, and -( $\mathrm{C}_{0-4}$ alkyl)-5-10 membered heterocycle substituted with $0-3 \mathrm{R}^{19}$ and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{p}$;
$R^{3 f}$, at each occurrence, is selected from: $C_{1-6}$ alkyl substituted with 0-2 $R^{1 a}, C_{2-6}$ alkenyl substituted with 0-2 $\mathrm{R}^{\mathrm{la}}, \mathrm{C}_{2-6}$ alkynyl substituted with $0-2 \mathrm{R}^{\text {la }}$, -( $\mathrm{C}_{0-4}$ alkyl)-5-10 membered carbocycle substituted with $0-3 \mathrm{R}^{1 \mathrm{a}}$, and -( $\mathrm{C}_{0-4}$ alkyl)-5-10 membered heterocycle substituted with $0-3 \mathrm{R}^{1 \mathrm{a}}$ and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$;

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$\mathrm{R}^{4}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I}, \mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{CN},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NO}_{2},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}\left(=\mathrm{NR}^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}\left(=\mathrm{NS}(\mathrm{O})_{2} \mathrm{R}^{5}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NHC}\left(=\mathrm{NR}^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(O) \mathrm{NHC}\left(=\mathrm{NR}^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{5},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}}\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3}, \mathrm{NHCH}_{2} \mathrm{R}^{1 \mathrm{c}}$, $\mathrm{OCH}_{2} \mathrm{R}^{\mathrm{lc}}, \mathrm{SCH}_{2} \mathrm{R}^{\mathrm{lc}}, \mathrm{NH}\left(\mathrm{CH}_{2}\right)_{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{t}} \mathrm{R}^{\mathrm{lb}}, \mathrm{O}\left(\mathrm{CH}_{2}\right)_{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{t}} \mathrm{R}^{\mathrm{lb}}, \mathrm{S}\left(\mathrm{CH}_{2}\right)_{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{t}} \mathrm{R}^{\mathrm{lb}}$, $\left(C R^{3} R^{3}\right)^{-5-5}$ membered carbocycle substituted with $0-1 R^{5}$, and a $\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right) r^{-5-6}$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{p}$, and substituted with 0-1 $\mathrm{R}^{5}$;
$R^{4 a}$, at each occurrence, is selected from $H,=O,\left(C R^{3} R^{3 a}\right)_{r} O R^{2},\left(C R^{3} R^{3 a}\right)_{r} F,\left(C R^{3} R^{3 a}\right)_{r} B r$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{Cl}, \mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{CN},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NO}_{2},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{T}} \mathrm{NR}{ }^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{N}=\mathrm{CHOR}{ }^{3}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NH}\left(\mathrm{CH}_{2}\right)_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}{ }^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}\left(=\mathrm{NR}^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NHC}\left(=\mathrm{NR}^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{r} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl,$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{T}} \mathrm{C}(\mathrm{O}) \mathrm{NHSO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right) \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{5},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}}\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}}{ }^{-5}-6$ membered carbocycle substituted with $0-1 R^{5}$, and a $\left(C R^{3} R^{3 a}\right) r^{-5-6}$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-1 R^{5}$;
$\mathrm{R}^{4 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{3},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{F},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{Cl},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{Br}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{I}, \mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{CN},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NO}_{2},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$,

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$\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, and $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3}$;
$R^{4 c}$, at each occurrence, is selected from $H, C_{1-4}$ alkyl $\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{r 1} O R^{2},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{r 1} \mathrm{~F}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{Br},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{rl}} \mathrm{Cl},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{CN},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{NO}_{2},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r} 1} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{~N}=\mathrm{CHOR}^{3},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NH}\left(\mathrm{CH}_{2}\right)_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{rl}} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{C}\left(=\mathrm{NR}^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{NHC}\left(=\mathrm{NR}^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r}} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{NR}^{2} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NHSO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{5},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}{ }^{2}$ $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}}\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}}-5-6$ membered carbocycle substituted with $0-1 \mathrm{R}^{5}$, and a $\left(C^{3} R^{3 a}\right)_{r}-5-6$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-1 R^{5}$;
$\mathrm{R}^{5}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{C}_{1-6}$ alkyl, $=\mathrm{O},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I},-\mathrm{CN}, \mathrm{NO}_{2}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{CH}\left(=\mathrm{NOR}^{3 \mathrm{~d}}\right)$, $\left(\mathrm{ClH}_{2}\right)_{\mathrm{r}} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3}$, phenyl substituted with $0-2 \mathrm{R}^{6}$, naphthyl substituted with 0-2 $R^{6}$, and benzyl substituted with $0-2 R^{6}$;
$\mathrm{R}^{5 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{C}_{1-6}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{3},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3}$, phenyl
substituted with $0-2 \mathrm{R}^{6}$, naphthyl substituted with $0-2 \mathrm{R}^{6}$, and benzyl substituted with 0-2 $R^{6}$, provided that $R^{5 a}$ does not form a $S-N$ or $S(O)_{p}-C(O)$ bond;
$\mathrm{R}^{6}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}$, halo, $\mathrm{C}_{1-4}$ alkyl, $\mathrm{CN}, \mathrm{NO}_{2}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(=\mathrm{NH}) \mathrm{NH}_{2}$, $\mathrm{NHC}(=\mathrm{NH}) \mathrm{NH}_{2}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, and $\mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{C}_{1-4}$ alkyl;
$\mathrm{R}^{7}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH}, \mathrm{C}_{1-6}$ alkyl, $\mathrm{C}_{1-6}$ alkyl- $\mathrm{C}(\mathrm{O})-\mathrm{C}_{1-6}$ alkyl-O-, $\left(\mathrm{CH}_{2}\right)_{\mathrm{n}}$-phenyl, $\mathrm{C}_{1-4}$ alkyl- $\mathrm{OC}(\mathrm{O})-, \mathrm{C}_{6-10}$ aryl- $\mathrm{O}-, \mathrm{C}_{6-10}$ aryl- $\mathrm{OC}(\mathrm{O})$-, $\mathrm{C}_{6-10}$ aryl- $\mathrm{CH}_{2}-\mathrm{C}(\mathrm{O})-, \mathrm{C}_{1-4}$ alkyl- $\mathrm{C}(\mathrm{O}) \mathrm{O}-\mathrm{C}_{1-4}$ alkyl- $\mathrm{OC}(\mathrm{O})-$, $\mathrm{C}_{6-10}$ aryl- $\mathrm{C}(\mathrm{O}) \mathrm{O}-\mathrm{C}_{1-4}$ alkyl-OC(O)-, $\mathrm{C}_{1-6}$ alkyl- $\mathrm{NH}_{2}-\mathrm{C}(\mathrm{O})$-, phenyl- $\mathrm{NH}_{2}-\mathrm{C}(\mathrm{O})$-, and phenyl- $\mathrm{C}_{1-4}$ alkyl-C(O)-;
$R^{8}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{C}_{1-6}$ alkyl, and $\left(\mathrm{CH}_{2}\right)_{\mathrm{n}}$-phenyl;
alternatively, $R^{7}$ and $R^{8}$, when attached to the same nitrogen, combine to form a $5-10$ membered heterocyclic ring consisting of carbon atoms and 0-2 additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{9}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{C}_{1-6}$ alkyl, and $\left(\mathrm{CH}_{2}\right)_{n}$-phenyl;
n , at each occurrence, is selected from $0,1,2$, and 3;
p , at each occurrence, is selected from 0,1 , and 2 ;
r , at each occurrence, is selected from $0,1,2,3,4,5$, and 6 ;
rl , at each occurrence, is selected from $1,2,3,4,5$, and 6 ; and

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t , at each occurrence, is selected from $0,1,2$, and 3 .

Claim 2. (Previously presented) A compound according to Claim 1, wherein:

G is a group of Formula IIa or IIb:


Ila


IIb
ring D , including the two atoms of Ring E to which it is attached, is a 5-6 membered ring consisting of: carbon atoms and $0-2$ heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
ring $D$ is substituted with $0-2 R$ and there are $0-3$ ring double bonds;

E is selected from phenyl, pyridyl, pyrimidyl, pyrazinyl, and pyridazinyl, and is substituted with 1-2 R;
alternatively, ring $D$ is absent, and ring $E$ is selected from phenyl, pyridyl, pyrimidyl, and thienyl, and ring E is substituted with $1-2 \mathrm{R}$;
alternatively, ring $D$ is absent, ring $E$ is selected from phenyl, pyridyl, and thienyl, and ring $E$ is substituted with 1 R and substituted with a 5 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, wherein the 5 membered heterocycle is substituted with $0-1$ carbonyl and $1-2 \mathrm{R}$ and there are 0-3 ring double bonds;

R is selected from $\mathrm{H}, \mathrm{C}_{1-4}$ alkyl, $\mathrm{F}, \mathrm{Cl}, \mathrm{OH}, \mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CN}, \mathrm{C}(=\mathrm{NH}) \mathrm{NH}_{2}$, $\mathrm{C}(-\mathrm{NH}) \mathrm{NHOH}, \mathrm{C}(=\mathrm{NH}) \mathrm{NHOCH}_{3}, \mathrm{NH}_{2}, \mathrm{NH}\left(\mathrm{C}_{1-3}\right.$ alkyl $), \mathrm{N}\left(\mathrm{C}_{1-3} \text { alkyl }\right)_{2}, \mathrm{C}(=\mathrm{NH}) \mathrm{NI}_{2}$, $\mathrm{CH}_{2} \mathrm{NH}_{2}, \mathrm{CH}_{2} \mathrm{NH}\left(\mathrm{C}_{1-3}\right.$ alkyl , $\mathrm{CH}_{2} \mathrm{~N}\left(\mathrm{C}_{1-3} \text { alkyl }\right)_{2},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{NR}^{7} \mathrm{R}^{8}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{7} \mathrm{R}^{8}$, $\mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{7} \mathrm{R}^{8}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{NR}^{7} \mathrm{R}^{8}, \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{NR}^{7} \mathrm{R}^{8}, \mathrm{SO}_{2} \mathrm{R}^{3}$, and $\mathrm{OCF}_{3} ;$
alternatively, when 2 R groups are attached to adjacent atoms, they combine to form methylenedioxy or ethylenedioxy;

A is selected from:
$\mathrm{C}_{5-10}$ carbocycle substituted with 0-2 R ${ }^{4}$;
$\mathrm{R}^{1 \mathrm{a}}$ is selected from $\mathrm{H},-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{R}^{\mathrm{lb}},-\left(\mathrm{CH}\left(\mathrm{CH}_{3}\right)\right)_{r} \mathrm{R}^{1 \mathrm{~b}},-\left(\mathrm{C}\left(\mathrm{CH}_{3}\right)_{2}\right)_{\mathrm{r}}-\mathrm{R}^{1 \mathrm{~b}}, \mathrm{NHCH}_{2} \mathrm{R}^{1 \mathrm{c}}, \mathrm{OCH}_{2} \mathrm{R}^{1 \mathrm{c}}$, $\mathrm{SCH}_{2} \mathrm{R}^{\mathrm{lc}}, \mathrm{NH}\left(\mathrm{CH}_{2}\right)_{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{t}} \mathrm{R}^{1 \mathrm{~b}}$, and $\mathrm{O}\left(\mathrm{CH}_{2}\right)_{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{i}} \mathrm{R}^{\mathrm{lb}}$, provided that $\mathrm{R}^{1 \mathrm{a}}$ forms other than an N-halo, N-S, or N-CN bond;
alternatively, when two $R^{\text {la }}$ groups are attached to adjacent atoms, together with the atoms to which they are attached they form a 5-7 membered ring consisting of: carbon atoms and $0-2$ heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, this ring being substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$ and $0-3$ ring double bonds;
$\mathrm{R}^{\mathrm{lb}}$ is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I},-\mathrm{CN},-\mathrm{CHO}, \mathrm{CF}_{3}$, $\mathrm{OR}^{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{~b}}, \mathrm{OC}(\mathrm{O}) \mathrm{R}^{2}, \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{2}, \mathrm{NR}^{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}$, $\mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NHR}^{2}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O})_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{OC}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{C}(\mathrm{O}) \mathrm{NR}^{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{2}$,
$\mathrm{C}_{5-6}$ carbocycle substituted with $0-2 \mathrm{R}^{4 b}$, and
5-6 membered heterocycle consisting of carbon atoms and from 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 R^{4 b}$, provided that $\mathrm{R}^{1 \mathrm{~b}}$ forms other than an $\mathrm{O}-\mathrm{O}, \mathrm{N}$-halo, $\mathrm{N}-\mathrm{S}$, or $\mathrm{N}-\mathrm{CN}$ bond;

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$\mathrm{R}^{1 \mathrm{c}}$ is selected from $\mathrm{H}, \mathrm{CH}\left(\mathrm{CH}_{2} \mathrm{OR}^{2}\right)_{2}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O}) \mathrm{R}^{2}, \mathrm{~S}(\mathrm{O})_{2} \mathrm{R}^{2}$, and $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}} ;$
$\mathrm{R}^{2}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, $\mathrm{C}_{5-6}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, a $\mathrm{C}_{5-6}$ carbocyclic- $\mathrm{CH}_{2}$-group substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$;
$\mathrm{R}^{2 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, C5-6 carbocycle substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituled with 0-2 $\mathrm{R}^{\mathbf{4 b}}$;
alternatively, $\mathrm{R}^{2}$ and $\mathrm{R}^{2 \mathrm{a}}$, together with the atom to which they are attached, combine to form a 5 or 6 membered saturated, partially saturated or unsaturated ring substituted with $0-2 R^{4 b}$ and consisting of: $0-1$ additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{2 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{C}_{1-4}$ alkoxy, $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, $\mathrm{C}_{5-6}$ carbocycle substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$;
$\mathrm{R}^{2 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{OH}, \mathrm{C}_{1-4}$ alkoxy, $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, $\mathrm{C}_{5-6}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered heterocycle containing from 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$;
$\mathrm{R}^{3}$, at each occurrence, is selected from $\mathrm{HH}, \mathrm{CII}_{3}, \mathrm{CII}_{2} \mathrm{CII}_{3}, \mathrm{CI}_{2} \mathrm{CII}_{2} \mathrm{CII}_{3}, \mathrm{CII}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, and phenyl;
$\mathrm{R}^{3 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, and phenyl;
altematively, $\mathrm{R}^{3}$ and $\mathrm{R}^{3 \mathrm{a}}$, together with the nitrogen atom to which they are attached, combine to form a 5 or 6 membered saturated, partially unsaturated, or unsaturated ring consisting of: carbon atoms and the nitrogen atom to which $R^{3}$ and $R^{3 a}$ are attached;
$\mathrm{R}^{3 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{Cl}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, and phenyl;
$\mathrm{R}^{3 \mathrm{~d}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2}$-phenyl, $\mathrm{CH}_{2} \mathrm{CH}_{2}$-phenyl, and $\mathrm{C}(=\mathrm{O}) \mathrm{R}^{3 \mathrm{c}}$;
$\mathrm{R}^{4}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{OR}^{2}, \mathrm{CH}_{2} \mathrm{OR}^{2},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I}$, $\mathrm{C}_{1-4}$ alkyl, $-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{Cl}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{Cl}_{2}\right)_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}$, $\mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}, \mathrm{CF}_{3}, \mathrm{CF}_{2} \mathrm{CF}_{3}, 5-6$ membered carbocycle substituted with 0-1 $\mathrm{R}^{5}$, and a 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with 0-1 R ${ }^{5}$;
$\mathrm{R}^{4 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H},-\mathrm{O}, \mathrm{CH}_{2} \mathrm{OR}^{2}, \mathrm{OR}^{2}, \mathrm{CH}_{2} \mathrm{~F}, \mathrm{~F}, \mathrm{CH}_{2} \mathrm{Br}, \mathrm{Br}, \mathrm{CH}_{2} \mathrm{Cl}$, $\mathrm{Cl}, \mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2}-\mathrm{CN},-\mathrm{CN}, \mathrm{CH}_{2} \mathrm{NO}_{2}, \mathrm{NO}_{2}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2}-\mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}$, $\mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{5},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{CF}_{3}, \mathrm{CF}_{3}$, $\mathrm{CH}_{2}-5-6$ membered carbocycle substituted with 0-1 $\mathrm{R}^{5}, 5-6$ membered carbocycle substituted with 0-1 $\mathrm{R}^{5}$, and a $\mathrm{CH}_{2}-5-6$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with 0-1 $R^{5}$, and 5-6 membered heterocycle consisting of: carbon atoms and $1-4$ heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with 0-1 R ${ }^{5}$;
$\mathrm{R}^{4 b}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{C}\left(\mathrm{CH}_{3}\right)_{3},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{CH}_{2}-\mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}$, $\mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}, \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}$, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{CF}_{3}$, and $\mathrm{CH}_{2}-\mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{CH}_{2} \mathrm{OR}^{2}, \mathrm{CH}_{2} \mathrm{~F}$, $\mathrm{CH}_{2} \mathrm{Br}, \mathrm{CH}_{2} \mathrm{Cl}, \mathrm{CH}_{2} \mathrm{CN}, \mathrm{CH}_{2} \mathrm{NO}_{2}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}$,
$\mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{CH}_{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{C}(\mathrm{O}) \mathrm{NHSO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NHSO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{5}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}$, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}, \mathrm{CF}_{3}, \mathrm{CH}_{2} \mathrm{CF}_{3}, 5-6$ membered carbocycle substituted with $0-1 \mathrm{R}^{5}$, $\mathrm{CH}_{2}$-5-6 membered carbocycle substituted with 0-1 $\mathrm{R}^{5}$, 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{p}$, and substituted with $0-1 \mathrm{R}^{5}$, and a $\mathrm{CH}_{2}-5-6$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{P}}$, and substituted with $0-1 \mathrm{R}^{5}$;
$\mathrm{R}^{5}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}$, $-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}$, $\mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}\left(=\mathrm{NOR}^{3 \mathrm{~d}}\right), \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}$, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{CF}_{3}$, phenyl substituted with 0-2 $\mathrm{R}^{6}$, naphthyl substituted with $0-2 \mathrm{R}^{6}$, and benzyl substituted with $0-2 \mathrm{R}^{6}$; and,
$\mathrm{R}^{6}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{CN}, \mathrm{NO}_{2}$, $\mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{C}(=\mathrm{NH}) \mathrm{NH}_{2}, \mathrm{NHC}(=\mathrm{NH}) \mathrm{NH}_{2}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, and $\mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{C}_{1-4}$ alkyl.

Claim 3. (Previously presented) A compound according to Claim 2, wherein;
$G$ is selected from the group:

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$\mathrm{G}_{1}$ is absent or is selected from $\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{1-3},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$, $\left(C R^{3} R^{3 a}\right)_{u} O\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} N R^{3 b}\left(R^{3} R^{3 a}\right)_{W},\left(C R^{3} R^{3 a}\right)_{u} C(O) N R^{3 b}\left(C R^{3} R^{3 a}\right)_{W}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{NR}^{3 \mathrm{~b}} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{NR}^{3 \mathrm{~b}} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$, $\left(C R^{3} R^{3 a}\right)_{u} S\left(C R^{3} R^{3 a}\right)_{W},\left(C R^{3} R^{3 a}\right)_{U} S(O)\left(C R^{3} R^{3 a}\right)_{W},\left(C R^{3} R^{3 a}\right)_{u} S(O)_{2}\left(C R^{3} R^{3 a}\right)_{W}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{S}(\mathrm{O}) \mathrm{NR}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{NR}^{3 \mathrm{~b}} \mathrm{~S}(\mathrm{O})_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$, and
$\left(C R^{3} R^{3 a}\right)_{u} S(O)_{2} \mathrm{NR}^{3 b}\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{w}}$, wherein $\mathbf{u}+\mathrm{w}$ total 0,1 , or 2 , provided that $\mathrm{G}_{1}$ does not form a N-S, $\mathrm{NCH}_{2} \mathrm{~N}, \mathrm{NCH}_{2} \mathrm{O}$, or $\mathrm{NCH}_{2} \mathrm{~S}$ bond with either group to which it is attached;
$\Lambda$ is phenyl substituted with $0-2 \mathrm{R}^{4}$;

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$\mathrm{R}^{\text {la }}$ is selected from $\mathrm{H}, \mathrm{R}^{\mathrm{lb}}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{R}^{\mathrm{lb}}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{2} \mathrm{R}^{\mathrm{lb}}, \mathrm{CH}_{2} \mathrm{R}^{\mathrm{lb}}$, and $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{R}^{\mathrm{lb}}$, provided that $\mathrm{R}^{1 \mathrm{a}}$ forms other than an N -halo, $\mathrm{N}-\mathrm{S}$, or $\mathrm{N}-\mathrm{CN}$ bond;
alternatively, when two $\mathrm{R}^{1 \text { a }}$ groups are attached to adjacent atoms, together with the atoms to which they are attached they form a 5-6 membered ring consisting of: carbon atoms and $0-2$ heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, this ring being substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$ and $0-3$ ring double bonds;
$\mathrm{R}^{\mathrm{Ib}}$ is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br},-\mathrm{CN},-\mathrm{CHO}, \mathrm{CF}_{3}, \mathrm{OR}^{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}$, $\mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{~b}}, \mathrm{OC}(\mathrm{O}) \mathrm{R}^{2}, \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{2}, \mathrm{NR}^{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{2}$, phenyl substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle consisting of carbon atoms and from 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, provided that $\mathrm{R}^{\mathrm{lb}}$ forms other than an $\mathrm{O}-\mathrm{O}, \mathrm{N}$-halo, $\mathrm{N}-\mathrm{S}$, or $\mathrm{N}-\mathrm{CN}$ bond;
$\mathrm{R}^{2}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, phenyl substituted with $0-2 R^{4 b}$, a benzyl substituted with $0-2 R^{4 b}$, and a 5-6 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 R^{4 b}$;
$\mathrm{R}^{2 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle consisting of: carbon atoms and $1-4$ heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$;
alternatively, $\mathrm{R}^{2}$ and $\mathrm{R}^{2 \mathrm{a}}$, together with the atom to which they are attached, combine to form a 5 or 6 membered saturated, partially saturated or unsaturated ring substituted with $0-2 R^{4 b}$

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and consisting of: $0-1$ additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $S(O)_{p}$;
$\mathrm{R}^{2 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{C}_{1-4}$ alkoxy, $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{p}$, and substituted with $0-2 \mathrm{R}^{4 b}$;
$\mathrm{R}^{2 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{OH}, \mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\operatorname{OCH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with $0-2 \mathrm{R}^{4 b}$, and 5-6 membered aromatic heterocycle containing from 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 R^{4 b}$;
$\mathrm{R}^{4}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{2} \mathrm{OR}^{2},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{OR}^{2}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I}, \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CF}_{3}$, and $\mathrm{CF}_{2} \mathrm{CF}_{3}$;
$\mathrm{R}^{\mathbf{4 a}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{2} \mathrm{OR}^{2}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Br}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{C}\left(\mathrm{CH}_{3}\right)_{3},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, and $-\mathrm{CF}_{3}$;
$\mathrm{R}^{4}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{CH}_{2}-\mathrm{C}(\mathrm{O}) \mathrm{R}^{3}$, $\mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{CH}_{2}-\mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$,

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$\mathrm{CH}_{2}-\mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2}$-C $\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}$. $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}}$-phenyl, and $\mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{Cl}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{CH}_{2} \mathrm{OR}^{2}, \mathrm{CH}_{2} \mathrm{~F}$, $\mathrm{CH}_{2} \mathrm{Br}, \mathrm{CH}_{2} \mathrm{Cl}, \mathrm{CH}_{2} \mathrm{CN}^{2}, \mathrm{CH}_{2} \mathrm{NO}_{2}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}$, $\mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}, \mathrm{CF}_{3}$, phenyl substituted with $0-1 \mathrm{R}^{5}$, and benzyl substituted with 0-1 $\mathrm{R}^{5}$;
$\mathrm{R}^{5}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{OR}^{3}$, $\mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}$, $\mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}, \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{Cl}_{3}$, phenyl substituted with $0-2 R^{6}$, naphthyl substituted with $0-2 R^{6}$, and benzyl substituted with $0-2$ $\mathrm{R}^{6}$; and,
$\mathrm{R}^{6}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}$, $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, and $\mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{C}_{1-4}$ alkyl.

Claim 4 (Previously presented) A compound according to Claim 3, wherein;
$G$ is selected from the group:












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## Amendment

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$\mathrm{G}_{1}$ is absent or is selected from $\mathrm{CH}_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2}, \mathrm{CH}_{2} \mathrm{O}, \mathrm{OCH}_{2}, \mathrm{NH}, \mathrm{CH}_{2} \mathrm{NH}, \mathrm{NHCH}_{2}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O})$, $\mathrm{C}(\mathrm{O}) \mathrm{CH}_{2}, \mathrm{C}(\mathrm{O}) \mathrm{NH}, \mathrm{NHC}(\mathrm{O}), \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{2}, \mathrm{~S}(\mathrm{O})_{2}\left(\mathrm{CH}_{2}\right), \mathrm{SO}_{2} \mathrm{NH}$, and $\mathrm{NHSO}_{2}$, provided that $\mathrm{G}_{1}$ does not form a $\mathrm{N}-\mathrm{S}, \mathrm{NCH}_{2} \mathrm{~N}, \mathrm{NCH}_{2} \mathrm{O}$, or $\mathrm{NCH}_{2} \mathrm{~S}$ bond with either group to which it is attached;
$\mathrm{R}^{1 \mathrm{a}}$ is selected from $\mathrm{H}, \mathrm{R}^{1 \mathrm{~b}}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{2} \mathrm{R}^{1 \mathrm{~b}}$, and $\mathrm{CH}_{2} \mathrm{R}^{1 \mathrm{~b}}$, provided that $\mathrm{R}^{1 \mathrm{a}}$ forms other than an N -halo, $\mathrm{N}-\mathrm{S}$, or $\mathrm{N}-\mathrm{CN}$ bond;
$\mathrm{R}^{1 \mathrm{~b}}$ is selected from $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br},-\mathrm{CN}, \mathrm{CF}_{3}, \mathrm{OR}^{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 b}, \mathrm{CO}_{2} \mathrm{R}^{2 b}$, $\mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{2}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{2}$, and 5-6 membered aromatic heterocycle consisting of carbon atoms and from 1-4 heteroatoms selected from the group
consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 R^{4 b}$, provided that $R^{1 b}$ forms other than an $\mathrm{O}-\mathrm{O}, \mathrm{N}$-halo, $\mathrm{N}-\mathrm{S}$, or $\mathrm{N}-\mathrm{CN}$ bond;
$\mathrm{R}^{2}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, phenyl substituted with $0-1 R^{4 b}$, benzyl substituted with $0-1 R^{4 b}$, and 5-6 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-1 \mathrm{R}^{4 \mathrm{~b}}$;
$\mathrm{R}^{2 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with 0-1 $\mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-1 R^{4 b}$;
alternatively, $R^{2}$ and $R^{2 a}$, together with the atom to which they are attached, combine to form a 5 or 6 membered saturated, partially saturated or unsaturated ring substituted with $0-1 R^{4 b}$ and consisting of: $0-1$ additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $S(O)_{p}$;
$\mathrm{R}^{2 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with $0-1 \mathrm{R}^{4 b}$, and 5-6 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-1 \mathrm{R}^{4 \mathrm{~b}}$;
$\mathrm{R}^{2 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{OH}, \mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with $0-1 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle containing from 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{p}$, and substituted with $0-1 \mathrm{R}^{4 \mathrm{~b}}$;

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$\mathrm{R}^{4}$, at each occurrence, is selected from $\mathrm{OH}, \mathrm{OR}^{2}, \mathrm{CH}_{2} \mathrm{OR}^{2},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Br}, \mathrm{Cl}, \mathrm{I}, \mathrm{CH}_{3}$,
$\mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CF}_{3}$, and $\mathrm{CF}_{2} \mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{2} \mathrm{OR}^{2}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Br}, \mathrm{Cl}^{2}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 b}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, and $\mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{ClI}_{\left(\mathrm{CH}_{3}\right)}^{2},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}$, $\mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, and $\mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, phenyl substituted with $0-1 \mathrm{R}^{5}$, and benzyl substituted with 0-1 R 5 ;
$\mathrm{R}^{5}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{OR}^{3}$, $\mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{CF}_{3}$, phenyl substituted with $0-2 \mathrm{R}^{6}$, naphthyl substituted with $0-2 \mathrm{R}^{6}$, and benzyl substituted with 0-2 $\mathrm{R}^{6}$; and,
$\mathrm{R}^{6}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}$, and $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$.

Claim 5. (Currently Amended) A compound according to Claim 4, wherein;
$G$ is selected from:































A is selected from the group: phenyl, 2-Cl-phenyl, 3-Cl-phenyl, 2-F-phenyl, 3-F-phenyl, 2methylphenyl, 2-aminophenyl, and 2-methoxyphenyl;
$B$ is attached to a different atom on $A$ than $M$ and is frem the group:



$\mathrm{R}^{1 \mathrm{a}}$ is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{~F}, \mathrm{CH}_{2} \mathrm{Cl}, \mathrm{Br}, \mathrm{CH}_{2} \mathrm{Br},-\mathrm{CN}, \mathrm{CH}_{2} \mathrm{CN}$, $\mathrm{CF}_{3}, \mathrm{CH}_{2} \mathrm{CF}_{3}, \mathrm{OCH}_{3}, \mathrm{CH}_{2} \mathrm{OH}, \mathrm{C}_{\left(\mathrm{CH}_{3}\right)_{2} \mathrm{OH}, \mathrm{CH}_{2} \mathrm{OCH}_{3}, \mathrm{NH}_{2}, \mathrm{CH}_{2} \mathrm{NH}_{2}, \mathrm{NHCH}_{3} \text {, }}$ $\mathrm{CH}_{2} \mathrm{NHCH}_{3}, \mathrm{~N}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{~N}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CO}_{2} \mathrm{H}, \mathrm{COCH}_{3}, \mathrm{CO}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CO}_{2} \mathrm{CH}_{3}, \mathrm{SCH}_{3}$, $\mathrm{CH}_{2} \mathrm{SCH}_{3}, \mathrm{~S}(\mathrm{O}) \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O}) \mathrm{CH}_{3}, \mathrm{~S}(\mathrm{O})_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{2} \mathrm{CH}_{3}, \mathrm{C}(\mathrm{O}) \mathrm{NH}_{2}$, $\mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NH}_{2}, \mathrm{SO}_{2} \mathrm{NH}_{2}, \mathrm{CH}_{2} \mathrm{SO}_{2} \mathrm{NH}_{2}, \mathrm{NHSO}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{NHSO}_{2} \mathrm{CH}_{3}$, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyridin-2-yl-N-oxide, pyridin-3-yl-N-oxide, pyridin-4-yl-Noxide, imidazol-1-yl, $\mathrm{CH}_{2}$-imidazol-1-yl, 4-methyl-oxazol-2-yl, 4-N,N-dimethylaminomethyl-oxazol-2-yl, 1,2,3,4-tetrazol-1-yl, 1,2,3,4-tetrazol-5-yl, $\mathrm{CH}_{2}$ -$1,2,3,4$-tetrazol-1-yl, and $\mathrm{CH}_{2}-1,2,3,4$-tetrazol-5-yl, provided that $\mathrm{R}^{1 a}$ forms other than an N-halo, N-S, or N-CN bond;
$\mathrm{R}^{2}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, phenyl substituted with $0-1 R^{4 b}$, benzyl substituted with $0-1 R^{4 b}$, and 5 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-1 R^{4 b}$;
$\mathrm{R}^{2 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}$, and $\mathrm{CH}_{2} \mathrm{CH}_{3}$;
alternatively, $R^{2}$ and $R^{2 a}$, together with the atom to which they are attached, combine to form a 5 or 6 membered saturated, partially saturated or unsaturated ring substituted with $0-1 R^{4 b}$ and consisting of: $0-1$ additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{2 b}$, at each occurrence, is selected from $\mathrm{OCl}_{3}, \mathrm{OCl}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{3}$, and $\mathrm{CH}_{2} \mathrm{CH}_{3}$;
$\mathrm{R}^{2 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{OH}, \mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{3}$, and $\mathrm{CH}_{2} \mathrm{CH}_{3}$;
$\mathrm{R}^{4 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{Cl}\left(\mathrm{Cl}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}$, and $\mathrm{C}\left(\mathrm{CH}_{3}\right)_{3} ;$
$\mathrm{R}^{4 b}$, at cach occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{2} \mathrm{CH}_{3}, \mathrm{~S}(\mathrm{O})_{2}$-phenyl, and $\mathrm{CF}_{3}$;
$\mathrm{R}^{5}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{2}-\mathrm{CH}_{3}, \mathrm{~S}(\mathrm{O})_{2}$-phenyl, $\mathrm{CF}_{3}$, phenyl substituted with $0-2 \mathrm{R}^{6}$, naphthyl substituted with $0-2 \mathrm{R}^{6}$, and benzyl substituted with $0-2 \mathrm{R}^{6}$; and;
$\mathrm{R}^{6}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}$, and $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$.

Claim 6. (Currently Amended) A compound according to Claim 5, wherein the compound is:

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$\mathrm{P}_{4}$ is -G;
$G$ is selected from:











and,

A-B is selected from:




Claim 7. (Currently Amended) A compound according to Claim 6, wherein :

A-B is seleeted from:


8. (Currently Amended) A compound according to Claim 1, wherein the compound is selected from the group:

3-methoxy-1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-1,4,5,6-tetrahydro-7-H-
pyrazolo[3,4-c]pyridin-7-one;

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1-(4-methoxyphenyl)-3-[(methylamino)methyl]-6-[4-(2-oxo-1-piperidinyl)phenyl]-1,4,5,6-tetrahydro- 7 H -pyrazolo $[3,4-c]$ pyridin- 7 -one;

1-(3-chloro-4-fluorophenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7 H -pyrazolo[3,4-c]pyridine-7-one;

1-[3-(aminomethyl)-4-fluorophenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridine-7-one;

1-(3-amino-1,2-benzisoxazol-5-yl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro- 7 H -pyrazolo[3,4-c]pyridine-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro$7 H$-pyrazolo[3,4-c]pyridin-7-onc;

1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridine-3-carbonitrile;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(1 H -tetraazol-5-yl)-1,4,5,6-tetrahydro- $7 H$-pyra\%olo [3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyll-4,5,6,7-tetrahydro-1 $H$-pyrazole-o[3,4-c]pyridine-3-carboxamide;

3-bromo-1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl) phenyl] $1,4,5,6$-tetrahydro- $7 \mathrm{H}-$ pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(4-pyridinyl)-1,4,5,6-tetrahydro-7 H -pyrazolo[3,4-c]pyridin-7-one;

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1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(4-pyridinyl-N-oxide)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(3-pyridinyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-onc;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(3-pyridinyl-N-oxide)-1,4,5.6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(2-pyridinyl)-1,4,5,6-tetrahydro-7 H -pyrazolo[3,4-c]-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl) phenyl]1,4,5,6-tetrahydro-7 H -pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-7-0x0-6-44(20x0-1(2H)-pyridinyl)phenyl-4,5,6,7-tetrahydro-1H pyrazolo[3,4-e]pyridine-3-carboxamide;

1-(4-methoxyphenyl)-3-(methylsulfonyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

## 1-(4-methoxyphenyl)-6-(4-(2-0x0-1(2H)-pyridinyl)phenyl-3-(2-pyridinyl)-1,4,5,6-tetrahydro-7H pyrazolo[3,4-e]pyridin-7-one;

1-[3-(aminomethyl)phenyl]-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

3-[7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridin-1-yl]benzamide;

1-(3-chlorophenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4.5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide;

## 

 pyrazolo[3,4-e|pyridine-3-earboxamide;1-(3-chlorophenyl)- $\mathrm{N}, \mathrm{N}$-dimethyl-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(3-chloro-4-fluorophenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(4-methөхурhenyl)-7-0x0-6-44-(2-0x0-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazole\{3,4-c]pyridite-3-earbonitrile;

1-(3-amino-1 H -indazol-5-yl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(3-amino-1,2-benzisoxazol-5-yl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide;
 4,4,5,6-tetrahydro-7/H-pyrazolo[3,4-e]pyridin-7-ппе;

1-(2,3-dihydro-1 H-indol-6-yl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

1-(2,3-dihydro-1H-isoindol-5-yl)-6-F4-(2-0xa-2H-pyridin-1-yl)phenyl-3-trifluoromethyl-1,4,5,6-tetrahydropyrazolo 3,4-e|pyidin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-3-(2-pyrrolidin-1-ylmethyl-phenyl)-1,4,5,6-tetrahydro-pyrazolo [3,4-c]pyridin-7-one;
ethyl1-(4-methexyphenyl) 7 -0хө-6-14-(2-0x0-1(2H)-pyridinyl)phenyH-4,5,6,7-tetrahydre-1H-pyrazolo $\{3 ; 4$-c]pyridine-3-carboxylate;

1-(4-methoxyphenyl)-7-0x0-6-[4-(2-0x0-1(2H)-pyridinyl)phenyl]-4,5,6,7 tetrahydre-1H-


1-(4-methexyphenyl)-N,N-dimethyl-7-0xe-6-14-(2-0x0-1(2H)-pyridinyl)phenyl $\mathbf{- 4 , 5 , 6 , 7 -}$ tetrahydro-1H-pyrazolo 3 3-4-c|pyridine-3-earboxamide;

N-(\{1-(4-methoxyphenyl)-7-0x0-6-H4-(2-0x-1(2H)-pyridiny )phenyl/-4,5,6,7 tetrahydro-1H-pyrazolo|3,4-c|pyridin-3-yHearbonyl)methanesulfonamide;

1-(4-hydroxy-phenyl)-7-oxo-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxylic acid amide;

1(4-methexyphenyl)-6-[4-(2-0x0-1(2IA-pyridinyl)phenyl]-3-(1H-tetranzol-5-yl)-1,4,5,6,-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

3-\{4-[dimethylamino)methyl]-1,3-0xazol-2-yl\}-1-(4-methoxyphenyl)-6-[4-(2-0x0-1(2H) pyridinyl)phenyIJ-1,4,5,6,-tetrahydro-7H-pyrazolo[3,4-c|pyridin-7-0ne;

3-\{4-[dimethylamino)methyl]-1,3-oxazol-2-yl\}-1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-1,4,5,6,-tetrahydro-7 H -pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxy-phenyl)-3-(4-methyl-oxazol-2-yl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

4-(4-methoxy-phenyl)-3-(4-methyl-oxazol-2-yl)-6-4(2-oxo-2H-pyridin-1-yl)-phenyl-1,4,5,6-tetrabydro-pyrazolo[3,4-c]pyridin-7-one;

3-acetyl-1-(4-methoxy-pheny)-6-4-(2-0x0-2H-pyridin-1-y $)$-pheny $]$-1,4,5,6-tetrahydropyrazole 3 3-4-elpyridin-7-one;

3-(4,5-dihydro-1H-imidazol-2-yI)-1-(4-methoxy-phenyl)-6-[4-(2-0x0-2H-pyxidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo 3,4 -elpyridin-7-one;

1-(4-methoxy-phenyl)-3-(1-methyl-4,5-dihydro-1H-imidazol-2-yl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxy-phenyl)-3-(1-methyl-1H-imidazol-2-yl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxy-phenyl)-3-methyl-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

3-hydroxymethyl-1-(4-methoxy-phenyl)-6-4-(2-0x $-2 H$-pyridin-1-yl)-phenyl $1,4,5,6-$
tetrahydro-pyrazolo 3,4 - 1 -tetrahydro-pyrazolo[3,4-e]pyridin-7-ante;

3-(1-hydroxy-1-methyl-ethyl)-1-(4-methoxy-phenyl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-letrahydropyrazolo[3,4-c]pyridin-7-one;

3-(1-hydroxy-1-methyl-ethyl)-1-(4-methoxy-phenyl)-6-[4-(2-oxo-2H-pyridin-1-yl)-phenylf-1,4,5,6-tetrahydro-pyrazolo|3,4-e|pyridin-7-one;

2-dimethylamino- $N$-\{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-piperidin-1-yl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridin-3-ylmethyl $\}$ - N -methylacetamide;

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2dimethylamine- N - (1-(4-methoxyphenyl)-7-0xo-6-4-(2-oxo-2H-pyridim-1-yl)-phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo\{3,4-e]pyridin-3-ylmethyłaeetamide;

N - 1 -(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-piperidin-1-yl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridin-3-ylmethyl\}-2-pyridin-2-yl-acetamide;

N -\{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-piperidin-1-yl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridin-3-ylmethyl\}-2-(1-oxypyridin-2-yl)acetamide;

N-hydroxy-3-17-0x日-6-[4-(2-0xo-2H-pyridin-1-yl)-phenyl]-3-triflworomethyl-4,5,6,7tetrahydre pyrazolo $\{3,4-\mathrm{e}]$ pyridin-1-yl]-benzamidine;

N -methoxy-3-\{7-0x0-6-4-(2-0xн-2H-pyridin-1-yl)-phenyl-3-trilluoromethyl-4,5,6,7-7 tetrahydro-pyrazolo[3,4-c|pyridin-1-yl]-benzamidine;

1-(3-cyano-4-fluorophenyl-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(3-aminomethyl-4-fluoro-phenyl)-7-oxo-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-4,5,6,7-tetrahydro-1 H-pyrazolo[3,4-c]pyridine-3-carboxylic acid amide;

2-\{7-oxo-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-3-trifluoromethyl-4,5,6,7-tetrahydro-pyrazolo[3,4-c]pyridin-1-yl\}-benzenesulfonamide;

2-(7-0x0-6-4-(2-0x $0-2 H-$ pyridin-1-yl)-phenyly-3-tiffuoromethyl-4,5,6,7-tetrahydre-pyrazolo\{3,4-c]pyridin-1-yI]-benzeneswlfanamide;

N-meety-2-17-0x日-6-54-(2-0x0-2H-pyridin-1-yl)-phenyl-3-trifluofomethyl-4,5,6,7-tetrahydro-pyrazolo[3,4-e|pyridin-1-y|]-benzenesulfonzmide;

1-(3-chloro-phenyl)-3-methanesulfonyl-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one; and

## 1-(3-ehlore-phenyl) 3-methanesulfonyl-6-14-(2-0x0-2H-pyridin-1-yl)-phenyl-1,4,5,6tetrahydro pyrazolo 3 3,4-c|pyridin-7-one;

1-(3-chloro-phenyl)-3-(1-hydroxy-1-methyl-ethyl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tctrahydro-pyrazolo[3,4-c]pyridin-7-one;

##  pyrazolo[3,4-elpyridin-1-yl]-benzamide;

or a pharmaceutically acceptable salt form thereof.

Claims 9-15 (Previously canceled)

Claim 16. (Original) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 1 or a pharmaceutically acceptable salt form thereof.

Claim 17. (Original) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 1 or a pharmaceutically acceptable salt form thereof.

Claim 18. (Original) A method according to Claim 17, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous
cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 19. (Original) A method according to Claim 17, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claims 20-30 (Previously canceled)

Claim 31. (Currently amended) A compound according to Claim 8, wherein the compound is:

1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazole@ $[3,4$-c] pyridine-3-carboxamide
or a pharmaceutically acceptable salt form thereof.

Claim 32. (Canceled)

Claim 33. (Previously presented) A compound according to Claim 8, wherein the compound is:

1-(4-methoxyphenyl)-3-(methylsulfonyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one
or a pharmaceutically acceptable salt form thereof.

Claim 34. (Previously presented) A compound according to Claim 8, wherein the compound is:

1-(3-chlorophenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridine-3-carboxamide
or a pharmaceutically acceptable salt form thereof.

Claims 35-37. (Canceled)

Claim 38. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 2 or a pharmaceutically acceptable salt form thereof.

Claim 39. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 3 or a pharmaceutically acceptable salt form thereof.

Claim 40. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapcutically effective amount of a compound of Claim 4 or a pharmaceutically acceptable salt form thereof.

Claim 41. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 5 or a pharmaceutically acceptable salt form thereof.

Claim 42. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 6 or a pharmaccutically acceptable salt form thereof.

Claim 43. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 7 or a pharmaceutically acceptable salt form thereof.

Claim 44. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 8 or a pharmaceutically acceptable salt form thereof.

Claim 45. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 31 or a pharmaceutically acceptable salt form thereof.

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Claim 46. (Canceled)

Claim 47. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 33 or a pharmaceutically acceptable salt form thereof.

Claim 48. (Previously presented) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 34 or a pharmaceutically acceptable salt form thereof.

Claims 49-51. (Canceled)

Claim 52. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 2 or a pharmaceutically acceptable salt form thereof.

Claim 53. (Previously presented) A method according to Claim 52, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 54. (Previously presented) A method according to Claim 52, whercin the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack,

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stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 55. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 3 or a pharmaceutically acceptable salt form thereof.

Claim 56. (Previously presented) A method according to Claim 55, wherein the thrombocmbolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 57. (Previously presented) A method according to Claim 55, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

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Claim 58. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 4 or a pharmaceutically acceptable salt form thereof.

Claim 59. (Previously presented) A method according to Claim 58, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 60. (Previously presented) A method according to Claim 58, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or ( $f$ ) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 61. (Previously presented) A method for trcating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 5 or a pharmaceutically acceptable salt form thereof.

Claim 62. (Previously presented) A method according to Claim 61, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic

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disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 63. (Previously presented) A method according to Claim 61, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 64. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 6 or a pharmaceutically acceptable salt form thereof.

Claim 65. (Previously presented) A method according to Claim 64, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 66. (Previously presented) A method according to Claim 64, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein
thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidncy embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 67. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 7 or a pharmaceutically acceptable salt form thereof.

Claim 68. (Previously presented) A method according to Claim 67, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thrombocmbolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 69. (Previously presented) A method according to Claim 67, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transięnt ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, ccrebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Amendment

Claim 70. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 8 or a pharmaceutically acceptable salt form thereof.

Claim 71. (Previously presented) A method according to Claim 70, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 72. (Previously presented) A method according to Claim 70 whercin the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 73. (Previously presented) A method for treating a thromboembolic disordcr, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 31 or a pharmaceutically acceptable salt form thereof.

Claim 74. (Previously presented) A method according to Claim 73, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic

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## Amendment

disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 75. (Previously presented) A method according to Claim 73, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 76. (Previously presented) A method according to Claim 73, wherein the thromboembolic disorder is an acute coronary syndrome.

Claim 77. (Previously presented) A method according to Claim 73, wherein the thromboembolic disorder is stroke.

Claim 78. (Previously presented) A method according to Claim 73, wherein the thromboembolic disorder is deep vein thrombosis.

Claim 79. (Previously presented) A method according to Claim 73, wherein the thromboembolic disorder is pulmonary embolism.

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Claims 80-86. (Canceled)

Claim 87. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 33 or a pharmaceutically acceptable salt form thereof.

Claim 88. (Previously presented) A method according to Claim 87, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 89. (Previously presented) A method according to Claim 87, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 90. (Previously presented) A method according to Claim 87, wherein the thromboembolic disorder is an acute coronary syndrome.
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USSN: $10 / 245,122$

Claim 91. (Previously presented) A method according to Claim 87, wherein the thromboembolic disorder is stroke.

Claim 92. (Previously presented) A method according to Claim 87, wherein the thromboembolic disorder is deep vein thrombosis.

Claim 93. (Previously presented) A method according to Claim 87, wherein the thromboembolic disorder is pulmonary embolism.

Claim 94. (Previously presented) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 34 or a pharmaceutically acceptable salt form thereof.

Claim 95. (Previously presented) A method according to Claim 94, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 96. (Previously presented) A method according to Claim 94, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d)
cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 97. (Previously presented) A method according to Claim 94, wherein the thromboembolic disorder is an acute coronary syndrome.

Claim 98. (Previously presented) A method according to Claim 94, wherein the thromboembolic disorder is stroke.

Claim 99. (Previously presented) A method according to Claim 94, wherein the thromboembolic disorder is deep vein thrombosis.

Claim 100. (Previously presented) A method according to Claim 94, wherein the thromboembolic disorder is pulmonary embolism.

Claims 101-121. (Canceled)

Claim 122. (New) A compound according to Claim 31 is a crystalline compound.

Claim 123. (New) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 122.

Claim 124. (New) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 122.

Claim 125. (New) A method according to Claim 124, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 126. (New) A method according to Claim 124, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arlerial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 127. (New) A method according to Claim 126, wherein the thromboembolic disorder is an acute coronary syndrome.

Claim 128. (New) A method according to Claim 126, wherein the thromboembolic disorder is stroke.

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Claim 129. (New) A method according to Claim 126, wherein the thromboembolic disorder is deep vein thrombosis.

Claim 130. (New) A method according to Claim 126, whercin the thromboembolic disorder is pulmonary embolism.

Claim 131. (New) A process for the preparation of the crystalline compound according to Claim 122, comprising recrystallization from isopropyl alcohol or $\mathrm{CH}_{2} \mathrm{Cl}_{2} / \mathrm{EtOAc}$.

Claim 132. (Ncw) A process for the preparation of the crystalline compound according to Claim 122, comprising recrystallization from isopropyl alcohol.

Claim 133. (New) A process for the preparation of the crystalline compound according to Claim 122 , comprising recrystallization from $\mathrm{CH}_{2} \mathrm{Cl}_{2} / \mathrm{EtOAc}$.

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## Amendment

## REMARKS

## Status

Claims 1-8, 16-19, 31, 33-34, 38-45, 47-48, 52-79, 87-100 and 122-133 will be pending upon entry of the present amendments. Amendments to the specification are made to correct clerical errors. Support for the present amendments is inherent in the specification. Support for new Claims 122-133 can be found as show in the following table. No new matter will be added upon entry of the present amendments.

| Claim | Support |
| :--- | :--- |
| 122 | Example 18 |
| 123 | Original Claim 16 |
| 124 | Original Claim 17 |
| 125 | Original Claim 18 |
| $126-130$ | Original Claim 19 |
| $131-133$ | Example 18 |

In view of the foregoing, Applicants submit that the application is now in condition for allowance. Early notification of such action is carnestly solicitcd. If the Examiner has any questions or believes further discussion will aid examination and advance prosecution of the application, a telephone call to the undersigned is invited.

Respectfully submitted,

Date: September 16, 2004


## Bristol-Myers SquibbCompany

Patent Department
P.O. Box 4000

Princeton, NJ 08543-4000
(609) 252-3791 (phone)


## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF
PINTO ET AL.
APPLICATION NO: 10/245,122

Examiner: Rifle, B.
Group Art Unit: 1624
Confirmation No.: 6870

FILED: SEPTEMBER 17, 2002
FOR: LACTAM-CONTAINING COMPOUNDS AND DERIVATIVES THEREOF AS FACTOR KA INHIBITORS

Commissioner for Patents
P.O. Box 1450

Alexandria, VA 22313-1450

Sir:


Transmitted herewith is an amendment in the above-identified application.

Fee calculation:

$\boxtimes$ Please charge Deposit Account No. 19-3880 in the name of Bristol-Myers Squibb Company in the amount of $\$ 1314.00$. An additional copy of this paper is enclosed. The Commissioner is hereby authorized to charge any additional fees under 37 C.F.R. $\$ 1.16$ and $\S 1.17$ which may be required, or credit any overpayment, to Account No. 19-3880 in the name of Bristol-Myers Squibb Company.

- $\square$ Enclosed is a Petition for Extension of Time.

Respectfully submitted,

Bristol-Myers Squibb Company
Patent Department
P.O. Box 4000

Princeton, NJ 08543-4000
(609) 252-3791

Date: November 19, 2003



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: D. Pinto et al. Examiner: Kifle, B.
Serial No.: 10/245,122 Group Art Unit: 1624

Filed: $\quad$ September 17, $2002 \quad$ Confirmation No. 6870

## For: LACTAM-CONTAINING COMPOUNDS AND DERIVATIVES THEREOF AS <br> FACTOR XA INHIBITORS

Commissioner for Patents
P.O. Box 1450

Alexandria, VA 22313-1450
Dear Sir:

## AMENDMENT AND REQUEST FOR RECONSIDERATION

Responsive to the Office Action mailed October 23, 2003, Applicant respectfully requests reconsideration in view of the following amendments and remarks.

Amendments to the Claims are represented by the listing of claims which begins on page 2 of this paper.

Remarks begin on page 93 of this paper.

## AMENDMENT

Subject matter to be added is in bold and underlined.
Subject matter to be deleted is in bold and strikethrough.

## In the Claims:

Please (a) cancel Claims 9-15 and 20-30; (b) enter rewritten Claims 1-8; and, (c) add new Claims 31-121 as follows.

This listing of claims will replace all prior versions and listings of claims in the application.

## Listing of Claims:

Claim 1. (Currently Amended) A compound of Formula I:


## RECEIVED

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M is a 3-10 membered carbocyele or a-4-10 membered heterocycle, consisting of: carbon atoms and $1-3$ heteroatoms selected from $\theta, S(\theta)_{p}, N$, and $\mathrm{NZ}^{2}$;
ring Mis substituted with 0-3 $R^{19}$ nnd 0-2 earbonylgroups, and there are 0 - $\mathbf{3}$ ring double bonds;
$P$ is fused onto ring $M$ and is a 5,6, or 7 membered carbocycle or a-5,6, or 7 membered heterocycle, consisting of: carbon atoms and $\mathbf{1 - 3}$ heteroatoms selected from- $\boldsymbol{\theta}$, $S(\theta)_{p}$, and $\mathbf{N}$;
ring $P$ is substituted with $0-3 R^{1 a}$ and-0-2 carbonylgroups, and there are 0 -3 ring double bends;
alternatively, ring $P$ is absent and $P_{4}$ is directly attached to ring $M$, provided that when ring $P$ is absent, $P_{4}$ and $M_{4}$ are attached to the $1,2,1,3$, or $\mathbf{1 , 4}$ positions of ring $M$;
one of $P_{4}$ and $\mathrm{M}_{4}$ is -A-B -Z-A-B and the other- $\mathrm{G}_{\mathbf{4}}-\mathbf{G}$;

## $\underline{P}_{4}$ is $-G_{1}-G_{\text {; }}$

G is a group of Formula IIa or IIb :


Па


IIb
ring $\cdot \mathrm{D}$, including the two atoms of Ring E to which it is attached, is a 5-6 membered ring consisting of: carbon atoms and $0-2$ heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
ring $D$ is substituted with $0-2 R$ and there are 0-3 ring double bonds;

E is selected from phenyl, pyridyl, pyrimidyl, pyrazinyl, and pyridazinyl, and is substituted with 1-2 R;
alternatively, ring $D$ is absent and ring E is selected from phenyl, pyridyl, pyrimidyl, pyrazinyl, pyridazinyl, pyrrolyl, pyrazolyl, imidazolyl, isoxazolyl, oxazolyl, triazolyl, thienyl, and thiazolyl, and ring E is substituted with 1-2 R;
alternatively, ring $D$ is absent and ring $E$ is selected from phenyl, pyridyl, pyrimidyl, pyrazinyl, pyridazinyl, pyrrolyl, pyrazolyl, imidazolyl, isoxazolyl, oxazolyl, triazolyl, thienyl, and thiazolyl, and ring E is substituted with 1 R and with a 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, wherein the 5-6 membered heterocycle is substituted with $0-1$ carbonyl and 1-2 R and there are $0-3$ ring double bonds;

R is selected from $\mathrm{H}, \mathrm{C}_{1-4}$ alkyl, $\mathrm{F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I}, \mathrm{OH}, \mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{OCH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CN}, \mathrm{C}\left(=\mathrm{NR}^{8}\right) \mathrm{NR}^{7} \mathrm{R}^{9}, \mathrm{NHC}\left(=\mathrm{NR}^{8}\right) \mathrm{NR}^{7} \mathrm{R}^{9}, \mathrm{ONHC}\left(=\mathrm{NR}^{8}\right) \mathrm{NR}^{7} \mathrm{R}^{9}$, $\mathrm{NR}^{8} \mathrm{CH}\left(=\mathrm{NR}^{7}\right), \mathrm{NH}_{2}, \mathrm{NH}\left(\mathrm{C}_{1-3}\right.$ alkyl $), \mathrm{N}\left(\mathrm{C}_{1-3} \text { alkyl }\right)_{2}, \mathrm{C}(=\mathrm{NH}) \mathrm{NH}_{2}, \mathrm{CH}_{2} \mathrm{NH}_{2}$, $\mathrm{CH}_{2} \mathrm{NH}\left(\mathrm{C}_{1-3}\right.$ alkyl $), \mathrm{CH}_{2} \mathrm{~N}\left(\mathrm{C}_{1-3} \text { alkyl }\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{NH}_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{NH}\left(\mathrm{C}_{1-3}\right.$ alkyl $)$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{~N}\left(\mathrm{C}_{1-3} \text { alkyl }\right)_{2},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{C}(\mathrm{O}) \mathrm{H},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{NR}^{7} \mathrm{R}^{8}$, $\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{7} \mathrm{R}^{8},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{NR}^{7} \mathrm{C}(\mathrm{O}) \mathrm{R}^{7},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{OR}^{3},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{NR}^{7} \mathrm{R}^{8}$, $\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{NR}^{7} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{7},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{SR}^{3},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{S}(\mathrm{O}) \mathrm{R}^{3},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{S}(\mathrm{O})_{2} \mathrm{R}^{3}$, and $\mathrm{OCF}_{3}$;
alternatively, when 2 R groups are attached to adjacent atoms, they combine to form methylenedioxy or ethylenedioxy;

A is selected from:
$\mathrm{C}_{3-10}$ carbocycle substituted with $0-2 \mathrm{R}^{4}$,and
5-12 membered heterocyele consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \boldsymbol{\theta}$, and $\mathrm{S}(\Theta)_{\text {p }}$, and stbstituted with $\mathbf{0 - 2} \mathbf{R}^{\mathbf{4}}$, provided that A is other than a dihydro-benzopyran;
 ; provided that Z and B are attached to different atoms on A and that the A-X-N moiety forms other than a $\mathrm{N}-\mathrm{N}-\mathrm{N}$ group;
provided that B is other than triazolone, quinolone, or isequinolone, wherein the triazolone, quinolone, and isequinolone groups are substituted or unsubstituted;
$\mathrm{Q}_{1}$ is selected from $\mathrm{C}=\mathrm{O}$ and $\mathrm{SO}_{2}$;
ring $Q$ is a 6 4-8 membered monocyclic orbicyclie ring ennsisting of, in addition to the $\mathrm{N}-\mathrm{Q}_{4}$ group shown, carbon atoms and $0-2$ hetereatoms selected from $\mathrm{NR}^{4 \epsilon}, \theta, \mathrm{~S}, \mathrm{~S}(\Theta)$, and $S(\Theta)_{2}$, wherein:
$0-2$ double bonds are present within the ring and the ring is substituted with $0-2$ $\mathrm{R}^{4 \mathrm{a}}$;
alternatively, ring $Q$ is a 48 membered monocyelic or bicyelic ring to which anether ring is fused,-wherein:
the $4-7$ membered ring consists of, in addition to the shown umide group, carbon atoms and 02 heteroutems selected from $\mathrm{NR}^{4 e}, \Theta, S, S(\theta)$, and $S(\theta) \neq$, and 0 - 2 deuble bends are present within the ring;
the fusion ring is phenyl-or a $5-6$ membered heteroaromatic consisting of earben atoms and 12 hetereatems elected frem $\mathrm{NR}^{4 \epsilon},-\theta, S, S(\Theta)$, and $S(\Theta)_{2}$;
ring $Q$, which includes the 47 membered ring and the fusion ring, is substituted with $03 R^{4 a}$;
alternatively, twe nen aljacent atems of one the rings of ring $Q$ are bridged with 12 atems selected from: Cubentems, $\mathrm{NR}^{4 \epsilon}, \Theta, S, S(\Theta)$, and $S(\Theta)_{z}$, provided bends ther than $\theta, S(\theta)_{p}-\theta, S(\theta)_{p} S(\theta)_{\rho}, N-O$, and $N S(\theta)_{p}$ are present;






$G_{1}$ is absent or is selected from $\left(C R^{3} R^{3 a}\right)_{1-5},\left(C R^{3} R^{3 a}\right)_{0-2} C R^{3}=C R^{3}\left(C R^{3} R^{3 a}\right)_{0-2},\left(C R^{3} R^{3 a}\right)_{0-}$ ${ }_{2} \mathrm{C} \equiv \mathrm{C}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{0-2},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{u} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{O}\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{w}}$, $\left(C R^{3} R^{3 a}\right)_{u} O C(O)\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} O\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} N^{3 b}\left(C R^{3} R^{3 a}\right)_{w}$, $\left(C R^{3} R^{3 a}\right)_{u} C(O) N^{3 b}\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} N^{3 b} C(O)\left(C R^{3} R^{3 a}\right)_{w}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{OC}(\mathrm{O}) \mathrm{N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{N}^{3 b} \mathrm{C}(\mathrm{O}) \mathrm{O}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$, $\left(C R^{3} R^{3 a}\right)_{u} N^{3 b} C(O) N^{3 b}\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} N^{3 b} C(S) N^{3 b}\left(C R^{3} R^{3 a}\right)_{w}$, $\left(C R^{3} R^{3 a}\right)_{U} S\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} S(O)\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} S(O)_{2}\left(C R^{3} R^{3 a}\right)_{w}$, $\left(C R^{3} R^{3 a}\right)_{U} S(O) N^{3 b}\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{U} N^{3 b} S(O)_{2}\left(C R^{3} R^{3 a}\right)_{w}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{S}(\mathrm{O})_{2} \mathrm{~N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{N}^{3 \mathrm{~b}} \mathrm{~S}(\mathrm{O})_{2} \mathrm{~N}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$,
$\left(C R^{3} R^{3 a}\right)_{u} N R^{3 e}\left(C R^{3} R^{3 a}\right)_{w},\left(C^{3} R^{3 a}\right)_{u} C(O)\left(C R^{3} R^{3 a}\right)_{u} C(O)\left(C R^{3} R^{3 a}\right)_{w}$,
$\left(C R^{3} R^{3 a}\right)_{u} N R^{3 b}\left(C R^{3} R^{3 a}\right)_{u} C(O) N R^{3 b}\left(R^{3} R^{3 a}\right)_{w}$,
$\left(C R^{3} R^{3 a}\right)_{u} N R^{3 b} C(O)\left(C R^{3} R^{3 a}\right)_{u} C(O)\left(C R^{3} R^{3 a}\right)_{w}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$,
$\left(C R^{3} R^{3 a}\right)_{\mathrm{u}} \mathrm{NR}^{3 b} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{S}(\mathrm{O}) \mathrm{NR}^{3 \mathrm{~b}} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3 \mathrm{~b}} \mathrm{~S}(\mathrm{O})_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{w}}$, and
$\left.\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{S}(\mathrm{O})_{2} \mathrm{NR}^{3 b} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3 b} \mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$, wherein $\mathrm{u}+\mathrm{w}$ total $0,1,2$, 3, or 4, provided that $G_{1}$ does not form an
$\mathrm{N}-\mathrm{S}, \mathrm{NCH}_{2} \mathrm{~N}, \mathrm{NCH}_{2} \mathrm{O}$, or $\mathrm{NCH}_{2} \mathrm{~S}$ bond with either group to which it is attached;

$\left(C R^{\mathbf{3}} \mathbf{R}^{\mathbf{3 e}}\right)_{\mathbf{q}} \mathbf{N R}^{\mathbf{3} b}\left(C R^{\mathbf{3}} \mathbf{R}^{\mathbf{3} \mathrm{e}}\right)_{\mathbf{q} \mathbf{1}},\left(C R^{\mathbf{3}} \mathbf{R}^{\mathbf{3 e}}\right)_{\mathbf{q}} \mathbf{C}(O)\left(C R^{\mathbf{3}} \mathbf{R}^{\mathbf{3 e}}\right)_{\mathbf{q} \mathbf{1}} ;$



 $\left(C R^{3} R^{3 \mathrm{e}}\right)_{\boldsymbol{q}} \mathrm{C}(\Theta)\left(C R^{3} \mathrm{R}^{3 \mathrm{e}}\right)_{\boldsymbol{q}} \mathrm{C}(\Theta)\left(C R^{3} \mathrm{R}^{3 \mathrm{e}}\right)_{\boldsymbol{q} 1} ;$



 $\left.\left(C R^{3} R^{3 e}\right)_{\mathbf{q}} S(\theta)\left(C R^{3} R^{3 \mathrm{e}}\right)_{\boldsymbol{q} \mathbf{1}},\left(C R^{3} R^{3 \mathrm{e}}\right)_{\boldsymbol{q}} S(\theta)\right)_{z}\left(C R^{3} R^{3 \mathrm{e}}\right)_{\boldsymbol{q} \mathbf{1}} ;$



that Z does not form $\mathrm{N} \mathbf{N S}, \mathrm{NCH}_{2} \mathrm{~N}, \mathrm{NCH}_{2} \mathrm{O}$, or $\mathrm{NCH}_{2} \mathrm{~S}$ bond-with either group to which it is attached;
provided that B-A-Z form other than a pyridone-phenyl- $\mathrm{CH}_{z}$, pyridone-pyridyl- $\mathrm{CH}_{\boldsymbol{z}}$, 0 . pyridone-pyrimidyl- $\mathrm{CH}_{2}$, wherein the pyridone, phenyl, pyridyl, and pyrimidyl groups are substituted-or unsubstituted;
 $\mathrm{C}_{1-6}$ alkyl substituted with $0-2 \mathbf{R}^{\mathbf{1 a}}, \mathrm{C}_{2-6}$ alkenyl substituted with $0-2 \mathbf{R}^{\mathbf{1 a}}, \mathrm{C}_{\mathbf{2 - 6}}$ alleynyl sthbstituted with $0-2 R^{\mathbf{1 a}}$,
 membered heterocycle substituted with $0-3 \mathbf{R}^{\mathbf{1 0}}$ and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathbf{N}, \boldsymbol{\theta}$, and $\mathrm{S}(\mathrm{O})_{p}$;
$R^{1 a}$, at each occurrence, is selected from $H$, $-\left(C R^{3} R^{3 a}\right)_{r}-R^{1 b},-\left(C R^{3} R^{3 a}\right)_{r}-C R^{3} R^{1 b} R^{1 b}$, $-\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}}-\mathrm{O}-\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}}-\mathrm{R}^{1 \mathrm{~b}},-\mathrm{C}_{2-6}$ alkenylene- $\mathrm{R}^{1 \mathrm{~b}},-\mathrm{C}_{2-6}$ alkynylene- $\mathrm{R}^{1 \mathrm{~b}}$, $-\left(C^{3} R^{3 a}\right)_{r}-C\left(=N R^{1 b}\right) N^{3} R^{1 b}, N R^{3} C^{3} R^{3 a} R^{1 c}, O C R^{3} R^{3 a} R^{1 c}, S C R^{3} R^{3 a R}{ }^{1 c}$, $N R^{3}\left(C R^{3} R^{3 a}\right)_{2}\left(C R^{3} R^{3 a}\right)_{t} R^{1 b}, C(O) N R^{2}\left(C R^{3} R^{3 a}\right)_{2}\left(C R^{3} R^{3 a}\right)_{t} R^{1 b}$, $\mathrm{CO}_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{t}} \mathrm{R}^{1 \mathrm{~b}}, \mathrm{O}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{t}} \mathrm{R}^{1 \mathrm{~b}}, \mathrm{~S}\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{t}} \mathrm{R}^{1 \mathrm{~b}}$, $S(O)_{p}\left(C R^{3} R^{3 a}\right)_{r} R^{1 d}, O\left(C R^{3} R^{3 a}\right)_{r} R^{1 d}, N R^{3}\left(C R^{3} R^{3 a}\right)_{r} R^{1 d}, O C(O) N R^{3}\left(C R^{3} R^{3 a}\right)_{r} R^{1 d}$, $N^{3} C(O) N R^{3}\left(C R^{3} R^{3 a}\right)_{r} R^{1 d}, N R^{3} C(O) O\left(C R^{3} R^{3 a}\right)_{r} R^{1 d}$, and $N R^{3} C(O)\left(C R^{3} R^{3 a}\right)_{r} R^{1 d}$, provided that $\mathrm{R}^{\text {la }}$ forms other than an N -halo, $\mathrm{N}-\mathrm{S}, \mathrm{O}-\mathrm{O}$, or $\mathrm{N}-\mathrm{CN}$ bond;
alternatively, when two $\mathrm{R}^{\text {la }}$ groups are attached to adjacent atoms, together with the atoms to which they are attached they form a 5-7 membered ring consisting of: carbon atoms and $0-2$ heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, this ring being substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$ and 0-3 ring double bonds;

## Amendment

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$\mathrm{R}^{1 \mathrm{~b}}$ is selected from $\mathrm{H}, \mathrm{C}_{1-3}$ alkyl, $\mathrm{F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I},-\mathrm{CN},-\mathrm{NO}_{2},-\mathrm{CHO},\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{OR}^{2}$, $\mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{~b}}, \mathrm{OC}(\mathrm{O}) \mathrm{R}^{2},\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}$, $\mathrm{C}\left(=\mathrm{NR}^{2 \mathrm{c}}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NHR}^{2}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}){ }_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{OC}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{2}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{2}, \mathrm{C}_{3-6}$ carbocycle substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$, and 5-10 membered heterocycle consisting of carbon atoms and from 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 \mathrm{R}^{4 b}$, provided that $\mathrm{R}^{1 \mathrm{~b}}$ forms other than an $\mathrm{O}-\mathrm{O}, \mathrm{N}$-halo, $\mathrm{N}-\mathrm{S}$, or N-CN bond;
$\mathrm{R}^{1 \mathrm{c}}$ is selected from $\mathrm{H}, \mathrm{CH}\left(\mathrm{CH}_{2} \mathrm{OR}^{2}\right)_{2}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O}) \mathrm{R}^{2}, \mathrm{~S}(\mathrm{O})_{2} \mathrm{R}^{2}$, and $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}} ;$
$R^{1 d}$ is selected from $C_{3-6}$ carbocycle substituted with 0-2 $R^{4 b}$ and 5-10 membered heterocycle consisting of carbon atoms and from 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 R^{4 b}$, provided that $R^{1 d}$ forms other than an N -S bond;
$\mathrm{R}^{2}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{C}_{1-6}$ alkyl, benzyl, $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{C}_{3-10}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and - $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}$-5-10 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{p}$, and substituted with 0-2 $\mathrm{R}^{\mathbf{4 b}}$;
$\mathrm{R}^{2 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}$,
$\mathrm{C}_{1-6}$ alkyl, benzyl, $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{C}_{3-10}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and -( $\left.\mathrm{CH}_{2}\right)_{\mathrm{r}}-5-10$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 R^{4 b}$;
alternatively, $\mathrm{R}^{2}$ and $\mathrm{R}^{2 \mathrm{a}}$, together with the atom to which they are attached, combine to form a 5 or 6 membered saturated, partially saturated or unsaturated ring substituted with $0-2 R^{4 b}$, and consisting of: $0-1$ additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{2 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{C}_{1-4}$ alkoxy substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}, \mathrm{C}_{1-6}$ alkyl substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$, $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{C}_{3-10}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}^{-}}$ 5-10 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$;
$\mathrm{R}^{2 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{OH}, \mathrm{C}_{1-4}$ alkoxy, $\mathrm{C}_{1-6}$ alkyl, $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{C}_{3-10}$ carbocycle substituted with $0-2 \mathrm{R}^{4 b}$, and - $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-5-10$ membered heterocycle containing from 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with 0-2 $\mathrm{R}^{4 b}$;
$\mathrm{R}^{3}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, and phenyl;
$\mathrm{R}^{3 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, and phenyl;
alternatively, $\mathrm{R}^{3}$ and $\mathrm{R}^{3 \mathrm{a}}$, together with the nitrogen atom to which they are attached, combine to form a 5 or 6 membered saturated, partially unsaturated, or unsaturated ring consisting of: carbon atoms, the nitrogen atom to which $\mathrm{R}^{3}$ and $\mathrm{R}^{3 a}$ are attached, and 0-1 additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{p}$;
$R^{3 b}$, at each occurrence, is selected from $H, C_{1-6}$ alkyl substituted with 0-2 $R^{1 a}, C_{2-6}$ alkenyl substituted with 0-2 $\mathrm{R}^{1 \mathrm{a}}, \mathrm{C}_{2-6}$ alkynyl substituted with 0-2 $\mathrm{R}^{1 \mathrm{a}}$,
-( $\mathrm{C}_{0-4}$ alkyl)-5-10 membered carbocycle substituted with 0-3 $\mathrm{R}^{1 \mathrm{a}}$, and -( $\mathrm{C}_{0-4}$ alkyl)-5-10 membered heterocycle substituted with 0-3 $\mathrm{R}^{\text {la }}$ and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{3 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, and phenyl;
$\mathrm{R}^{3 \mathrm{~d}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}_{1-4}$ alkyl-phenyl, and $\mathrm{C}(=\mathrm{O}) \mathrm{R}^{3 \mathrm{c}}$;
$R^{3 e}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{SO}_{2} \mathrm{NHR}^{3}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{NHR}^{3}$, $\mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{f}}, \mathrm{S}(\mathrm{O}) \mathrm{R}^{3 \mathrm{f}}, \mathrm{S}(\mathrm{O})_{2} \mathrm{R}^{3 \mathrm{f}}, \mathrm{C}_{1-6}$ alkyl substituted with $0-2 \mathrm{R}^{1 \mathrm{a}}, \mathrm{C}_{2-6}$ alkenyl substituted with $0-2 R^{1 a}, C_{2-6}$ alkynyl substituted with $0-2 R^{1 a}$, $-\left(\mathrm{C}_{0-4}\right.$ alkyl)-5-10 membered carbocycle substituted with 0-3 $\mathrm{R}^{1 \mathrm{a}}$, and -( $\mathrm{C}_{0-4}$ alkyl)-5-10 membered heterocycle substituted with $0-3 \mathrm{R}^{1 \mathrm{a}}$ and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$R^{3 f}$, at each occurrence, is selected from: $C_{1-6}$ alkyl substituted with 0-2 $R^{1 a}, C_{2-6}$ alkenyl substituted with 0-2 $\mathrm{R}^{1 \mathrm{a}}, \mathrm{C}_{2-6}$ alkynyl substituted with $0-2 \mathrm{R}^{1 \mathrm{a}}$, -( $\mathrm{C}_{0-4}$ alkyl)-5-10 membered carbocycle substituted with 0-3 $\mathrm{R}^{1 \mathrm{a}}$, and -( $\mathrm{C}_{0-4}$ alkyl)-5-10 membered heterocycle substituted with 0-3 $\mathrm{R}^{1 \mathrm{a}}$ and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$R^{4}$, at each occurrence, is selected from $H,=O,\left(R^{3} R^{3 a}\right)_{r} O R^{2}, F, C l, B r, I, C_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{CN},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NO}_{2},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}$, $\left(C R^{3} R^{3 a}\right)_{r}{ }^{N} R^{2} C(O) R^{2 b},\left(C R^{3} R^{3 a}\right)_{r} C(O) N R^{2} R^{2 a}$, (CR $\left.{ }^{3} R^{3 a}\right)_{r} N R^{2} C(O) N R R^{2 a}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}\left(=\mathrm{NR}^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}\left(=\mathrm{NS}(\mathrm{O})_{2} \mathrm{R}^{5}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NHC}\left(=\mathrm{NR}^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NHC}\left(=\mathrm{NR}^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{5},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}}\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3}, \mathrm{NHCH}_{2} \mathrm{R}^{1 \mathrm{c}}$, $\mathrm{OCH}_{2} \mathrm{R}^{\mathrm{lc}}, \mathrm{SCH}_{2} \mathrm{R}^{\mathrm{lc}}, \mathrm{NH}\left(\mathrm{CH}_{2}\right)_{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{t}} \mathrm{R}^{\mathrm{lb}}, \mathrm{O}\left(\mathrm{CH}_{2}\right)_{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{t}} \mathrm{R}^{\mathrm{lb}}, \mathrm{S}\left(\mathrm{CH}_{2}\right)_{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{t}} \mathrm{R}^{1 \mathrm{~b}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{r}$-5-6 membered carbocycle substituted with $0-1 R^{5}$, and a $\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{r}-5-6$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-1 \mathrm{R}^{5}$;
$R^{4 a}$, at each occurrence, is selected from $H,=O,\left(C R^{3} R^{3 a}\right)_{r} O R^{2},\left(C R^{3} R^{3 a}\right)_{r} F,\left(C R^{3} R^{3 a}\right)_{r} B r$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{Cl}, \mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{CN},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NO}_{2},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(C R^{3} R^{3 a}\right)_{r} C(O) R^{2 c},\left(C R^{3} R^{3 a}\right)_{\mathrm{r}} N R^{2} C(O) R^{2 b},\left(C R^{3} R^{3 a}\right)_{r} C(O) N R^{2} R^{2 a}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{N}=\mathrm{CHOR}^{3},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NH}\left(\mathrm{CH}_{2}\right)_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}\left(=\mathrm{NR}^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NHC}\left(=\mathrm{NR}^{2}\right) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NHSO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right) \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{5},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}}\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}}-5-6$ membered carbocycle substituted with $0-1 R^{5}$, and a $\left(C R^{3} R^{3 a}\right)_{r}-5-6$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with 0-1 $\mathrm{R}^{5}$;
$\mathrm{R}^{4 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{3}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{F},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{Cl},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{Br}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{I}, \mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{CN},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NO}_{2},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, and $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3}$;
$R^{4 c}$, at each occurrence, is selected from $H, C_{1-4}$ alkyl $\left(C R^{3} R^{3 a}\right)_{r 1} O R^{2},\left(C R^{3} R^{3 a}\right)_{r 1} F$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r} 1} \mathrm{Br},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r} 1} \mathrm{Cl},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{CN},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{{ }_{r 1}} \mathrm{NO}_{2},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r} 1} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(C^{3} R^{3 a}\right)_{r} C(O) R^{2 c},\left(C R^{3} R^{3 a}\right)_{r 1} N R^{2} C(O) R^{2 b},\left(C R^{3} R^{3 a}\right)_{r} C(O) N R^{2} R^{2 a}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{~N}=\mathrm{CHOR}^{3},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NH}\left(\mathrm{CH}_{2}\right)_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{rl}} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(C R^{3} R^{3 a}\right)_{r 1} C\left(=N R^{2}\right) N R^{2} R^{2 a},\left(C R^{3} R^{3 a}\right)_{r} N H C\left(=N R^{2}\right) N R^{2} R^{2 a},\left(C R^{3} R^{3 a}\right)_{r} S O_{2} N R^{2} R^{2 a}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{NR}^{2} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NHSO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{5},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{r}}\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r}}$-5-6 membered carbocycle substituted with 0-1 $\mathrm{R}^{5}$, and a $\left(C R^{3} R^{3 a}\right)_{r}-5-6$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-1 R^{5}$;
$\mathrm{R}^{5}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{C}_{1-6}$ alkyl, $=\mathrm{O},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I},-\mathrm{CN}, \mathrm{NO}_{2}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{CH}\left(=\mathrm{NOR}^{3 \mathrm{~d}}\right)$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3}$, phenyl substituted with 0-2 $\mathrm{R}^{6}$, naphthyl substituted with 0-2 $R^{6}$, and benzyl substituted with $0-2 R^{6}$;
$\mathrm{R}^{5 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{C}_{1-6}$ alkyl, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{3},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}},\left(\mathrm{CF}_{2}\right)_{\mathrm{r}} \mathrm{CF}_{3}$, phenyl substituted with 0-2 $\mathrm{R}^{6}$, naphthyl substituted with $0-2 \mathrm{R}^{6}$, and benzyl substituted with 0-2 $R^{6}$, provided that $R^{5 a}$ does not form a $S-N$ or $S(O)_{p}-C(O)$ bond;

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$\mathrm{R}^{6}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}$, halo, $\mathrm{C}_{1-4}$ alkyl, $\mathrm{CN}, \mathrm{NO}_{2}$, $\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(=\mathrm{NH}) \mathrm{NH}_{2}$, $\mathrm{NHC}(=\mathrm{NH}) \mathrm{NH}_{2}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, and $\mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{C}_{1-4}$ alkyl;
$\mathrm{R}^{7}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH}, \mathrm{C}_{1-6}$ alkyl, $\mathrm{C}_{1-6}$ alkyl-C(O)-, $\mathrm{C}_{1-6}$ alkyl-O-, $\left(\mathrm{CH}_{2}\right)_{\mathrm{n}}$-phenyl, $\mathrm{C}_{1-4}$ alkyl- $\mathrm{OC}(\mathrm{O})-, \mathrm{C}_{6-10}$ aryl-O-, $\mathrm{C}_{6-10}$ aryl- $\mathrm{OC}(\mathrm{O})$-, $\mathrm{C}_{6-10}$ aryl- $\mathrm{CH}_{2}-$ $\mathrm{C}(\mathrm{O})-, \mathrm{C}_{1-4}$ alkyl-C(O)O-C1-4 alkyl-OC(O)-, $\mathrm{C}_{6-10}$ aryl-C(O)O-C $\mathrm{C}_{1-4}$ alkyl-OC(O)-, $\mathrm{C}_{1-6}$ alkyl- $\mathrm{NH}_{2}-\mathrm{C}(\mathrm{O})-$, phenyl- $\mathrm{NH}_{2}-\mathrm{C}(\mathrm{O})$-, and phenyl- $\mathrm{C}_{1-4}$ alkyl- $\mathrm{C}(\mathrm{O})$-;
$R^{8}$, at each occurrence, is selected from $H, C_{1-6}$ alkyl, and $\left(\mathrm{CH}_{2}\right)_{n}$-phenyl;
alternatively, $R^{7}$ and $R^{8}$, when attached to the same nitrogen, combine to form a 5-10 membered heterocyclic ring consisting of carbon atoms and 0-2 additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{9}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{C}_{1-6}$ alkyl, and $\left(\mathrm{CH}_{2}\right)_{\mathrm{n}}$-phenyl;
n , at each occurrence, is selected from $0,1,2$, and 3 ;
p, at each occurrence, is selected from 0,1 , and 2 ;
r , at each occurrence, is selected from $0,1,2,3,4,5$, and 6;
$r 1$, at each occurrence, is selected from $1,2,3,4,5$, and 6 ;
t , at each occurrence, is selected from $0,1,2$, and $3 ;$ and,

## provided that when:

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(a) ring $\mathrm{M}^{2}$ is phenyl and is substituted $\mathbf{1 , 2}$ by $\mathrm{M}_{\mathbf{4}}$ and $\mathbf{P}_{\mathbf{4}}$ and $\mathrm{G}_{4}$ is present, then $\mathbf{Z - A}$ is other than

NHC(O)-thienyl, $\mathrm{NHCH}_{2}$-thienyl, $\mathrm{NHC}(\mathrm{O})$-benzothienyl, and $\mathrm{NHCH}_{2}$-benzothienyl; and,
(b) B-is 2-0x0-1-pyrrolidinyl and rings P-Mare 1,7-dihydro-2-methy-6H-purin-6one, then $\mathbf{G}-\mathrm{G}_{\mathbf{4}}$ is other then unsubstituted phenyl.

Claim 2. (Currently Amended) A compound according to Claim 1, wherein; the compound is of Formula II:

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or a sterevisomer or pharmaceutically acceptable salt thereof, wherein;
 membered heterocyele, consisting of:- carbonntoms and $1-3$ heteroatoms selected from $\boldsymbol{\theta}, \mathbf{S}\left(\Theta_{\mathbf{p}}, \mathbf{N}\right.$, and $\mathrm{NZ}^{\mathbf{2}}$;
ring M is sthbstituted with 0-2 $\mathrm{Re}_{0}^{19}$ nnd 0-2 earbonyl grotrs, and there are 0-3 ring double bends;
ring $P$, including $P_{1}, P_{2}$, and $P_{3}$, is a 5 or 6 membered aromatic heterocycle, consisting of: carbon-atoms and $1-3$ heteroatoms-selected from $\theta, S(\Theta)_{p}$, and $N$;
alternatively, ring $P$, including $P_{4}, P_{2}$, and $P_{3}$; is a 5 or 6 membered-dihydre-arommtic heterecyele, consisting of: carbon atoms and 1-3 heteroatoms selected from $\theta$, $S(O)_{p}$, and N ;

## ring $\mathbf{P}$ is substilted-with $0-2 R^{\mathbf{1 9}}$;

## one of $\mathrm{P}_{4}$ and $\mathrm{M}_{4}$ is - $\mathrm{Z}-\mathrm{A}-\mathrm{B}$ and the other- $\mathrm{G}_{4}-\mathrm{G}$;

G is a group of Formula IIa or Ilb:


IIa


IIb
ring D , including the two atoms of Ring E to which it is attached, is a 5-6 membered ring consisting of: carbon atoms and $0-2$ heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
ring D is substituted with $0-2 \mathrm{R}$ and there are $0-3$ ring double bonds;

E is selected from phenyl, pyridyl, pyrimidyl, pyrazinyl, and pyridazinyl, and is substituted with 1-2 R;
alternatively, ring $D$ is absent, and ring E is selected from phenyl, pyridyl, pyrimidyl, and thienyl, and ring E is substituted with 1-2 R;
alternatively, ring D is absent, ring E is selected from phenyl, pyridyl, and thienyl, and ring E is substituted with 1 R and substituted with a 5 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, wherein the 5 membered heterocycle is substituted with 0-1 carbonyl and 1-2 R and there are 0-3 ring double bonds;

R is selected from $\mathrm{H}, \mathrm{C}_{1-4}$ alkyl, $\mathrm{F}, \mathrm{Cl}, \mathrm{OH}, \mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CN}, \mathrm{C}(=\mathrm{NH}) \mathrm{NH}_{2}$, $\mathrm{C}(=\mathrm{NH}) \mathrm{NHOH}, \mathrm{C}(=\mathrm{NH}) \mathrm{NHOCH}_{3}, \mathrm{NH}_{2}, \mathrm{NH}\left(\mathrm{C}_{1-3}\right.$ alkyl $), \mathrm{N}\left(\mathrm{C}_{1-3} \text { alkyl }\right)_{2}, \mathrm{C}(=\mathrm{NH}) \mathrm{NH}_{2}$, $\mathrm{CH}_{2} \mathrm{NH}_{2}, \mathrm{CH}_{2} \mathrm{NH}\left(\mathrm{C}_{1-3}\right.$ alkyl $), \mathrm{CH}_{2} \mathrm{~N}\left(\mathrm{C}_{1-3} \text { alkyl }\right)_{2},\left(\mathrm{CR}^{8} \mathrm{R}^{9}\right)_{\mathrm{t}} \mathrm{NR}^{7} \mathrm{R}^{8}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{7} \mathrm{R}^{8}$, $\mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{7} \mathrm{R}^{8}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{NR}^{7} \mathrm{R}^{8}, \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{NR}^{7} \mathrm{R}^{8}, \mathrm{SO}_{2} \mathrm{R}^{3}$, and $\mathrm{OCF}_{3}$;
alternatively, when 2 R groups are attached to adjacent atoms, they combine to form methylenedioxy or ethylenedioxy;

A is selected from:
$\mathrm{C}_{5-10}$ carbocycle substituted with $0-2 \mathrm{R}^{4}$,and
5-10 membered heterocycle consisting of: carbon atoms and 1-4 hetereatoms
selected from the group consisting of $N, O$, and $S(\Theta)_{p}$, and substituted with $0-2 R^{4}$,
_ provided that A is other thana-dihydre-benzopyran;
provided that $B$ is other than triazolone, quinolene, or isequinolone, wherein the triazolone, quinolene, and isequinolone groups are substituted or unsubstituted;
$\boldsymbol{Q}_{4}$ is selected from $\mathrm{C}=\mathbf{O}$ and $\mathrm{SO}_{2}$;
ring $Q$ is a-4-7 membered monocyclic or tricyclic ring consisting of, in addition to the N - $\mathrm{Q}_{1}$ group shown, carben atoms and $0-2$ hetereatoms selected from $\mathbf{N R}^{4 e}, \boldsymbol{\theta}, \mathbf{S}, \mathbf{S}(\boldsymbol{\theta})$, and $S(O)_{2}$, wherein:

0-2-double bonds are present within the ring and the ring is substituted with $\theta-2 R^{4 \pi}$;
alternatively, ring $Q$ is $a-7$ membered ring to which another ring is fused, wherein: the $4-7$ membered ring consists of, in oddition to the shown amide group, carbon atoms and $0-2$ heteroatoms selected from $\mathrm{NR}^{4 e}, \Theta, S, S(\Theta)$, and $S(O)_{z}$ and $0-$ 1 double bonds are present within the ring;
the fusion ring is phenyl or a 5 - 6 membered heteroaromatic consisting of carbon atems and $\mathbf{1 - 2}$ hetereatoms selected from $\mathrm{NR}^{4 \mathrm{e}}, \boldsymbol{\theta}$, and $\boldsymbol{S}$;
ring $Q$, which includes the $4-7$ membered ring and the fusion ring, is sthbstituted with $\mathbf{0 - 3} \mathbf{R}^{\mathbf{4 a}}$,

 $-\theta C R^{2} R^{\mathbf{2 n}_{n}}$;

Z is selected from a bend, $\mathrm{CH}_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2}, \mathrm{CH}_{2} \mathrm{O}, \mathrm{OCH}_{2}, \mathrm{C}(\mathrm{O}), \mathrm{NH}, \mathrm{CH}_{2} \mathrm{NH}, \mathrm{NHCH}_{2}$, $\mathrm{CH}_{2} \mathrm{C}(\mathrm{O}), \mathrm{C}(\mathrm{O}) \mathrm{CH}_{2}, \mathrm{C}(\Theta) \mathrm{NH}, \mathrm{NHC}(\Theta), \mathrm{NHC}(\Theta) \mathrm{CH}_{2} \mathrm{C}(\Theta) \mathrm{NH}, \mathrm{S}(\Theta)_{2}, \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{2} ;$ $\mathrm{S}(\mathrm{O})_{2}\left(\mathrm{CH}_{2}\right)_{,} \mathrm{SO}_{2} \mathrm{NH}$, and $\mathrm{NHSO}_{2}$, provided that 7 does not form a $\mathrm{N}-\mathrm{S}, \mathrm{NCH}_{2} \mathbf{N}$, $\mathrm{NCH}_{2} \mathrm{O}$, or $\mathrm{NCH}_{2} \mathrm{~S}$ bond with either group to which it is attached;

$\mathrm{R}^{1 \mathrm{a}}$ is selected from H , $-\left(\mathrm{CH}_{2}\right)_{\mathrm{r}}-\mathrm{R}^{1 \mathrm{~b}},-\left(\mathrm{CH}\left(\mathrm{CH}_{3}\right)\right)_{\mathrm{r}}-\mathrm{R}^{1 \mathrm{~b}},-\left(\mathrm{C}\left(\mathrm{CH}_{3}\right)_{2}\right)_{\mathrm{r}}-\mathrm{R}^{1 \mathrm{~b}}, \mathrm{NHCH}_{2} \mathrm{R}^{1 \mathrm{c}}, \mathrm{OCH}_{2} \mathrm{R}^{1 \mathrm{c}}$, $\mathrm{SCH}_{2} \mathrm{R}^{\mathrm{lc}}, \mathrm{NH}\left(\mathrm{CH}_{2}\right)_{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{t}} \mathrm{R}^{1 \mathrm{~b}}$, and $\mathrm{O}\left(\mathrm{CH}_{2}\right)_{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{t}} \mathrm{R}^{\mathrm{lb}}$, provided that $\mathrm{R}^{\text {la }}$ forms other than an N -halo, $\mathrm{N}-\mathrm{S}$, or $\mathrm{N}-\mathrm{CN}$ bond;
alternatively, when two $\mathrm{R}^{1 \mathrm{a}}$ groups are attached to adjacent atoms, together with the atoms to which they are attached they form a 5-7 membered ring consisting of: carbon atoms and
$0-2$ heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, this ring being substituted with $0-2 R^{4 b}$ and $0-3$ ring double bonds;
$\mathrm{R}^{\mathrm{lb}}$ is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I},-\mathrm{CN},-\mathrm{CHO}, \mathrm{CF}_{3}$, $\mathrm{OR}^{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{~b}}, \mathrm{OC}(\mathrm{O}) \mathrm{R}^{2}, \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{2}, \mathrm{NR}^{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}$, $\mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NHR}^{2}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O})_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{OC}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{C}(\mathrm{O}) \mathrm{NR}^{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{2}$, $\mathrm{C}_{5-6}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered heterocycle consisting of carbon atoms and from 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, provided that $\mathrm{R}^{1 \mathrm{~b}}$ forms other than an $\mathrm{O}-\mathrm{O}$, N-halo, N-S, or N-CN bond;
$\mathrm{R}^{1 \mathrm{c}}$ is selected from $\mathrm{H}, \mathrm{CH}\left(\mathrm{CH}_{2} \mathrm{OR}^{2}\right)_{2}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O}) \mathrm{R}^{2}, \mathrm{~S}(\mathrm{O})_{2} \mathrm{R}^{2}$, and $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$;
$\mathrm{R}^{2}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, $\mathrm{C}_{5-6}$ carbocycle substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$, a $\mathrm{C}_{5-6}$ carbocyclic- $\mathrm{CH}_{2}$-group substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 R^{4 b}$;
$\mathrm{R}^{2 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, $\mathrm{C}_{5-6}$ carbocycle substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$;
alternatively, $\mathrm{R}^{2}$ and $\mathrm{R}^{2 \mathrm{a}}$, together with the atom to which they are attached, combine to form a 5 or 6 membered saturated, partially saturated or unsaturated ring substituted with $0-2 R^{4 b}$ and consisting of: 0-1 additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{2 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{C}_{1-4}$ alkoxy, $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, $\mathrm{C}_{5-6}$ carbocycle substituted with 0-2 $\mathrm{R}^{\mathbf{4 b}}$, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 R^{4 b}$;
$\mathrm{R}^{2 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{OH}, \mathrm{C}_{1-4}$ alkoxy, $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$, benzyl, $\mathrm{C}_{5-6}$ carbocycle substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered heterocycle containing from 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$;
$\mathrm{R}^{3}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, and phenyl;
$\mathrm{R}^{3 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, and phenyl;
alternatively, $\mathrm{R}^{3}$ and $\mathrm{R}^{3 \mathrm{a}}$, together with the nitrogen atom to which they are attached, combine to form a 5 or 6 membered saturated, partially unsaturated, or unsaturated ring consisting of: carbon atoms and the nitrogen atom to which $\mathrm{R}^{3}$ and $\mathrm{R}^{3 \mathrm{a}}$ are attached;
$\mathrm{R}^{3 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, and phenyl;
$\mathrm{R}^{3 \mathrm{~d}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2}$ phenyl, $\mathrm{CH}_{2} \mathrm{CH}_{2}$-phenyl, and $\mathrm{C}(=\mathrm{O}) \mathrm{R}^{3 \mathrm{c}}$;
$\mathrm{R}^{4}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{OR}^{2}, \mathrm{CH}_{2} \mathrm{OR}^{2},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I}, \mathrm{C}_{1-4}$ alkyl, $-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}$, . $\mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}, \mathrm{CF}_{3}, \mathrm{CF}_{2} \mathrm{CF}_{3}$, 5-6 membered carbocycle substituted with 0-1 $\mathrm{R}^{5}$, and a 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-1 \mathrm{R}^{5}$;
$\mathrm{R}^{4 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{2} \mathrm{OR}^{2}, \mathrm{OR}^{2}, \mathrm{CH}_{2} \mathrm{~F}, \mathrm{~F}, \mathrm{CH}_{2} \mathrm{Br}, \mathrm{Br}, \mathrm{CH}_{2} \mathrm{Cl}$, $\mathrm{Cl}, \mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2}-\mathrm{CN},-\mathrm{CN}, \mathrm{CH}_{2} \mathrm{NO}_{2}, \mathrm{NO}_{2}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2}-\mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}$, $\mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{5},\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{CF}_{3}, \mathrm{CF}_{3}, \mathrm{CH}_{2}-$ 5-6 membered carbocycle substituted with 0-1 $\mathrm{R}^{5}, 5-6$ membered carbocycle substituted with $0-1 R^{5}$, and
a $\mathrm{CH}_{2}-5-6$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-1 R^{5}$, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-1 \mathrm{R}^{5}$;
$\mathrm{R}^{4 \mathrm{~b}}$; at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{C}\left(\mathrm{CH}_{3}\right)_{3},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{CH}_{2}-\mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}$,
$\mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}, \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}$, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{CF}_{3}$, and $\mathrm{CH}_{2}-\mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{CH}_{2} \mathrm{OR}^{2}, \mathrm{CH}_{2} \mathrm{~F}$, $\mathrm{CH}_{2} \mathrm{Br}, \mathrm{CH}_{2} \mathrm{Cl}, \mathrm{CH}_{2} \mathrm{CN}, \mathrm{CH}_{2} \mathrm{NO}_{2}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}$, $\mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{CH}_{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{C}(\mathrm{O}) \mathrm{NHSO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NHSO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{5}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}, \mathrm{CF}_{3}$, $\mathrm{CH}_{2} \mathrm{CF}_{3}, 5-6$ membered carbocycle substituted with $0-1 \mathrm{R}^{5}, \mathrm{CH}_{2}-5-6$ membered carbocycle substituted with 0-1 $\mathrm{R}^{5}$, 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with 0-1 $\mathrm{R}^{5}$, and a $\mathrm{CH}_{2}-5-6$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-1 R^{5}$;
$\mathrm{R}^{5}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl},-$ $\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}$, $\mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}\left(=\mathrm{NOR}^{3 \mathrm{~d}}\right), \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{C}\left(=\mathrm{NR}^{3}\right) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}$,
$\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{CF}_{3}$, phenyl substituted with 0-2 $R^{6}$, naphthyl substituted with $0-2 R^{6}$, and benzyl substituted with $0-2 R^{6}$; and,
$\mathrm{R}^{6}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{CN}, \mathrm{NO}_{2}$, $\mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{C}(=\mathrm{NH}) \mathrm{NH}_{2}, \mathrm{NHC}(=\mathrm{NH}) \mathrm{NH}_{2}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, and $\mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{C}_{1-4}$ alkyl.

Claim 3. (Currently Amended) A compound according to Claim 2, wherein;
fing M is strbstituted with $\mathbf{0 - 2} \mathbf{R}^{\mathbf{1 a}}$ nnd is selected from the-group:






Amendment
USSN: 10/245,122





ring $P$, including $\mathbf{P}_{\mathbf{4}}, \mathbf{P}_{\mathbf{2}}, \mathbf{P}_{\mathbf{3}}$, and $\mathbf{P}_{\mathbf{4}}$ is selected from-group:










one of $\mathrm{P}_{4}$ and $\mathrm{M}_{4}$ is -Z-A-B and the other $-\mathbf{G}_{\mathbf{1}}-\mathbf{G}$;
$G$ is selected from the group:











































































$G_{1}$ is absent or is selected from $\left(C R^{3} R^{3 a}\right)_{1-3},\left(C R^{3} R^{3 a}\right)_{u} C(O)\left(C R^{3} R^{3 a}\right)_{w}$,
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{u}} \mathrm{O}\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{w},\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{u}} \mathrm{NR}^{3 b}\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{w},\left(\mathrm{CR}^{3} R^{3 a}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3 b}\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{w}}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{u}} \mathrm{NR}^{3 b} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{NR}^{3 b} \mathrm{C}(\mathrm{O})\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{u}} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3 b}\left(\mathrm{CR}^{3} \mathrm{R}^{3 a}\right)_{\mathrm{w}}$, $\left(C R^{3} R^{3 a}\right)_{u} S\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} S(O)\left(C R^{3} R^{3 a}\right)_{w},\left(C R^{3} R^{3 a}\right)_{u} S(O)_{2}\left(C R^{3} R^{3 a}\right)_{w}$, $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{S}(\mathrm{O}) \mathrm{NR}^{3 \mathrm{~b}}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}},\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{NR}^{3 \mathrm{~b}} \mathrm{~S}(\mathrm{O})_{2}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$, and
$\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{u}} \mathrm{S}(\mathrm{O})_{2} \mathrm{NR}^{3 b}\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{w}}$, wherein $\mathrm{u}+\mathrm{w}$ total 0 , 1 , or 2 , provided that $G_{1}$ does not form a N-S, $\mathrm{NCH}_{2} \mathrm{~N}, \mathrm{NCH}_{2} \mathrm{O}$, or $\mathrm{NCH}_{2} \mathrm{~S}$ bond with either group to which it is attached;
' A is selected from one of the following carbocyclic nd heterocyclic groups which are phenyl substituted with 0-2 $\mathrm{R}^{4}$;
phenyl, piperidinyl, piperazinyl, pyridyl, pyrimidyl, furanyl, merpholinyl, thienyl, pyrfolyl, pyrfolidinyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl, pyrazolyt, imidazolyl, 1,2,3-oxadiazolyl, 1,2,4-exadiazolyl, 1,2,5-oxadiazolyl, 1,3,4-oxadiazolyl, 1,2,3-thindiazolyl, 1,2,4-thiadiazolyl, 1,2,5-thiadiazolyl, 1,3,4-thiadiazolyl, 1,2,3-triazolyl, 1,2,4-triazolyl, 1,2,5-triazolyl, 1,3,4-triazolyl, benzofuranyl, benzothioftranyl, indolinyl, indolyl, benzimidazolyl, benzoxazolyl, benzthiazolyl, indazolyl, benzisoxazolyl, benzisothiazolyl, and isoindazolyl;

Bis
 ; provided that $Z$ and $B$ are attached to different atoms on A; provided that B is other than triazolene, quinelene, or isequinolone, wherein the trinzolone, quinolone, and isequinolone groups are substituted or unsubstituted;
$\mathrm{Q}_{4}$ is selected from $\mathrm{C}=\boldsymbol{O}$ and $\mathrm{SO}_{2} ;$
fing $Q$ is $\Omega 5-7$ membered ring consisting of, in addition to the $N-Q_{4}$ group shown, carben atoms and $\theta-2$ heteroatoms selected from $\mathrm{NR}^{4 \mathrm{e}}, \boldsymbol{\theta}, \boldsymbol{S}, \boldsymbol{S}(\theta)$, and $S(\theta)_{2}$, wherein: $0-2$ double bonds are present within the ring and the ring is substituted with $\theta-2 R^{4 a}$,
alternatively, ring $Q$ is a $5-7$ membered ring to which another ring is fused, wherein: the 5.7 membered ring consists of, in addition to the shown amide group, carben atoms and $0-2$ heteroatoms selected from $\mathrm{NR}^{4}, \underline{\theta}, \mathrm{~S}, \mathrm{~S}(\mathrm{O})$, and $\mathrm{S}(\mathrm{O})_{2}$, and 0-1 double bonds are present within the ring;

# the fusion ring is phenylor a 5-6 membered heteroaromatic consisting of 

 carbon atoms and 1 - 2 heterontoms selected from $\mathrm{NR}^{4 e}, \mathbf{O}$, and $S$;ring $Q$, which includes the $5-7$ membered ring and the fusion ring, is sthbstituted with $0-3 \mathbf{R}^{4 a}$;
$\mathrm{R}^{1 \mathrm{a}}$ is selected from $\mathrm{H}, \mathrm{R}^{1 \mathrm{~b}}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{R}^{1 \mathrm{~b}}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{2} \mathrm{R}^{1 \mathrm{~b}}, \mathrm{CH}_{2} \mathrm{R}^{\mathrm{lb}}$, and $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{R}^{1 \mathrm{~b}}$, provided that $\mathrm{R}^{1 \mathrm{a}}$ forms other than an

N-halo, N-S, or N-CN bond;
alternatively, when two $\mathrm{R}^{1 \mathrm{a}}$ groups are attached to adjacent atoms, together with the atoms to which they are attached they form a 5-6 membered ring consisting of: carbon atoms and $0-2$ heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, this ring being substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$ and 0-3 ring double bonds;
$\mathrm{R}^{1 \mathrm{~b}}$ is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br},-\mathrm{CN},-\mathrm{CHO}, \mathrm{CF}_{3}, \mathrm{OR}^{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}$, $\mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{~b}}, \mathrm{OC}(\mathrm{O}) \mathrm{R}^{2}, \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{2}, \mathrm{NR}^{2}\left(\mathrm{CH}_{2}\right)_{\mathrm{r}} \mathrm{OR}^{2}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{2}$, phenyl substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle consisting of carbon atoms and from 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 \mathrm{R}^{4 b}$, provided that $\mathrm{R}^{1 \mathrm{~b}}$ forms other than an $\mathrm{O}-\mathrm{O}, \mathrm{N}-$ halo, $\mathrm{N}-\mathrm{S}$, or $\mathrm{N}-\mathrm{CN}$ bond;
$\mathrm{R}^{2}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, phenyl substituted with 0-2 $\mathrm{R}^{4 b}$, a benzyl substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and a 5-6 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)$, and substituted with $0-2 R^{4 b}$;
$\mathrm{R}^{2 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CF}_{3}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with 0-2 $\mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle

- consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$, and substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$;
alternatively, $\mathrm{R}^{2}$ and $\mathrm{R}^{2 a}$, together with the atom to which they are attached, combine to form a 5 or 6 membered saturated, partially saturated or unsaturated ring substituted with $0-2 R^{4 b}$ and consisting of: 0-1 additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $S(O)_{p}$;
$\mathrm{R}^{2 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{C}_{1-4}$ alkoxy, $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 R^{4 b}$;
$\mathrm{R}^{2 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{CF}_{3}, \mathrm{OH}, \mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{OCH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with $0-2 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle containing from 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 R^{4 b}$;
$\mathrm{R}^{4}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{2} \mathrm{OR}^{2},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{OR}^{2}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br}, \mathrm{I}, \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CF}_{3}$, and $\mathrm{CF}_{2} \mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{2} \mathrm{OR}^{2}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Br}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{C}\left(\mathrm{CH}_{3}\right)_{3},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, and $-\mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{CH}_{2}-\mathrm{C}(\mathrm{O}) \mathrm{R}^{3}$, $\mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{CH}_{2}-\mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2^{-}}$ $\mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2}$ - $\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}, \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}$, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}}$-phenyl, and $\mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{CH}_{2} \mathrm{OR}^{2}, \mathrm{CH}_{2} \mathrm{~F}$, $\mathrm{CH}_{2} \mathrm{Br}, \mathrm{CH}_{2} \mathrm{Cl}, \mathrm{CH}_{2} \mathrm{CN}, \mathrm{CH}_{2} \mathrm{NO}_{2}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}$, $\mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{5 \mathrm{a}}, \mathrm{CF}_{3}$, phenyl substituted with $0-1 \mathrm{R}^{5}$, and benzyl substituted with $0-1 R^{5}$;
$\mathrm{R}^{5}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{OR}^{3}$, $\mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}$, $\mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}, \mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{CF}_{3}, \mathrm{~S}(\mathrm{O})_{\mathrm{p}}$ - $\mathrm{C}_{1-4}$ alkyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{CF}_{3}$, phenyl substituted with 0-2 $R^{6}$, naphthyl substituted with $0-2 R^{6}$, and benzyl substituted with $0-2$ $\mathrm{R}^{6}$; and,
$\mathrm{R}^{6}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}$, $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, and $\mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{C}_{1-4}$ alkyl.

Claim 4 (Currently Amended) A compound according to Claim 3, wherein;
fing M is substituted with $0-2 R^{14}$ and is selected from the group:










ring $P$, ineluding $P_{\mathbf{1}}, \mathbf{P}_{\mathbf{2}}, \mathbf{P}_{\mathbf{3}}$, and $\mathbf{P}_{4}$ is selected from group:






oneof $\mathrm{P}_{4}$ and $\mathrm{M}_{4}$ is-A-B and the other- G ;
$G$ is selected from the group:




































$\mathrm{G}_{1}$ is absent or is selected from $\mathrm{CH}_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2}, \mathrm{CH}_{2} \mathrm{O}, \mathrm{OCH}_{2}, \mathrm{NH}, \mathrm{CH}_{2} \mathrm{NH}, \mathrm{NHCH}_{2}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O})$, $\mathrm{C}(\mathrm{O}) \mathrm{CH}_{2}, \mathrm{C}(\mathrm{O}) \mathrm{NH}, \mathrm{NHC}(\mathrm{O}), \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{2}, \mathrm{~S}(\mathrm{O})_{2}\left(\mathrm{CH}_{2}\right), \mathrm{SO}_{2} \mathrm{NH}$, and $\mathrm{NHSO}_{2}$, provided that $\mathrm{G}_{1}$ does not form a $\mathrm{N}-\mathrm{S}, \mathrm{NCH}_{2} \mathrm{~N}, \mathrm{NCH}_{2} \mathrm{O}$, or $\mathrm{NCH}_{2} \mathrm{~S}$ bond with either group to which it is attached;

A is selected from phenyl, pyridyl, and pyrimidyl, and is substituted with $0-2 \mathbf{R}^{4}$;
Bis-
 ; provided that $Z$ and B are attached to different atoms on $A$;
provided that B is other than triazolone, quinolone, or isoquinolone, wherein the triazolone, quinelone, and isequinolone groups are substituted or unsubstituted;
$Q_{4}$ is selected from $\mathrm{C}=\mathrm{O}$ and $\mathrm{SO}_{3}$;
ring $Q$ is a $6-7$ membered ring consisting of, in addition to the $\mathrm{N}-\mathrm{Q}_{4}$ group shown, carben atoms and $0-1$ heteroatoms selected from $N^{4 e}, \theta, S, S(\Theta)$, and $S(\Theta)_{2}$, wherein:

0-2-double bonds are present within the ring and the ring is substituted with $\theta-2 R^{4}$;
alternatively, ring $Q$ is a $5-7$ membered ring to which another ring is fused, wherein: the 5-7 memberedring consists of, in addition to the shown amide group, carbon atoms and $0-1$ heterontoms selected from $\mathrm{NR}^{4}, \underline{\Theta}, \mathrm{~S}, \mathrm{~S}(\Theta)$, and $S(\Theta)_{\mathbf{z}}$, and 0-1 double bonds are present within the ring;
the fusion ring is phenyl;
ring $Q$, which includes the $5-7$ membered ring and the fusion ring, is substituted-with $0-2 R^{4 a}$;
$\mathrm{R}^{\text {la }}$ is selected from $\mathrm{H}, \mathrm{R}^{1 \mathrm{~b}}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{2} \mathrm{R}^{\mathrm{lb}}$, and $\mathrm{CH}_{2} \mathrm{R}^{\mathrm{Ib}}$, provided that $\mathrm{R}^{\text {la }}$ forms other than an N halo, N-S, or N-CN bond;
$\mathrm{R}^{1 \mathrm{~b}}$ is selected from $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{Br},-\mathrm{CN}, \mathrm{CF}_{3}, \mathrm{OR}^{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{~b}}$, $\mathrm{CO}_{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{S}(\mathrm{O})_{\mathrm{p}} \mathrm{R}^{2}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{SO}_{2} \mathrm{R}^{2}$, and 5-6 membered aromatic heterocycle consisting of carbon atoms and from 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-2 R^{4 b}$, provided that $R^{1 b}$ forms other than an $\mathrm{O}-\mathrm{O}, \mathrm{N}$-halo, $\mathrm{N}-\mathrm{S}$, or $\mathrm{N}-\mathrm{CN}$ bond;
$\mathrm{R}^{2}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, phenyl substituted with $0-1 \mathrm{R}^{4 b}$, benzyl substituted with $0-1 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-1 R^{4 b}$;
$\mathrm{R}^{2 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with 0-1 $\mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-1 R^{4 b}$;
alternatively, $\mathrm{R}^{2}$ and $\mathrm{R}^{2 \mathrm{a}}$, together with the atom to which they are attached, combine to form a 5 or 6 membered saturated, partially saturated or unsaturated ring substituted with $0-1 R^{4 b}$ and consisting of: $0-1$ additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{2 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with 0-1 $\mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-1 R^{4 b}$;
$\mathrm{R}^{2 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{OH}, \mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{OCH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, benzyl, phenyl substituted with $0-1 \mathrm{R}^{4 \mathrm{~b}}$, and 5-6 membered aromatic heterocycle containing from 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-1 R^{4 b}$;
$\mathrm{R}^{4}$, at each occurrence, is selected from $\mathrm{OH}, \mathrm{OR}^{2}, \mathrm{CH}_{2} \mathrm{OR}^{2},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Br}, \mathrm{Cl}, \mathrm{I}, \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}},\left(\mathrm{CH}_{2}\right)_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CF}_{3}$, and $\mathrm{CF}_{2} \mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{2} \mathrm{OR}^{2}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Br}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{c}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, and $\mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}$, $\mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, and $\mathrm{CF}_{3}$;
$\mathrm{R}^{4 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}$, phenyl substituted with $0-1 \mathrm{R}^{5}$, and benzyl substituted with 0-1 $R^{5}$;
$\mathrm{R}^{5}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{OR}^{3}$, $\mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{\mathrm{p}}-\mathrm{C}_{1-4}$ alkyl,
$\mathrm{S}(\mathrm{O})_{\mathrm{p}}$-phenyl, $\mathrm{CF}_{3}$, phenyl substituted with $0-2 \mathrm{R}^{6}$, naphthyl substituted with $0-2 \mathrm{R}^{6}$, and benzyl substituted with 0-2 $\mathrm{R}^{6}$; and,
$\mathrm{R}^{6}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$, $\mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2},-\mathrm{CN}, \mathrm{NO}_{2}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 b}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 b}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}$, and $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$.

Claim 5. (Currently Amended) A compound according to Claim 4, wherein;
ring $M$ is substituted with $\mathbf{0 - 1} \mathbf{R}^{\mathbf{1 a}}$ and is selected from the group:









ring $\mathbf{P}$, ineluding $\mathbf{P}_{\mathbf{4}}, \mathbf{P}_{\mathbf{2}}, \mathbf{P}_{\mathbf{3}}$, and $\mathbf{P}_{\mathbf{4}}$ is selected from group:



one of $\mathrm{P}_{4}$ and $\mathrm{M}_{4}$ is - $\mathrm{A}-\mathrm{B}$ and the other - $G$;

G is selected from:

















A is selected from the group: phenyl, 2-pyridyl, 3-pyridyl, 2-pyrimidyl, 2-Cl-phenyl, 3-Cl-
phenyl, 2-F-phenyl, 3-F-phenyl, 2-methylphenyl, 2-aminophenyl, and

## 2-methoxyphenyl;

$B$ is attached to a different atom on $A$ than $M$ and is selected from the group:













$\mathrm{R}^{\mathrm{la}}$ is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{~F}, \mathrm{CH}_{2} \mathrm{Cl}, \mathrm{Br}, \mathrm{CH}_{2} \mathrm{Br},-\mathrm{CN}, \mathrm{CH}_{2} \mathrm{CN}$, $\mathrm{CF}_{3}, \mathrm{CH}_{2} \mathrm{CF}_{3}, \mathrm{OCH}_{3}, \mathrm{CH}_{2} \mathrm{OH}, \mathrm{C}\left(\mathrm{CH}_{3}\right)_{2} \mathrm{OH}, \mathrm{CH}_{2} \mathrm{OCH}_{3}, \mathrm{NH}_{2}, \mathrm{CH}_{2} \mathrm{NH}_{2}, \mathrm{NHCH}_{3}$, $\mathrm{CH}_{2} \mathrm{NHCH}_{3}, \mathrm{~N}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}_{2} \mathrm{~N}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CO}_{2} \mathrm{H}, \mathrm{COCH}_{3}, \mathrm{CO}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CO}_{2} \mathrm{CH}_{3}, \mathrm{SCH}_{3}$, $\mathrm{CH}_{2} \mathrm{SCH}_{3}, \mathrm{~S}(\mathrm{O}) \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O}) \mathrm{CH}_{3}, \mathrm{~S}(\mathrm{O})_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{~S}(\mathrm{O})_{2} \mathrm{CH}_{3}, \mathrm{C}(\mathrm{O}) \mathrm{NH}_{2}$, $\mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{NH}_{2}, \mathrm{SO}_{2} \mathrm{NH}_{2}, \mathrm{CH}_{2} \mathrm{SO}_{2} \mathrm{NH}_{2}, \mathrm{NHSO}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{NHSO}_{2} \mathrm{CH}_{3}$, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyridin-2-yl-N-oxide, pyridin-3-yl-N-oxide, pyridin-4-yl-Noxide, imidazol-1-yl, $\mathrm{CH}_{2}$-imidazol-1-yl, 4-methyl-oxazol-2-yl, 4-N,N-
dimethylaminomethyl-oxazol-2-yl, 1,2,3,4-tetrazol-1-yl, 1,2,3,4-tetrazol-5-yl, $\mathrm{CH}_{2}{ }^{-}$ 1,2,3,4-tetrazol-1-yl, and $\mathrm{CH}_{2}$-1,2,3,4-tetrazol-5-yl, provided that $\mathrm{R}^{1 \mathrm{a}}$ forms other than an N-halo, N-S, or N-CN bond;
$\mathrm{R}^{2}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, phenyl substituted with 0-1 $R^{4 b}$, benzyl substituted with $0-1 R^{4 b}$, and 5 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of $N, O$, and $S(O)_{p}$, and substituted with $0-1 R^{4 b}$;
$\mathrm{R}^{2 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{CH}_{3}$, and $\mathrm{CH}_{2} \mathrm{CH}_{3}$;
alternatively, $R^{2}$ and $R^{2 a}$, together with the atom to which they are attached, combine to form a 5 or 6 membered saturated, partially saturated or unsaturated ring substituted with $0-1 R^{4 b}$ and consisting of: 0-1 additional heteroatoms selected from the group consisting of $\mathrm{N}, \mathrm{O}$, and $\mathrm{S}(\mathrm{O})_{\mathrm{p}}$;
$\mathrm{R}^{2 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{3}$, and $\mathrm{CH}_{2} \mathrm{CH}_{3}$;
$\mathrm{R}^{2 \mathrm{c}}$, at each occurrence, is selected from $\mathrm{OH}, \mathrm{OCH}_{3}, \mathrm{OCH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{3}$, and $\mathrm{CH}_{2} \mathrm{CH}_{3}$;
$\mathrm{R}^{4 \mathrm{a}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}$, $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}\left(\mathrm{CH}_{3}\right)_{2}, \mathrm{CH}\left(\mathrm{CH}_{3}\right) \mathrm{CH}_{2} \mathrm{CH}_{3}$, and $\mathrm{C}\left(\mathrm{CH}_{3}\right)_{3}$;
$\mathrm{R}^{4 \mathrm{~b}}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{2} \mathrm{CH}_{3}, \mathrm{~S}(\mathrm{O})_{2}$-phenyl, and $\mathrm{CF}_{3}$;
$\mathrm{R}^{5}$, at each occurrence, is selected from $\mathrm{H},=\mathrm{O}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{OR}^{3}, \mathrm{CH}_{2} \mathrm{OR}^{3}, \mathrm{~F}, \mathrm{Cl}, \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{CH}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{3}, \mathrm{C}(\mathrm{O}) \mathrm{OR}^{3 \mathrm{c}}, \mathrm{NR}^{3} \mathrm{C}(\mathrm{O}) \mathrm{R}^{3 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}, \mathrm{SO}_{2} \mathrm{NR}^{3} \mathrm{R}^{3 \mathrm{a}}$, $\mathrm{NR}^{3} \mathrm{SO}_{2}-\mathrm{C}_{1-4}$ alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2}$-phenyl, $\mathrm{S}(\mathrm{O})_{2}-\mathrm{CH}_{3}, \mathrm{~S}(\mathrm{O})_{2}$-phenyl, $\mathrm{CF}_{3}$, phenyl substituted with 0-2 $R^{6}$, naphthyl substituted with $0-2 R^{6}$, and benzyl substituted with $0-2 R^{6}$; and,
$\mathrm{R}^{6}$, at each occurrence, is selected from $\mathrm{H}, \mathrm{OH}, \mathrm{OR}^{2}, \mathrm{~F}, \mathrm{Cl}, \mathrm{CH}_{3}, \mathrm{CH}_{2} \mathrm{CH}_{3}, \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$, $\mathrm{CH}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}, \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{CH}_{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}, \mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}$, and $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}}$.

Claim 6. (Currently Amended) A compound according to Claim 5, wherein the compound is selected from:









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$P_{4}$ is -G;

## $\mathrm{M}_{4}$ is AB;

G is selected from:












and,

A-B is selected from:

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Claim 7. (Currently Amended) A compound according to Claim 6, wherein the compound is selectedfrom:


## $\mathbf{P}_{4}$ is-G;

## $\mathrm{M}_{4}$ is-A-B;

A-B is selected from:


8. (Currently Amended) A compound according to Claim 1, wherein the compound is selected from the group:

3-methoxy-1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-1,4,5,6-tetrahydro-7-H-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-3-[(methylamino)methyl]-6-[4-(2-oxo-1-piperidinyl)phenyl]-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

1-(3-chloro-4-fluorophenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridine-7-one;

1-[3-(aminomethyl)-4-fluorophenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridine-7-one;

1-(3-amino-1,2-benzisoxazol-5-yl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridine-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro$7 H$-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-4-(2-oxehexahydro-1H-azepin-1-y) phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7H-pyrazolof 3,4 - e]pyridin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-0xө-1-piperazinyl)phenyly-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-0x0-1-imidazolidinyl)phenyl]-3-(trifluoremethyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-е]pyridin-7-өne;

# 1-(4-methoxyphenyl)-6-4-(2-0xotetrahydre-1(2H)-pyrimidinyl)phenyl] 3-(trifluoromethyl)-1,4,5,6-tetrahydre-7H-pyrazolo[3,4-e]pyridin-7-one; 

## 6-4-(3-ethyl-2-0x $0-2,3-$ dihydro-1H-benzinidazol-1-y) phenyl]-1-(4-methexyphenyl)-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7H-pyrazole[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridine-3-carbonitrile;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(1H-tetraazol-5-yl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

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1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl-4,5,6,7-tetrahydro- 1 H -pyrazole-[3,4-c]pyridine-3-carboxamide;

3-bromo-1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl) phenyl]1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(4-pyridinyl)-1,4,5,6-teträhydro-7H-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(4-pyridinyl-N-oxide)-1,4,5,6-tetrahydro- 7 H -pyrazolo[ $3,4-c$ ]pyridin- 7 -one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(3-pyridinyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(3-pyridinyl-N-oxide)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(2-pyridinyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl) phenyl]1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

## 1-(4-methoxyphenyl)-7-0x0-6[5-(2-0x日-1-piperidinyl)-2-pyridinyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxanide;

1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(4-methoxyphenyl)-3-(methylsulfonyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-(4-(2-oxo-1(2H)-pyridinyl)phenyll-3-(2-pyridinyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

1-[3-(aminomethyl)phenyl]-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

3-[7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-4,5,6,7-tetrahydro- 1 H -pyrazolo[3,4-c]pyridin-1-yl]benzamide;

1-(3-chlorophenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(3-chlorophenyl)-7-oxo-6-[4-(2-oxo-1(2H)pyridinyl)phenyl]-4,5,6,7-tetrahydro-1 $\mathrm{H}^{-}$ pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(3-chlorophenyl)-N,N-dimethyl-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro1 H -pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(3-chloro-4-fluorophenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridine-3-carbonitrile;

1-(3-amino-1 H -indazol-5-yl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(3-amino-1,2-benzisoxazol-5-yl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro1 H -pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(2,3-dihydro-1H-indol-6-yl)-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro- 7 H -pyrazolo[3,4-c]pyridin-7-one;

1-(2,3-dihydro-1H-indol-6-yl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro- 7 H -pyrazolo[3,4-c]pyridin-7-one;

1-(2,3-dihydro- 1 H -isoindol-5-yl)-6-[4-(2-oxo-2H-pyridin-1-yl)phenyl]-3-trifluoromethyl-1,4,5,6-tetrahydropyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-3-(2-pyrrolidin-1-ylmethyl-phenyl)-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;
ethyl 1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridine-3-carboxylate;

1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1 (2H)-pyridinyl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridine-3-carboxylic acid;

1-(4-methoxyphenyl)-N,N-dimethyl-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetrahydro- 1 H -pyrazolo[3,4-c]pyridine-3-carboxamide;
$N$-( $(1-(4-m e t h o x y p h e n y l)-7-o x o-6-[4-(2-o x o-1(2 H)$-pyridinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridin-3-yl\} carbonyl)methanesulfonamide;

1-(4-hydroxy-phenyl)-7-oxo-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxylic acid amide;

1-(4-methoxyphenyl)-6-[4-(2-oxo-1 $(2 H$ )-pyridinyl)phenyl]-3-( 1 H -tetraazol-5-yl)-1,4,5;6,-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;

3-\{4-[dimethylamino)methyl]-1,3-oxazol-2-yl\}-1-(4-methoxyphenyl)-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-1,4,5,6,-tetrahydro-7 H -pyrazolo[3,4-c]pyridin-7-one;

3-\{4-[dimethylamino)methyl]-1,3-oxazol-2-yl\}-1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperidinyl)phenyl]-1,4,5,6,-tetrahydro-7 H -pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxyphenyl)-7-өx-6-[4-(2-0xө-1-piperazinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(4-methoxyphenyl)-3-(methylsulfonyl)-6-[4-(2-өxө-1-piperazinyl)phenyl]-1,4,5,6-tetrahydre-7H pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxy-phenyl)-3-(4-methyl-oxazol-2-yl)-6-[4-(2-ox'o-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxy-phenyl)-3-(4-methyl-oxazol-2-yl)-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

3-acetyl-1-(4-methoxy-phenyl)-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

3-(4,5-dihydro-1H-imidazol-2-yl)-1-(4-methoxy-phenyl)-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxy-phenyl)-3-(1-methyl-4,5-dihydro-1H-imidazol-2-yl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxy-phenyl)-3-(1-methyl-1H-imidazol-2-yl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

1-(4-methoxy-phenyl)-3-methyl-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

3-hydroxymethyl-1-(4-methoxy-phenyl)-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

3-(1-hydroxy-1-methyl-ethyl)-1-(4-methoxy-phenyl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydropyrazolo[3,4-c]pyridin-7-one;

3-(1-hydroxy-1-methyl-ethyl)-1-(4-methoxy-phenyl)-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

2-dimethylamino- N -\{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxopiperidin-1-yl)phenyl]-4,5,6,7tetrahydro=1 H -pyrazolo[3,4-c] pyridin-3-ylmethyl $\}$ - $N$-methylacetamide;

2-dimethylamino- N -\{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridin-3-ylmethyl \}acetamide;
$N$-\{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxopiperidin-1-yl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridin-3-ylmethyl\}-2-pyridin-2-yl-acetamide;
$N$-\{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxopiperidin-1-yl)phenyl]-4,5,6,7-tetrahydro-1 $\mathrm{H}^{-}$ pyrazolo[3,4-c]pyridin-3-ylmethyl\}-2-(1-oxypyridin-2-yl)acetamide;

## 6-4-(1,1-dioxe-16-isothiazolidin-2-yl)-phenyl]-1-(4-methoxy-phenyl)-7-oxo-4,5,6,7-7 tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-еағboxylie neid_anide;

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N-hydroxy-3-\{7-oxo-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-3-trifluoromethyl-4,5,6,7-tetrahydro-pyrazolo[3,4-c]pyridin-1-yl\}-benzamidine;

N-methoxy-3-\{7-oxo-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-3-trifluoromethyl-4,5,6,7-tetrahydro-pyrazolo[3,4-c]pyridin-1-yl\}-benzamidine;

1-(3-cyano-4-fluorophenyl-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide;

1-(3-aminomethyl-4-fluoro-phenyl)-7-oxo-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxylic acid amide;

2-\{7-oxo-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-3-trifluoromethyl-4,5,6,7-tetrahydro-pyrazolo[3,4-c]pyridin-1-yl\}-benzenesulfonamide;

2-\{7-oxo-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-3-trifluoromethyl-4,5,6,7-tetrahydro-pyrazolo[3,4-c]pyridin-1-yl\}-benzenesulfonamide;

N -acetyl-2-\{7-oxo-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-3-trifluoromethyl-4,5,6,7-tetrahydro-pyrazolo[3,4-c]pyridin-1-yl\}-benzenesulfonamide;

1-(3-chloro-phenyl)-3-methanesulfonyl-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

1-(3-chloro-phenyl)-3-methanesulfonyl-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;

1-(3-chloro-phenyl)-3-(1-hydroxy-1-methyl-ethyl)-6-[4-(2-oxo-piperidin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one; and,

3-\{7-oxo-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-3-trifluoromethyl-4,5,6,7-tetrahydro-pyrazolo[3,4-c]pyridin-1-yl $\}$-benzamide;
or a pharmaceutically acceptable salt form thereof.

## Claims 9-15 (Canceled)

Claim 16. (Original) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 1 or a pharmaceutically acceptable salt form thereof.

Claim 17. (Original) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 1 or a pharmaceutically acceptable salt form thereof.


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Claim 18. (Original) A method according to Claim 17, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.


Claim 19. (Original) A method according to Claim 17, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism,

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kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or ( $f$ ) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

## Claims 20-30 (Canceled)

Claim 31. (New) A compound according to Claim 8, wherein the compound is:

1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl-4,5,6,7-tetrahydro-1H-pyrazole-[3,4-c]pyridine-3-carboxamide
or a pharmaceutically acceptable salt form thereof.

Claim 32. (New) A compound according to Claim 8, wherein the compound is:

1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridine-3-carboxamide
or a pharmaceutically acceptable salt form thereof.

Claim 33. (New) A compound according to Claim 8, wherein the compound is:

1-(4-methoxyphenyl)-3-(methylsulfonyl)-6-[4-(2-oxo-1-piperidinyl)phenyl] 1,4,5,6-tetrahydro$7 H$-pyrazolo[3,4-c]pyridin-7-one
or a pharmaceutically acceptable salt form thereof.

Claim 34. (New) A compound according to Claim 8, wherein the compound is:

1-(3-chlorophenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1 H -pyrazolo[3,4-c]pyridine-3-carboxamide
or a pharmaceutically acceptable salt form thereof.

Claim 35. (New) A compound according to Claim 8, wherein the compound is:

1-(3-chlorophenyl)-7-oxo-6-[4-(2-oxo-1(2H)pyridinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide
or a pharmaceutically acceptable salt form thereof.

Claim 36. (New) A compound according to Claim 8, wherein the compound is:

1-(4-methoxyphenyl)- $N, N$-dimethyl-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetrahydro- 1 H -pyrazolo[3,4-c]pyridine-3-carboxamide
or a pharmaceutically acceptable salt form thereof.

Claim 37. (New) A compound according to Claim 8, wherein the compound is:

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3-(1-Hydroxy-1-methyl-ethyl)-1-(4-methoxy-phenyl)-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one
or a pharmaceutically acceptable salt form thereof.

Claim 38. (New) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 2 or a pharmaceutically acceptable salt form thereof.

Claim 39. (New) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 3 or a pharmaceutically acceptable salt form thereof.

Claim 40. (New) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 4 or a pharmaceutically acceptable salt form thereof.

Claim 41. (New) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 5 or a pharmaceutically acceptable salt form thereof.

Claim 42. (New) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 6 or a pharmaceutically acceptable salt form thereof.

Claim 43. (New) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 7 or a pharmaceutically acceptable salt form thereof.

Claim 44. (New) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 8 or a pharmaceutically acceptable salt form thereof.

Claim 45. (New) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 31 or a pharmaceutically acceptable salt form thereof.

Claim 46. (New) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 32 or a pharmaceutically acceptable salt form thereof.

Claim 47. (New) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 33 or a pharmaceutically acceptable salt form thereof.

Claim 48. (New) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 34 or a pharmaceutically acceptable salt form thereof.

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Claim 49. (New) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 35 or a pharmaceutically acceptable salt form thereof.

Claim 50. (New) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 36 or a pharmaceutically acceptable salt form thereof.

Claim 51. (New) A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of Claim 37 or a pharmaceutically acceptable salt form thereof.

Claim 52. (New) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 2 or a pharmaceutically acceptable salt form thereof.

Claim 53. (New) A method according to Claim 52, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 54. (New) A method according to Claim 52, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis,

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arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or ( $f$ ) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 55. (New) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 3 or a pharmaceutically acceptable salt form thereof.

Claim 56. (New) A method according to Claim 55, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 57. (New) A method according to Claim 55, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or . other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 58. (New) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 4 or a pharmaceutically acceptable salt form thereof.

Claim 59. (New) A method according to Claim 58, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.


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Claim 60. (New) A method according to Claim 58, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.


Claim 61. (New) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 5 or a pharmaceutically acceptable salt form thereof.

Claim 62. (New) A method according to Claim 61, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous
cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 63. (New) A method according to Claim 61, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or ( f ) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 64. (New) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 6 or a pharmaceutically acceptable salt form thereof.

Claim 65. (New) A method according to Claim 64, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 66. (New) A method according to Claim 64, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis,
arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 67. (New) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 7 or a pharmaceutically acceptable salt form thereof.

Claim 68. (New) A method according to Claim 67, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 69. (New) A method according to Claim 67, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulnonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or ( f ) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 70. (New) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 8 or a pharmaceutically acceptable salt form thereof.

Claim 71. (New) A method according to Claim 70, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 72. (New) A method according to Claim 70 wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or ( f ) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 73. (New) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 31 or a pharmaceutically acceptable salt form thereof.

Claim 74. (New) A method according to Claim 73, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous
cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 75. (New) A method according to Ċlaim 73, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or ( f ) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 76. (New) A method according to Claim 73, wherein the thromboembolic disorder is an acute coronary syndrome.

Claim 77. (New) A method according to Claim 73, wherein the thromboembolic disorder is stroke.

Claim 78. (New) A method according to Claim 73, wherein the thromboembolic disorder is deep vein thrombosis.

Claim 79. (New) A method according to Claim 73, wherein the thromboembolic disorder is pulmonary embolism.

Claim 80. (New) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 32 or a pharmaceutically acceptable salt form thereof.

Claim 81. (New) A method according to Claim 80, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 82. (New) A method according to Claim 80, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or ( $f$ ) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 83. (New) A method according to Claim 80, wherein the thromboembolic disorder is an acute coronary syndrome.

Claim 84. (New) A method according to Claim 80, wherein the thromboembolic disorder is stroke.

Claim 85. (New) A method according to Claim 80, wherein the thromboembolic disorder is deep vein thrombosis.

Claim 86. (New) A method according to Claim 80, wherein the thromboembolic disorder is pulmonary embolism.

Claim 87. (New) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 33 or a pharmaceutically acceptable salt form thereof.

Claim 88. (New) A method according to Claim 87, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 89. (New) A method according to Claim 87, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosiș, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or ( f ) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 90. (New) A method according to Claim 87, wherein the thromboembolic disorder is an acute coronary syndrome.

Claim 91. (New) A method according to Claim 87, wherein the thromboembolic disorder is stroke.

Claim 92. (New) A method according to Claim 87, wherein the thromboembolic disorder is deep vein thrombosis.

Claim 93. (New) A method according to Claim 87, wherein the thromboembolic disorder is pulmonary embolism.

Claim 94. (New) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 34 or a pharmaceutically acceptable salt form thereof.

Claim 95. (New) A method according to Claim 94, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 96. (New) A method according to Claim 94, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent

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myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial.embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass; (e) hemodialysis, or ( f ) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 97. (New) A method according to Claim 94, wherein the thromboembolic disorder is an acute coronary syndrome.

Claim 98. (New) A method according to Claim 94, wherein the thromboembolic disorder is stroke.

Claim 99. (New) A method according to Claim 94, wherein the thromboembolic disorder is deep vein thrombosis.

Claim 100. (New) A method according to Claim 94, wherein the thromboembolic disorder is pulmonary embolism.

Claim 101. (New) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 35 or a pharmaceutically acceptable salt form thereof.

Claim 102. (New) A method according to Claim 101, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 103. (New) A method according to Claim 101, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 104. (New) A method according to Claim 101, wherein the thromboembolic disorder is an acute coronary syndrome.

Claim 105. (New) A method according to Claim 101, wherein the thromboembolic disorder is stroke.

Claim 106. (New) A method according to Claim 101, wherein the thromboembolic disorder is deep vein thrombosis.

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Claim 107. (New) A method according to Claim 101, wherein the thromboembolic disorder is pulmonary embolism.

Claim 108. (New) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 36 or a pharmaceutically acceptable salt form thereof.

Claim 109. (New) A method according to Claim 108, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 110. (New) A method according to Claim 108, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 111. (New) A method according to Claim 108, wherein the thromboembolic disorder is an acute coronary syndrome.

Claim 112. (New) A method according to Claim 108, wherein the thromboembolic disorder is stroke.

Claim 113. (New) A method according to Claim 108, wherein the thromboembolic disorder is deep vein thrombosis.

Claim 114. (New) A method according to Claim 108, wherein the thromboembolic disorder is pulmonary embolism.

Claim 115. (New) A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of Claim 37 or a pharmaceutically acceptable salt form thereof.

Claim 116. (New) A method according to Claim 115, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.

Claim 117. (New) A method according to Claim i15, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death, transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis,
or ( $f$ ) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.

Claim 118. (New) A method according to Claim 115, wherein the thromboembolic disorder is an acute coronary syndrome.

Claim 119. (New) A method according to Claim 115, wherein the thromboembolic disorder is stroke.

Claim 120. (New) A method according to Claim 115, wherein the thromboembolic disorder is deep vein thrombosis.

Claim 121. (New) A method according to Claim 115, wherein the thromboembolic disorder is pulmonary embolism.

USSN: 10/245,122

## REMARKS

## Status

Claims 1-8, 16-19, and 31-121 will be pending upon entry of the present amendments.
Support for the present amendments is inherent in the specification. Support for new Claims 31121 can be found as show in the following table. No new matter will be added upon entry of the present amendments.

| Claim | Support |
| :--- | :--- |
| 31 | Example 18 |
| 32 | Example 27 |
| 33 | Example 28 |
| 34 | Example 32 |
| 35 | Example 33 |
| 36 | Example 91 |
| 37 | Example 108 |
| $38-51$ | Original Claim 16 |
| $52,55,58,61,64,67,70,73,80,87,94, ~$ <br> $101,108,115$ | Original Claim 17 |
| $53,56,59,62,65,68,71,74,81,88,95$, <br> $102,109,116$ | Original Claim 18 |
| $54,57,60,63,66,69,72,75-79,82-86,89-$ <br> $93,96-100,103-107,110-114,117-121$ | Original Claim 19 |

## Discussion

The rejection of Claims 1-21 has been drawn to an improper Markush group has been obviated by appropriate amendment. Applicants have now limited the Claims to the elected subject matter, as suggested by the Examiner. Withdrawal of this rejection is respectfully requested.

In view of the foregoing, Applicants submit that the application is now in condition for allowance. Early notification of such action is earnestly solicited. If the Examiner has any

## DOCKET NO.: PH-7398

Amendment
USSN: 10/245,122
questions or believes further discussion will aid examination and advance prosecution of the application, a telephone call to the undersigned is invited.

Respectfully submitted,

Date: November 19, 2003


Jing Belfield, Ph.D.
Agent for Applicant
Registration No. 45,914

Bristol-Myers SquibbCompany<br>Patent Department<br>P.O. Box 4000<br>Princeton, NJ 08543-4000<br>(609) 252-3791 (phone)<br>(609) 252-4526 (fax)

| Electronic Acknowledgement Receipt |  |
| :---: | :---: |
| EFS ID: | 3302243 |
| Application Number: | 10245122 |
| International Application Number: |  |
| Confirmation Number: | 6870 |
| Title of Invention: | LACTAM-CONTAINING COMPOUNDS AND DERIVATIVES THEREOF AS FACTOR XA INHIBITORS |
| First Named Inventor/Applicant Name: | Donald J.P. Pinto |
| Customer Number: | 23914 |
| Filer: | Jason M. Okun/DAVID NGUY |
| Filer Authorized By: | Jason M. Okun |
| Attorney Docket Number: | PH-7398 |
| Receipt Date: | 14-MAY-2008 |
| Filing Date: | 17-SEP-2002 |
| Time Stamp: | 14:53:17 |
| Application Type: | Utility under 35 USC 111(a) |

## Payment information:

| Submitted with Payment |  | no |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| File Listing: |  |  |  |  |  |
| Document Number | Document Description | File Name | File Size(Bytes) /Message Digest | $\begin{array}{c\|} \hline \text { Multi } \\ \text { Part /.zip } \end{array}$ | Pages (if appl.) |
| 1 | Request for Certificate of Correction | ReqExpeditedCOC03822000$010 . p d f$ | 7510381 | no | 243 |
|  |  |  | 5164be3d $7595 c 5172751710 \mathrm{be} 49173 \mathrm{ad}$ b44aa2e2 |  |  |
| Warnings: |  | Page 244 |  |  |  |
| Information: |  |  |  |  |  |

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

DATE
TO SPE OF : ART UNIT_1624 James Wilson Spe
SUBJECT : Request for Certificate of Correction for Appl. No.: : $16 / 245122$ Patent No.: 6967208
Please respond to this request for a certificate of correction within 7 days.

## FOR IFW FILES:

Please review the requested changes/corrections as shown in the COCIN documient(s) in the IFW application image. No new matter should be introduced, nor should the scope or meaning of the claims be changed.

Please complete the response (see betow) and forward the completed response to scanning using document code COCX.

## FOR PAPER FILES:

Please review the requested changes/corrections as shown in the attached certificate of correction. Please complete this form (see below) and forward it with the file to:

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## Thank You For Your Assistance

The request for issuing the above-identified correction(s) is hereby:
Note your decision on the appropriate box.

- Approved
- Approved in Part
- Denied

All changes apply.
Specify below which changes do not apply.
State the reasons for denial below.

Comments: $\qquad$
$\qquad$
$\qquad$
$\qquad$

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION 

| PATENT NO. | $: 6,967,208 \mathrm{~B} 2$ |
| :--- | :--- |
| APPLICATION NO. | $: 10 / 245122$ |
| DATED | $:$ November 22, 2005 |
| INVENTOR(S) | $:$ Donald J. P. Pinto et al. |

APPLICATION NO. : $10 / 245122$
DATED : November 22, 2005
INVENTOR(S) : Donald J. P. Pinto et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

## ON THE TITLE PAGE ITEM [75]:

Inventors, "Yun-Long Li, Wilmington DE (US); Wei Han, Yardley, PA (US);" should be deleted.

## COLUMN 174:

Line 24, "piperidinyl)phenyl-4,5,6,7-tetrahydro-1H-pyrazole-" should read --piperidinyl)phenyl]-4,5,6,7-tetrahydro-1H- --;
Line 25, "[3,4-c]pyridine-3-caboxamide" should read --pyrazolo[3,4-c]pyridine-3-caboxamide--;
Line 47, "CDCl3" should read -- $\mathrm{CHCl}_{3}-$-; and
Line 49, "CDCl3" should read --CHCl ${ }_{3}-$-.

## COLUMN 175:

Line 29, "1-(4-meyhoxyphenyl)-" should read --1-(4-methoxyphenyl)- --.

## COLUMN 237:

Lines 15-20, "
 $P_{2}, M_{1}$, and $M_{2}$, is substituted with $0-2 R^{1 a}$ and is


Lines 22-23, "ring $M$, including $P^{1}, P_{2}$, and $M_{1}$, and $M_{2}$ is substituted with 0-2 $\mathrm{R}^{1 a}$ and is" should be deleted;

Lines 25-30, "
 $"$ should read --ring $P$, including $P_{1}$,

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION 

PATENT NO. $: 6,967,208$ B2
Page 2 of 13
APPLICATION NO. : 10/245122
DATED : November 22, 2005
INVENTOR(S) : Donald J. P. Pinto et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:
$P_{2}$, and $P_{3}$, is


Line 33, 'ring $P$, including $P_{1}, P_{2}$, and $P_{3}$, is" should be deleted; and Line 34, '" $P_{4}$ is $-G_{1}-G ; "$ should read $-M_{4}$ is $-A-B$; $\mathrm{P}_{4}$ is $-\mathrm{G}_{1}-\mathrm{G} ;--$.

## COLUMN 238:

Line 1 , " $\mathrm{S}(\mathrm{O})^{\mathrm{p}}$," should read $-\mathrm{S}(\mathrm{O})_{\mathrm{P},-- \text {; }}$
Line 33, "6 4-8 membered" should read -6 membered--; and
Line 34, "0-2 double bonds are" should read --0 double bond is--.

## COLUMN 239:

Line 18, " $\mathrm{NR}^{2 c}(\mathrm{O}) \mathrm{NHR}^{2}$," should read $-\mathrm{NR}^{2} \mathrm{C}(\mathrm{O}) \mathrm{NHR}^{2},-\cdots$.

## COLUMN 241:

Line 27, " $\left(\mathrm{CR}_{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{Cl}$," should read --( $\left(\mathrm{CR}^{3} \mathrm{R}^{3 \mathrm{a}}\right)_{\mathrm{r} 1} \mathrm{Cl},--$.

## COLUMN 242:

Line 21 , "6;" should read --6; and--.

## COLUMN 243:

Line 30, " $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$," should read -- $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$,--;
Line 38, " $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$," should read -- $\mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{2} \mathrm{CH}_{3}$,--; and Line 62, "benzyl" should read --benzyl,--.

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION 

PATENT NO. $\quad: 6,967,208$ B2
Page 3 of 13
APPLICATION NO. : 10/245122
DATED
: November 22, 2005
INVENTOR(S) : Donald J. P. Pinto et al.
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

## COLUMN 244:

Line 10, "benzyl phenyl;" should read --benzyl, and phenyl;--; and
Line 51, "alkyl $\mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3}$," should read --alkyl, $\mathrm{NR}^{3} \mathrm{SO}_{2} \mathrm{CF}_{3},--$.

## COLUMN 246:

Lines 20-30, "

" should read --


## COLUMN 248:

Lines 1-5,


Lines 10-15, "

 - -; and

Lines 35-40, "



## COLUMN 249:

Lines 5-10,"


# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION 

PATENT NO. : 6,967,208 B2
Page 4 of 13
APPLICATION NO. : $10 / 245122$
DATED
: November 22, 2005
INVENTOR(S) : Donald J. P. Pinto et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Lines 15-20, "
 " should read --


Lines 25-30, "

" should read --


Line 35, "


Line 65, "

" should read --


## COLUMN 251:

Lines 15-20, "


Lines 20-25, "


Lines 25-30,"


## COLUMN 252:

The first row should read --



# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION 

PATENT NO. $\quad$ : 6,967,208 B2
Page 5 of 13
APPLICATION NO. : 10/245122
DATED
: November 22, 2005
INVENTOR(S) : Donald J. P. Pinto et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Line 35, "


COLUMN 253:
Line 41, "1-4 hetero" should read --1-4 hetero- --.
COLUMN 254:
Line 3, " $\mathrm{R}^{4 a \text { " }}$ should read -- $\mathrm{R}^{4 a}$,--; and
Line 24 , " $C(O) R^{c}$ " should read --C(O) $R^{2 c}-$.

## COLUMN 255:

Lines 15-20, "N ${ }^{\sim}$ should read $-\mathrm{NH}_{2}$
Line 65, "


COLUMN 256:

Line 5,"



Line 15,"


## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,967,208 B2 Page 6 of 13
APPLICATION NO. : $10 / 245122$
DATED : November 22, 2005
INVENTOR(S) : Donald J. P. Pinto et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Lines 20-25, "



Line 65, "


COLUMN 258:
Line 5," HN
Line 25,"

## COLUMN 259:

Line 67, " $\mathrm{CH}_{2} \mathrm{c}(\mathrm{O}) \mathrm{R}^{2 \mathrm{~b}}$," should be deleted.

## COLUMN 261:

Lines 50-55,"


## COLUMN 262:

Line 34, "and is" should read --and is:--;
Line 35, "selected from the group:" should be deleted;

## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. $: 6,967,208$ B2
Page 7 of 13
APPLICATION NO. : 10/245122
DATED : November 22, 2005
INVENTOR(S) : Donald J. P. Pinto et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Lines 37-42, "




Lines 43-53, "



## COLUMN 263:

Line 38, " $\mathrm{S}(\mathrm{O})_{p}$-phenyl" should read -- $\mathrm{S}(\mathrm{O})_{2}$-phenyl---; and
Line 43, " $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2}$ a." should read -- $\mathrm{SO}_{2} \mathrm{NR}^{2} \mathrm{R}^{2 \mathrm{a}} .-$.

## COLUMN 265:

Lines 20-25, "

 " should be deleted;

Line 30, "is selected from:" should read --is--;

Line 35, "
 "should be deleted; and

Line 66, "phenyl-4,5,6,7-tetrahydro-1H-pyrazole-[3,4-c]". should read --phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo-[3,4-c]--.

PATENT NO. : 6,967,208 B2 Page 8 of 13<br>APPLICATION NO. : 10/245122<br>DATED : November 22, 2005<br>INVENTOR(S) : Donald J. P. Pinto et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

COLUMN 266:
Lines 21-23, "1-(4-methoxyphenyl)-7-ox0-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetra hydro-1 H-pyrazolo[3,4-c]pyridine-3carboxamide;" should be deleted;
Lines 27-29, "1-(4-methoxyphenyl)-6-(4-(2-oxo-1(2H)-pyridinyl)phenyl]-3-(2-pyridinyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;" should be deleted;
Lines 40-42, "1-(3-chlorophenyl)-7-oxo-6-[4-(2-oxo-1(2H)pyridinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide;" should be deleted;
Lines 49-51, "1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetra hydro-1H-pyrazolo[3,4-c]pyridine-3carbonitrile;" should be deleted;
Lines 58-60, " 1 -(2,3-dihydro-1H-indol-6-yl)-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;" should be deleted; and
Lines 65-67, "1-(2,3-dihydro-1H-isoindol-5-yl)-6-[4-(2-oxo-2H-pyridin-1-yl)phenyl]-3-trifluoromethyl-1,4,5,6-tetrahydropyrazolo[3,4-c]pyridin-7-one;" should be deleted.

## COLUMN 267:

Lines 4-15, "ethyl 1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxylate; 1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxylic acid; 1-(4-methoxyphenyl)-N,N-dimethyl-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxamide; N-(\{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridin-3yl \} carbonyl)methanesulfonamide;" should be deleted;

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION 

PATENT NO. : 6,967,208 B2 Page 9 of 13

| APPLICATION NO. | $: 10 / 245122$ |
| :--- | :--- |
| DATED | $:$ November 22,2005 |
| INVENTOR(S) | $:$ Donald J. P. Pinto et |

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Lines 19-25, "1-(4-methoxyphenyl)-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-3-(1H-tetraazol-5-yl)-1,4,5,6,-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;3-\{4-[dimethylamino)methyl]-1,3-oxazol-2-yl\}-1-(4-methoxyphenyl)-6-[4-(2-oxo-1(2H)-pyridinyl)phenyl]-1,4,5,6,-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;" should be deleted;
Lines 32-40, "1-(4-methoxy-phenyl)-3-(4-methyl-oxazol-2-yl)-6-[4-(2-oxo-2H-1-pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one; 3-acetyl-1-(4-methoxy-phenyl)-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one; 3-(4,5-dihydro-1H-imidazol-2-yl)-1-(4-methoxy-phenyl)-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;" should be deleted;
Lines 51-53, "3-hydroxymethyl-1-(4-methoxy-phenyl)-6-[4-(2-oxo2 H -pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;" should be deleted;
Lines 57-59, "3-(1-hydroxy-1-methyl-ethyl)-1-(4-methoxy-phenyl)-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;" should be deleted;
Line 61, "(2-oxopiperidin-1-yl)phenyl]-4,5,6,7-tetrahydro-1H-" should read --(2-oxo-piperidin-1-yl)phenyl]-4,5,6,7-tetrahydro-1H- --; and
Lines 65-67, "2-dimethylamino- N - \{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridin-3-ylmethyl\}acetamide;" should be deleted.

COLUMN 268:
Line 1, " N - $\{1$-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxopiperidin-1-" should read --N- \{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-piperidin-1- --;
Line 4, " N - $\{1$-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxopiperidin-1-" should read --N- \{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-piperidin-1---;
Lines 7-12, "N-hydroxy-3-\{7-oxo-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-3-trifluoromethyl-4,5,6,7-tetrahydro-pyrazolo[3,4-c]pyridin-1-yl\}-benzamidine; N-methoxy-3-\{7-oxo-6-[4-

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION 

PATENT NO. $: 6,967,208 \mathrm{~B} 2 \quad$ Page 10 of 13
APPLICATION NO. : $10 / 245122$
DATED : November 22, 2005
INVENTOR(S) : Donald J. P. Pinto et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:
(2-oxo-2H-pyridin-1-yl)-phenyl]-3-trifluoromethyl-4,5,6,7-tetrahydro-pyrazolo[3,4-c]pyridin-1-yl\}-benzamidine;" should be deleted;
Line 14, "piperidinyl)phenyl]-4,5,6,7-tetrahydro-pyrazolo[3,4-c]" should read --piperidinyl)phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]--;
Lines 22-27, "2-\{7-oxo-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-3-trifluoromethyl-4,5,6,7-tetrahydro-pyrazolo[3,4-c]pyridin-1-yl\}-benzenesulfonamide; N -acetyl-2-\{7-oxo-6-[4-(2-oxo2 H -pyridin-1-yl)-phenyl]-3-trifluoromethyl-4, 5,6,7-tetrahydro-pyrazolo[3,4-c]pyridin-1-yl\}-benzenesulfonamide;" should be deleted;
Line 30, "4-c]pyridin-7-one;" should read --4-c]pyridin-7-one; and--;
Lines 31-33, "1-(3-chloro-phenyl)-3-methanesulfonyl-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-1,4,5,6-tetrahydro-pyrazolo[3,4-c]pyridin-7-one;" should be deleted;
Line 36, "and," should be deleted; and
Lines 37-39, "3-\{7-oxo-6-[4-(2-oxo-2H-pyridin-1-yl)-phenyl]-3-trifluoromethyl-4,5,6,7-tetrahydro-pyrazolo[3,4-c]pyridin-1-yl\}benzamide;" should be deleted.

## COLUMN 269:

Line 4, "phenyl-4,5,6,7-tetrahydro-1H-pyrazole-[3,4-c]" should read --phenyl]-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]--.
Lines 7-12, claim 14 should be deleted; and
Lines 25-43, claims 17 to 19 should be deleted.

## COLUMN 270:

Lines 9-12, claim 28 should be deleted; and Lines 21-32, claims 31 to 33 should be deleted.

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION 

PATENT NO. : 6,967,208 B2 Page 11 of 13
APPLICATION NO. : $10 / 245122$
DATED : November 22, 2005
INVENTOR(S) : Donald J. P. Pinto et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

COLUMN 273:
Lines $16-45$, claims 62 to 68 should be deleted.

## COLUMN 274:

Line 23, "arterial, embolism," should read --arterial embolism,--;
Lines 38-67, claims 83 to 89 should be deleted.

## COLUMNS 275-276:

Lines 1-32 and 1-30, respectively, claims 90 to 103 should be deleted.

## COLUMN 276:

Line 31, add claims 104 to 118 as follows:
--104 . A compound according to claim 13 is a crystalline compound.
105. A pharmaceutical composition, comprising: a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of claim 104.
106. A method for treating a thromboembolic disorder, comprising: administering to a patient in need thereof a therapeutically effective amount of a compound of claim 104.
107. A method according to claim 106, wherein the thromboembolic disorder is selected from the group consisting of arterial cardiovascular thromboembolic disorders, venous cardiovascular thromboembolic disorders, and thromboembolic disorders in the chambers of the heart.
108. A method according to claim 106, wherein the thromboembolic disorder is selected from unstable angina, an acute coronary syndrome, first myocardial infarction, recurrent myocardial infarction, ischemic sudden death,

# UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION 

| PATENT NO. | $: 6,967,208$ B2 | Page 12 of 13 |
| :--- | :--- | ---: |
| APPLICATION NO. | $: 10 / 245122$ |  |
| DATED | $:$ November 22,2005 |  |
| INVENTOR(S) | $:$ Donald J. P. Pinto et al. |  |

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:
transient ischemic attack, stroke, atherosclerosis, peripheral occlusive arterial disease, venous thrombosis, deep vein thrombosis, thrombophlebitis, arterial embolism, coronary arterial thrombosis, cerebral arterial thrombosis, cerebral embolism, kidney embolism, pulmonary embolism, and thrombosis resulting from (a) prosthetic valves or other implants, (b) indwelling catheters, (c) stents, (d) cardiopulmonary bypass, (e) hemodialysis, or (f) other procedures in which blood is exposed to an artificial surface that promotes thrombosis.
109. A method according to claim 108 , wherein the thromboembolic disorder is an acute coronary syndrome.
110. A method according to claim 108 , wherein the thromboembolic disorder is stroke.
111. A method according to claim 108 , wherein the thromboembolic disorder is deep vein thrombosis.
112. A method according to claim 108 , wherein the thromboembolic disorder is pulmonary embolism.
113. A process for the preparation of the crystalline compound according to claim 104, comprising recrystallization from isopropyl alcohol or $\mathrm{CH}_{2} \mathrm{Cl}_{2} / \mathrm{EtOAc}$.
114. A process for the preparation of the crystalline compound according to claim 104, comprising recrystallization from isopropyl alcohol.

115 A process for the preparation of the crystalline compound according to claim 104, comprising recrystallization from $\mathrm{CH}_{2} \mathrm{Cl}_{2} / \mathrm{EtOAc}$.
116. A compound according to claim 104 is prepared by a process comprising recrystallization from isopropyl alcohol or $\mathrm{CH}_{2} \mathrm{Cl}_{2} / \mathrm{EtOAc}$.
117. A compound according to claim 104 is prepared by a process comprising recrystallization from isopropyl alcohol.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:
118. A compound according to claim 104 is prepared by a process comprising recrystallization from $\mathrm{CH}_{2} \mathrm{Cl}_{2} / \mathrm{EtOAc}$.--.

## Signed and Sealed this

Second Day of December, 2008


JON W. DUDES
Director of the United States Patent and Trademark Office

