03822.000010 <u>PATENT</u>

# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent of:	)	
	:	Examiner: B. Kifle
DONALD J.P. PINTO ET AL.	)	
A 1 N 10/045 100	:	Group Art Unit: 1624
Appln. No.: 10/245,122	)	Confirmation No.: 6870
Filed: September 17, 2002	,	Commination No.: 0870
and soptemed 17, 2002	:	
For: LACTAM-CONTAINING COMPOUNDS	)	
AND DERIVATIVES THEREOF AS	:	
FACTOR XA INHIBITORS	)	
H.C. D N	:	
U.S. Patent No.: 6,967,208 B2	)	
Issued: November 22, 2005	,	May 13, 2008
155404. 11010111001 22, 2005	,	1.14, 13, 2000

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

Amendment filed September 22, 2004 2.

3. 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

4. Notice of Allowance mailed October 13, 2004

Office Communication confirming deletion of inventors mailed August 5.

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

FITZPATRICK, CELLA, HARPER & SCINTO

30 Rockefeller Plaza

New York, New York 10112-3801

Facsimile: (212) 218-2200

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# **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<sub>3</sub>--; and

Line 49, "CDCl3" should read --CHCl<sub>3</sub>--.

# COLUMN 175:

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

# COLUMN 237:

Lines 15-20, " 
$$\nearrow$$
 " should read --ring M, including  $P_1$ ,  $P_2$ ,

### MAILING ADDRESS OF SENDER:

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# **CERTIFICATE OF CORRECTION**

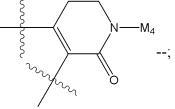
**PATENT NO.** : US 6,967,208 B2

DATED : November 22, 2005

INVENTOR(S): DONALD J. P. PINTO ET AL. 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 0-2R<sup>1a</sup> and is



Lines 22-23, "ring M, including  $P^1$ ,  $P_2$ , and  $M_1$ , and  $M_2$  is substituted with 0-2  $R^{1a}$  and is" should be deleted;

Lines 25-30, " 
$$\stackrel{\text{R}^{1a}}{\underset{\text{Pl}}{\bigvee}}$$
 " 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;  $P_4$  is — $G_1$  —G;--.

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# Staple Here Only! No. 2 P. 1

# 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 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, " $S(O)^p$ ," should read -- $S(O)_p$ ,--;

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, "NR<sup>2c</sup>(O)NHR<sup>2</sup>," should read --NR<sup>2</sup>C(O)NHR<sup>2</sup>,--.

# COLUMN 241:

Line 27, " $(CR_3R^{3a})_{r,1}$  Cl," should read -- $(CR^3R^{3a})_{r,1}$  Cl,--.

### COLUMN 242:

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

# COLUMN 243:

Line 30, "CH2CH2CH3CH3," should read --CH2CH2CH2CH3,--;

Line 38, "CH2CH2CH2CH3," should read --CH2CH2CH2CH3,--; and

Line 62, "benzyl" should read --benzyl,--.

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DATED: November 22, 2005

INVENTOR(S): DONALD J. P. PINTO ET AL. 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 NR<sup>3</sup>SO<sub>2</sub>CF<sub>3</sub>," should read --alkyl, NR<sup>3</sup>SO<sub>2</sub>CF<sub>3</sub>,--.

# COLUMN 246:

Lines 20-30, "
$$CH_3NH_2$$
 "should read -- 
$$CH_2NH_2$$

# COLUMN 248:

Lines 1-5, "N
$$_{0}$$
" should read -- N $_{0}$  N $_{1}$  N $_{2}$  --; and N $_{2}$  N $_{3}$  N $_{4}$  N $_{2}$  N $_{2}$  N $_{2}$  --; and N $_{3}$  N $_{4}$  N $_{2}$  N $_{2}$  N $_{3}$  Should read -- N $_{3}$  N $_{4}$  N $_{2}$  N $_{2}$  -- C $_{1}$  Should read -- N $_{3}$  N $_{4}$  C $_{1}$  Should read -- N $_{2}$  C $_{1}$  Should read -- N $_{3}$  N $_{4}$  C $_{1}$  Should read -- N $_{2}$  C $_{1}$  Should read -- N $_{3}$  Should read -- N $_{4}$  C $_{1}$  Should read -- N $_{4}$  Should read

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# **CERTIFICATE OF CORRECTION**

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DATED: November 22, 2005

INVENTOR(S): DONALD J. P. PINTO ET AL. 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:

# COLUMN 251:

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**PATENT NO.** : US 6,967,208 B2

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 252:

# COLUMN 253:

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

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DATED : November 22, 2005

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

# COLUMN 255:

# COLUMN 256:

Line 5, "
$$N \rightarrow 0$$
 " should read --  $N \rightarrow 0$  --; and

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DATED : November 22, 2005

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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 258**:

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# **CERTIFICATE OF CORRECTION**

**PATENT NO.** : US 6,967,208 B2

DATED : November 22, 2005

INVENTOR(S): DONALD J. P. PINTO ET AL. Page 9 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 259:

Line 67, " $CH_2c(O)R^{2b}$ ," should be deleted.

# COLUMN 261:

# COLUMN 262:

Line 34, "and is" should read -- and is:--;

Line 35, "selected from the group:" should be deleted;

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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 263:

Line 38, " $S(O)_p$ -phenyl" should read -- $S(O)_2$ -phenyl--; and Line 43, " $SO_2NR^2R^2a$ ." should read -- $SO_2NR^2R^2a$ .--.

# COLUMN 265:

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

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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# CERTIFICATE OF CORRECTION

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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:

- 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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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]-1,4,5,6tetrahydro-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-vlmethyl}acetamide:" should be deleted.

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DATED: November 22, 2005

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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 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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INVENTOR(S) : DONALD J. P. PINTO ET AL.

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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 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.

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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 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 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.

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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:

- 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 CH<sub>2</sub>Cl<sub>2</sub>/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 CH<sub>2</sub>Cl<sub>2</sub>/EtOAc.
- 116. A compound according to claim 104 is prepared by a process comprising recrystallization from isopropyl alcohol or CH<sub>2</sub>Cl<sub>2</sub>/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

# MAILING ADDRESS OF SENDER:

**PATENT NO.** US 6,967,208 B2

FITZPATRICK, CELLA, HARPER & SCINTO 30 Rockefeller Plaza
New York, New York 10112-3801
(212) 218-2100 - Telephone
(212) 218-2200 - Facsimile



# 

# 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 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 CH<sub>2</sub>Cl<sub>2</sub>/EtOAc.--.

**MAILING ADDRESS OF SENDER:** 

PATENT NO. <u>US 6,967,208 B2</u>

FITZPATRICK, CELLA, HARPER & SCINTO 30 Rockefeller Plaza
New York, New York 10112-3801
(212) 218-2100 - Telephone
(212) 218-2200 - Facsimile





# United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandra, Vrignia 22313-1450 www.uspin.gov

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
23914	7590 08/17/2005		EXAM	INER
STEPHEN B	. DAVIS		KIFLE, I	BRUCK
BRISTOL-MY PATENT DEF	YERS SQUIBB COM	PANY	ART UNIT	PAPER NUMBER
PO BOX 400			1624	
PRINCETON,	, NJ 08543-4000		DATE MAILED: 08/17/200	5

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



# UNITED STATES DEPARTMENT OF COMMERCE

# U.S. Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / 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.

Bruck Kifle, Ph.D. Primary Examiner

Art Unit: 1624

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandia, Virginia 22313-1450 www.uspto.gov

# NOTICE OF ALLOWANCE AND FEE(S) DUE

24348

7590

10/13/2004

BRISTOL-MYERS SQUIBB COMPANY PATENT DEPARTMENT P.O. BOX 4000 PRINCETON, NJ 08543-4000 EXAMINER KIFLE, BRUCK

.

ART UNIT

PAPER NUMBER

1624

DATE MAILED: 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	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
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 THE 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 WITHIN 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 FEE IS DUE OR THE APPLICATION WILL 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 5b 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 5a on Part B - Fee(s) 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 "4b" of Part B - Fee(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 (Rev. 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 ISSUE FEE Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

			or <u>F</u>			
INSTRUCTIONS: This fo appropriate. All further co- indicated unless corrected maintenance fee notification	orm should be used for tran rrespondence including the below or directed otherwise ns.	smitting the ISSU Patent, advance or in Block 1, by (a	JE FEE and F ders and notif i) specifying a	UBLICATION FEE (if required to a maintenance fees new correspondence address	pired). Blocks I through 5 s will be mailed to the current and/or (b) indicating a sep	should be completed when correspondence address a arate "FEE ADDRESS" fo
CURRENT CORRESPONDENC	TE ADDRESS (Note: Use Block 1 for	any change of address)		Note: A certificate of Fee(s) Transmittal. The papers Fisch addition	mailing can only be used f nis certificate cannot be used al paper, such as an assignm	or domestic mailings of the for any other accompanying
24348 7.	590 10/13/2004			have its own certificat	c of mailing or transmission.	em or formal drawing, mus
BRISTOL-MYE. PATENT DEPAR' P.O. BOX 4000 PRINCETON, NJ		ANY		I hereby certify that t	rtificate of Mailing or Tran. his Fec(s) Transmittal is bein with sufficient postage for fir il Step ISSUE FEE address PTO (703) 746-4000, on the	a denosited with the United
						(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	PH-7398	6870
				VES THEREOF AS FACTOR		DATE OUT
APPLN. TYPE	SMALL ENTITY	ISSUE F	EE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO .	\$40		\$0	\$40	01/13/2005
EXAM	MINER	ART UN	IIT	CLASS-SUBCLASS	]	
KIFLE,	BRUCK	1624		514-212080		
CFR 1.363).  Change of correspond Address form PTO/SB/1  "Fee Address" indicate PTO/SB/47; Rev 03-02 Number is required.  3. ASSIGNEE NAME AND	the address or indication of "Formula dence address (or Change of 22) attached.  tion (or "Fee Address" Indicator more recent) attached. Use DRESIDENCE DATA TO B	Correspondence ation form e of a Customer E PRINTED ON T	(1) the nam or agents O (2) the nam registered a 2 registered listed, no na	.,	a member a 2eles of up to no name is 3	
(A) NAME OF ASSIGN		(В	B) RESIDENCI	ar on the patent. If an assign or filing an assignment.  E: (CITY and STATE OR CO		
4a. The following fee(s) are	enclosed:	4b	. Payment of F	` '	•	
Issue Fee		, n		the amount of the fee(s) is en		
Advance Order - # of	small entity discount permitte	oa)		by credit card. Form PTO-203		credit any overnayment to
			Deposit Acco	etor is hereby authorized by count Number	(enclose an extra e	opy of this form).
	(from status indicated above MALL ENTITY status. See		☐ b. Applica	int is no longer claiming SMA	LL ENTITY status. See 37 C	FR 1.27(g)(2).
The Director of the USPTO NOTE: The Issue Fee and P interest as shown by the rece	is requested to apply the Issu bublication Fee (if required) vords of the United States Pate	ic Fee and Publicat will not be accepted ent and Trademark	tion Fee (if any t from anyone Office.	or to re-apply any previous other than the applicant; a reg	y paid issue fee to the applications is provided by paid issue fee to the application of the provided by paid is a provided by paid	ation identified above. the assignce or other party in
Authorized Signature				Date		
					No	
Alexandria, Virginia 22313-	-1430.			o obtain or retain a benefit by ection is estimated to take 12 on the individual case. Any or ation Officer, U.S. Patent and FORMS TO THIS ADDRES.		

PTOL-85 (Rev. 09/04) Approved for use through 04/30/2007.

OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE



UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address COMMISSIONER FOR PATENTS PO. Box 1450 Alexandria, Virginia 22313-1459 www.tuspto.guv

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
24348	7590 10/13/2004		EXAM	INER
	ERS SQUIBB COMPANY		KIFLE, E	3RUCK
PATENT DEPAR P.O. BOX 4000	RTMENT		ART UNIT	PAPER NUMBER
PRINCETON, N	1 08543-4000		1624	<del></del>

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

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.tuspto.gov

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
24348 75	90 10/13/2004		EXAM	INER
	RS SQUIBB COMPANY	Y	KIFLE, E	BRUCK
PATENT DEPART P.O. BOX 4000	MENI		ART UNIT	PAPER NUMBER
PRINCETON, NJ 0	08543-4000		1624	

DATE MAILED: 10/13/2004

### 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:

except a design of 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 at (703) 305-8283.

Page 4 of 4

PTOL-85 (Rev. 09/04) Approved for use through 04/30/2007.

	Application No.	Applicant(s)	
	10/245,122	PINTO ET AL.	
Notice of Allowability	Examiner	Art Unit	
	Bruck Kifle, Ph.D.	1624	
The MAILING DATE of this communication appe All claims being allowable, PROSECUTION ON THE MERITS IS nerewith (or previously mailed), a Notice of Allowance (PTOL-85) NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RI	(OR REMAINS) CLOSED in or other appropriate comm GHTS. This application is:	n this application. If not included unication will be mailed in due could	rse. THIS
<ol> <li>This communication is responsive to <u>amendments filed 9/1</u></li> </ol>	6/04 and 9/22/04.		
2. 🛮 The allowed claim(s) is/are <u>1-8,16-19,31,33,34,38-45,47,48</u>	3,52-79,87-100 and 122-13	<u>6</u> .	
3. The drawings filed on are accepted by the Examiner	r.		
4.	been received. been received in Application currents have been received of this communication to file ENT of this application.  itted. Note the attached EX is reason(s) why the oath of the submitted.	on No  d in this national stage application  a reply complying with the require  AMINER'S AMENDMENT or NOTI  r declaration is deficient.	ements
1)  hereto or 2) to Paper No./Mail Date  (b) including changes required by the attached Examiner's Paper No./Mail Date  Identifying indicia such as the application number (see 37 CFR 1.	s Amendment / Comment o	r in the Office action of	:k) of
each sheet. Replacement sheet(s) should be labeled as such in the	_		
<ol> <li>DEPOSIT OF and/or INFORMATION about the deposit attached Examiner's comment regarding REQUIREMENT I</li> </ol>			the
Attachment(s)  1. Notice of References Cited (PTO-892)  2. Notice of Draftperson's Patent Drawing Review (PTO-948)  3. Information Disclosure Statements (PTO-1449 or PTO/SB/0 Paper No./Mail Date  4. Examiner's Comment Regarding Requirement for Deposit of Biological Material	6. ☐ Interview S Paper No. 8), 7. ☐ Examiner's	oformal Patent Application (PTO-15) ummary (PTO-413), //Mail Date Amendment/Comment  Statement of Reasons for Allowar  Bruck Kifle, Ph.D. Primary Examiner Art Unit: 1624	

U.S. Patent and Trademark Office PTOL-37 (Rev. 1-04)

L-37 (Rev. 1-04) Notice of Allowability

Part of Paper No./Mail Date 20041007

12-12-04

DOCKET NO.: PH-7398

PATENT

FILING BY "EXPRESS MAIL" UNDER 37 CFR 1.10

EL983150226US

Express Mail Label Number

October 8, 2004

Date of Deposit

# 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:

**September 17, 2002** 

Confirmation No. 6870

For:

LACTAM-CONTAINING COMPOUNDS AND DERIVATIVES THEREOF AS

FACTOR XA INHIBITORS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

# PETITION AND FEE DELETING CORRECTLY NAMED PERSONS WHO ARE NOT INVENTORS OF INVENTION NOW BEING CLAIMED (UNDER 37 C.F.R. §1.48(b))

Due to the Amendment filed September 22, 2004, the actual inventors of the aboveidentified application have now changed. Thus, it is hereby requested that:

Wei Han

Yun-Long Li

inventors of the above-identified application as filed, be deleted as an inventor.

Please charge Deposit Account No. 19-3880 in the name of Bristol-Myers Squibb Company in the amount of \$130 for payment of the fee. An additional copy of this paper is here enclosed. The Commissioner is hereby authorized to charge any additional fees

10/15/2004 JBALINAN 00000094 193880 10245122

01 FC:1460

130.00 DA

DOCKET NO.: PH-7398

Amendment

USSN: 10/245,122

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.

Respectfully submitted,

Date: October 8, 2004

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

Bristol-Myers SquibbCompany

Patent Department P.O. Box 4000 Princeton, NJ 08543-4000 (609) 252-3791 (phone) (609) 252-4526 (fax) 9-23-04

**DOCKET NO.: PH-7398** 

**PATENT** 

1624 Uh)



# FILING BY "EXPRESS MAIL" UNDER 37 CFR 1.10

EL983150053US

Express Mail Label Number

September 22, 2004

Date of Deposit

# 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:

**September 17, 2002** 

Confirmation No. 6870

LACTAM-CONTAINING COMPOUNDS AND DERIVATIVES THEREOF AS

**FACTOR XA 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.

**DOCKET NO.: PH-7398** 

USSN: 10/245,122

# **Amendment**

# **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 <u>Part A of Example 27</u>. High Resolution Mass Spec  $(M+H)^+$  for  $C_{27}H_{25}N_4O_5$  485.1827.

DOCKET NO.: PH-7398

USSN: 10/245,122

# Amendment

# 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:

Ι

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  $R^{1a}$  and is

ring P, including  $P_1$ ,  $P_2$ , and  $P_3$ , is  $P_4$ 

 $M_4$  is -A-B;

P<sub>4</sub> is -G<sub>1</sub>-G;

Amendment

DOCKET NO.: PH-7398 USSN: 10/245,122

G is a group of Formula IIa or 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 N, O, and S(O)<sub>p</sub>;

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 N, O, and S(O)<sub>p</sub>, 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 H, C<sub>1-4</sub> alkyl, F, Cl, Br, I, OH, OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH(CH<sub>3</sub>)<sub>2</sub>,

  OCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CN, C(=NR<sup>8</sup>)NR<sup>7</sup>R<sup>9</sup>, NHC(=NR<sup>8</sup>)NR<sup>7</sup>R<sup>9</sup>, ONHC(=NR<sup>8</sup>)NR<sup>7</sup>R<sup>9</sup>,

  NR<sup>8</sup>CH(=NR<sup>7</sup>), NH<sub>2</sub>, NH(C<sub>1-3</sub> alkyl), N(C<sub>1-3</sub> alkyl)<sub>2</sub>, C(=NH)NH<sub>2</sub>, CH<sub>2</sub>NH<sub>2</sub>,

  CH<sub>2</sub>NH(C<sub>1-3</sub> alkyl), CH<sub>2</sub>N(C<sub>1-3</sub> alkyl)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>NH(C<sub>1-3</sub> alkyl),

DOCKET NO.: PH-7398

USSN: 10/245,122

Amendment

$$\begin{split} & CH_2CH_2N(C_{1\text{--}3}\text{ alkyl})_2, (CR^8R^9)_tC(O)H, (CR^8R^9)_tC(O)R^{2c}, (CR^8R^9)_tNR^7R^8, \\ & (CR^8R^9)_tC(O)NR^7R^8, (CR^8R^9)_tNR^7C(O)R^7, (CR^8R^9)_tOR^3, (CR^8R^9)_tS(O)_pNR^7R^8, \\ & (CR^8R^9)_tNR^7S(O)_pR^7, (CR^8R^9)_tSR^3, (CR^8R^9)_tS(O)R^3, (CR^8R^9)_tS(O)_2R^3, \text{ and } OCF_3; \end{split}$$

alternatively, when 2 R groups are attached to adjacent atoms, they combine to form methylenedioxy or ethylenedioxy;

### A is selected from:

 $C_{3-10}$  carbocycle substituted with 0-2  $R^4$ ;

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 N-N-N group;

 $Q_1$  is C=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 R<sup>4a</sup>;

X is absent;

 $G_1 \text{ is absent or is selected from } (CR^3R^{3a})_{1-5}, (CR^3R^{3a})_{0-2}CR^3 = CR^3(CR^3R^{3a})_{0-2},$   $(CR^3R^{3a})_{0-2}C = C(CR^3R^{3a})_{0-2}, (CR^3R^{3a})_uC(O)(CR^3R^{3a})_w, (CR^3R^{3a})_uC(O)O(CR^3R^{3a})_w,$   $(CR^3R^{3a})_uOC(O)(CR^3R^{3a})_w, (CR^3R^{3a})_uO(CR^3R^{3a})_w, (CR^3R^{3a})_uN^{3b}(CR^3R^{3a})_w,$   $(CR^3R^{3a})_uC(O)N^{3b}(CR^3R^{3a})_w, (CR^3R^{3a})_uN^{3b}C(O)(CR^3R^{3a})_w,$   $(CR^3R^{3a})_uOC(O)N^{3b}(CR^3R^{3a})_w, (CR^3R^{3a})_uN^{3b}C(O)O(CR^3R^{3a})_w,$   $(CR^3R^{3a})_uN^{3b}C(O)N^{3b}(CR^3R^{3a})_w, (CR^3R^{3a})_uN^{3b}C(O)O(CR^3R^{3a})_w,$   $(CR^3R^{3a})_uN^{3b}C(O)N^{3b}(CR^3R^{3a})_w, (CR^3R^{3a})_uN^{3b}C(S)N^{3b}(CR^3R^{3a})_w,$ 

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 $(CR^{3}R^{3a})_{u}S(CR^{3}R^{3a})_{w}, (CR^{3}R^{3a})_{u}S(O)(CR^{3}R^{3a})_{w}, (CR^{3}R^{3a})_{u}S(O)_{2}(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}S(O)N^{3b}(CR^{3}R^{3a})_{w}, (CR^{3}R^{3a})_{u}N^{3b}S(O)_{2}(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}S(O)_{2}N^{3b}(CR^{3}R^{3a})_{w}, (CR^{3}R^{3a})_{u}N^{3b}S(O)_{2}N^{3b}(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}NR^{3e}(CR^{3}R^{3a})_{w}, (CR^{3}R^{3a})_{u}C(O)(CR^{3}R^{3a})_{u}C(O)(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}NR^{3b}(CR^{3}R^{3a})_{u}C(O)NR^{3b}(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}NR^{3b}C(O)(CR^{3}R^{3a})_{u}C(O)(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}C(O)(CR^{3}R^{3a})_{u}C(O)NR^{3b}(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}NR^{3b}C(O)(CR^{3}R^{3a})_{u}C(O)NR^{3b}(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}NR^{3b}C(O)(CR^{3}R^{3a})_{u}C(O)NR^{3b}(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}S(O)NR^{3b}C(O)(CR^{3}R^{3a})_{w}, (CR^{3}R^{3a})_{u}C(O)NR^{3b}S(O)_{2}(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}S(O)_{2}NR^{3b}C(O)NR^{3b}CR^{3}R^{3a})_{w}, (CR^{3}R^{3a})_{u}C(O)NR^{3b}S(O)_{2}(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}S(O)_{2}NR^{3b}C(O)NR^{3b}CR^{3}R^{3a})_{w}, (CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}S(O)_{2}NR^{3b}C(O)NR^{3b}CR^{3}R^{3a})_{w}, (CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}S(O)_{2}NR^{3b}C(O)NR^{3b}CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}S(O)_{2}NR^{3b}C(O)NR^{3b}CR^{3}R^{3a})_{u}S(O)NR^{3b}CR^{3}R^{3a}$ 

 $R^{1a}, \text{ at each occurrence, is selected from } H, -(CR^3R^{3a})_r - R^{1b}, -(CR^3R^{3a})_r - CR^3R^{1b}R^{1b}, \\ -(CR^3R^{3a})_r - O -(CR^3R^{3a})_r - R^{1b}, -C_{2-6} \text{ alkenylene-} R^{1b}, -C_{2-6} \text{ alkynylene-} R^{1b}, \\ -(CR^3R^{3a})_r - C(=NR^{1b})NR^3R^{1b}, NR^3CR^3R^{3a}R^{1c}, OCR^3R^{3a}R^{1c}, SCR^3R^{3a}R^{1c}, \\ -(CR^3R^{3a})_r - C(=NR^{1b})NR^3R^{1b}, NR^3CR^3R^{3a}R^{1c}, OCR^3R^{3a}R^{1c}, SCR^3R^{3a}R^{1c}, \\ -(CR^3R^{3a})_r - C(=NR^{1b})NR^3R^{1b}, NR^3CR^3R^{3a}R^{1c}, OCR^3R^{3a}R^{1c}, SCR^3R^{3a}R^{1c}, \\ -(CR^3R^{3a})_r - C(=NR^{1b})NR^3R^{1b}, NR^3C(R^3R^{3a})_r - C(R^3R^{3a})_r - C(R^3R^{3a})_r$ 

alternatively, when two R<sup>1a</sup> 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)<sub>p</sub>, this ring being substituted with 0-2 R<sup>4b</sup> and 0-3 ring double bonds;

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- R1b is selected from H,  $C_{1-3}$  alkyl, F, Cl, Br, I, -CN, -NO<sub>2</sub>, -CHO,  $(CF_2)_rCF_3$ ,  $(CR^3R^{3a})_rOR^2$ ,  $NR^2R^{2a}$ ,  $C(O)R^{2b}$ ,  $CO_2R^{2b}$ ,  $OC(O)R^2$ ,  $(CF_2)_rCO_2R^{2a}$ ,  $S(O)_pR^{2b}$ ,  $NR^2(CH_2)_rOR^2$ ,  $C(=NR^{2c})NR^2R^{2a}$ ,  $NR^2C(O)R^{2b}$ ,  $NR^2C(O)NHR^2$ ,  $NR^2C(O)_2R^{2a}$ ,  $OC(O)NR^2R^{2a}$ ,  $C(O)NR^2R^{2a}$ ,  $C(O)NR^2(CH_2)_rOR^2$ ,  $SO_2NR^2R^{2a}$ ,  $NR^2SO_2R^2$ ,  $C(O)NR^2SO_2R^2$ ,  $C_{3-6}$  carbocycle substituted with 0-2  $R^{4b}$ , 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  $R^{4b}$ , provided that  $R^{1b}$  forms other than an O-O, N-halo, N-S, or N-CN bond;
- $R^{1c}$  is selected from H, CH(CH<sub>2</sub>OR<sup>2</sup>)<sub>2</sub>, C(O)R<sup>2c</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, S(O)R<sup>2</sup>, S(O)<sub>2</sub>R<sup>2</sup>, and SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>;
- R<sup>1d</sup> is selected from C<sub>3-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup> 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)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>, provided that R<sup>1d</sup> forms other than an N-S bond;
- R<sup>2</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, C<sub>1-6</sub> alkyl, benzyl, -(CH<sub>2</sub>)<sub>r</sub>-C<sub>3-10</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and -(CH<sub>2</sub>)<sub>r</sub>-5-10 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>2a</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, C<sub>1-6</sub> alkyl, benzyl, -(CH<sub>2</sub>)<sub>r</sub>-C<sub>3-10</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and -(CH<sub>2</sub>)<sub>r</sub>-5-10 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;

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- alternatively, R<sup>2</sup> and R<sup>2a</sup>, 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<sup>4b</sup> and consisting of: 0-1 additional heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;
- R<sup>2b</sup>, at each occurrence, is selected from CF<sub>3</sub>, C<sub>1-4</sub> alkoxy substituted with 0-2 R<sup>4b</sup>, C<sub>1-6</sub> alkyl substituted with 0-2 R<sup>4b</sup>, -(CH<sub>2</sub>)<sub>r</sub>-C<sub>3-10</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and -(CH<sub>2</sub>)<sub>r</sub>-5-10 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>2c</sup>, at each occurrence, is selected from CF<sub>3</sub>, OH, C<sub>1-4</sub> alkoxy, C<sub>1-6</sub> alkyl, -(CH<sub>2</sub>)<sub>r</sub>-C<sub>3-10</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and -(CH<sub>2</sub>)<sub>r</sub>-5-10 membered heterocycle containing from 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>3</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, and phenyl;
- R<sup>3a</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, and phenyl;
- alternatively, R<sup>3</sup> and R<sup>3a</sup>, 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 R<sup>3</sup> and R<sup>3a</sup> are attached, and 0-1 additional heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;
- R<sup>3b</sup>, at each occurrence, is selected from H, C<sub>1-6</sub> alkyl substituted with 0-2 R<sup>1a</sup>, C<sub>2-6</sub> alkenyl substituted with 0-2 R<sup>1a</sup>, C<sub>2-6</sub> alkynyl substituted with 0-2 R<sup>1a</sup>,

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-( $C_{0.4}$  alkyl)-5-10 membered carbocycle substituted with 0-3 R<sup>1a</sup>, and -( $C_{0.4}$  alkyl)- 5-10 membered heterocycle substituted with 0-3 R<sup>1a</sup> and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;

- R<sup>3c</sup>, at each occurrence, is selected from CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, and phenyl;
- $R^{3d}$ , at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C<sub>1-4</sub> alkyl-phenyl, and C(=O)R<sup>3c</sup>;
- R<sup>3c</sup>, at each occurrence, is selected from H, SO<sub>2</sub>NHR<sup>3</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3</sup>, C(O)R<sup>3</sup>, C(O)NHR<sup>3</sup>, C(O)OR<sup>3f</sup>, S(O)R<sup>3f</sup>, S(O)<sub>2</sub>R<sup>3f</sup>, C<sub>1-6</sub> alkyl substituted with 0-2 R<sup>1a</sup>, C<sub>2-6</sub> alkenyl substituted with 0-2 R<sup>1a</sup>, -(C<sub>0-4</sub> alkyl)-5-10 membered carbocycle substituted with 0-3 R<sup>1a</sup>, and -(C<sub>0-4</sub> alkyl)-5-10 membered heterocycle substituted with 0-3 R<sup>1a</sup> and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;
- R<sup>3f</sup>, at each occurrence, is selected from: C<sub>1-6</sub> alkyl substituted with 0-2 R<sup>1a</sup>, C<sub>2-6</sub> alkenyl substituted with 0-2 R<sup>1a</sup>, C<sub>2-6</sub> alkynyl substituted with 0-2 R<sup>1a</sup>,

  -(C<sub>0-4</sub> alkyl)-5-10 membered carbocycle substituted with 0-3 R<sup>1a</sup>, and -(C<sub>0-4</sub> alkyl)-5-10 membered heterocycle substituted with 0-3 R<sup>1a</sup> and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;

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(CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NHC(=NR<sup>2</sup>)NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>C(O)NHC(=NR<sup>2</sup>)NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>SO<sub>2</sub>R<sup>5</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>S(O)<sub>p</sub>R<sup>5a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>(CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>, NHCH<sub>2</sub>R<sup>1c</sup>, OCH<sub>2</sub>R<sup>1c</sup>, SCH<sub>2</sub>R<sup>1c</sup>, NH(CH<sub>2</sub>)<sub>2</sub>(CH<sub>2</sub>)<sub>t</sub>R<sup>1b</sup>, O(CH<sub>2</sub>)<sub>2</sub>(CH<sub>2</sub>)<sub>t</sub>R<sup>1b</sup>, S(CH<sub>2</sub>)<sub>2</sub>(CH<sub>2</sub>)<sub>t</sub>R<sup>1b</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>-5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, and a (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>-5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>5</sup>;

- $R^{4a}, \text{ at each occurrence, is selected from } H, =O, (CR^3R^{3a})_rOR^2, (CR^3R^{3a})_rF, (CR^3R^{3a})_rBr, \\ (CR^3R^{3a})_rCI, C_{1-4} \text{ alkyl, } (CR^3R^{3a})_rCN, (CR^3R^{3a})_rNO_2, (CR^3R^{3a})_rNR^2R^{2a}, \\ (CR^3R^{3a})_rC(O)R^{2c}, (CR^3R^{3a})_rNR^2C(O)R^{2b}, (CR^3R^{3a})_rC(O)NR^2R^{2a}, \\ (CR^3R^{3a})_rN=CHOR^3, (CR^3R^{3a})_rC(O)NH(CH_2)_2NR^2R^{2a}, (CR^3R^{3a})_rNR^2C(O)NR^2R^{2a}, \\ (CR^3R^{3a})_rC(=NR^2)NR^2R^{2a}, (CR^3R^{3a})_rNHC(=NR^2)NR^2R^{2a}, (CR^3R^{3a})_rSO_2NR^2R^{2a}, \\ (CR^3R^{3a})_rNR^2SO_2NR^2R^{2a}, (CR^3R^{3a})_rNR^2SO_2-C_{1-4} \text{ alkyl, } (CR^3R^{3a})_rC(O)NHSO_2-C_{1-4} \\ \text{alkyl, } (CR^3R^{3a})NR^2SO_2R^5, (CR^3R^{3a})_rS(O)_pR^{5a}, (CR^3R^{3a})_r(CF_2)_rCF_3, (CR^3R^{3a})_r-5-6 \\ \text{ membered carbocycle substituted with } 0-1 R^5, \text{ and a } (CR^3R^{3a})_r-5-6 \text{ membered} \\ \text{ heterocycle consisting of: carbon atoms and } 1-4 \text{ heteroatoms selected from the group} \\ \text{ consisting of } N, O, \text{ and } S(O)_p, \text{ and substituted with } 0-1 R^5; \end{aligned}$
- $R^{4b}, \text{ at each occurrence, is selected from } H, =O, (CH_2)_rOR^3, (CH_2)_rF, (CH_2)_rCl, (CH_2)_rBr, \\ (CH_2)_rI, C_{1-4} \text{ alkyl, } (CH_2)_rCN, (CH_2)_rNO_2, (CH_2)_rNR^3R^{3a}, (CH_2)_rC(O)R^3, \\ (CH_2)_rC(O)OR^{3c}, (CH_2)_rNR^3C(O)R^{3a}, (CH_2)_r-C(O)NR^3R^{3a}, (CH_2)_rNR^3C(O)NR^3R^{3a}, \\ (CH_2)_r-C(=NR^3)NR^3R^{3a}, (CH_2)_rNR^3C(=NR^3)NR^3R^{3a}, (CH_2)_rSO_2NR^3R^{3a}, \\ (CH_2)_rNR^3SO_2NR^3R^{3a}, (CH_2)_rNR^3SO_2-C_{1-4} \text{ alkyl, } (CH_2)_rNR^3SO_2CF_3, \\ (CH_2)_rNR^3SO_2-phenyl, (CH_2)_rS(O)_pCF_3, (CH_2)_rS(O)_p-C_{1-4} \text{ alkyl, } (CH_2)_rS(O)_p-phenyl, \\ \text{and } (CH_2)_r(CF_2)_rCF_3; \\ \end{cases}$

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 $R^{4c}, \text{ at each occurrence, is selected from H, $C_{1-4}$ alkyl $(CR^3R^{3a})_{r1}OR^2$, $(CR^3R^{3a})_{r1}F$, $(CR^3R^{3a})_{r1}Br$, $(CR^3R^{3a})_{r1}Cl$, $(CR^3R^{3a})_{r1}CN$, $(CR^3R^{3a})_{r1}NO_2$, $(CR^3R^{3a})_{r1}NR^2R^{2a}$, $(CR^3R^{3a})_{r}C(O)R^{2c}$, $(CR^3R^{3a})_{r1}NR^2C(O)R^{2b}$, $(CR^3R^{3a})_{r}C(O)NR^2R^{2a}$, $(CR^3R^{3a})_{r1}N=CHOR^3$, $(CR^3R^{3a})_{r}C(O)NH(CH_2)_2NR^2R^{2a}$, $(CR^3R^{3a})_{r1}NR^2C(O)NR^2R^{2a}$, $(CR^3R^{3a})_{r1}NR^2C(O)NR^2R^{2a}$, $(CR^3R^{3a})_{r1}C(=NR^2)NR^2R^{2a}$, $(CR^3R^{3a})_{r1}NHC(=NR^2)NR^2R^{2a}$, $(CR^3R^{3a})_{r}SO_2NR^2R^{2a}$, $(CR^3R^{3a})_{r1}NR^2SO_2NR^2R^{2a}$, $(CR^3R^{3a})_{r1}NR^2SO_2-C_{1-4}$ alkyl$, $(CR^3R^{3a})_{r}C(O)NHSO_2-C_{1-4}$ alkyl$, $(CR^3R^{3a})_{r1}NR^2SO_2R^5$, $(CR^3R^{3a})_{r}S(O)_{p}R^{5a}$, $(CR^3R^{3a})_{r}(CF_2)_{r}CF_3$, $(CR^3R^{3a})_{r-5-6}$ membered carbocycle substituted with 0-1 R^5$, and a $(CR^3R^{3a})_{r-5-6}$ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)_p$, and substituted with 0-1 R^5$;$ 

R<sup>5</sup>, at each occurrence, is selected from H, C<sub>1-6</sub> alkyl, =O, (CH<sub>2</sub>)<sub>r</sub>OR<sup>3</sup>, F, Cl, Br, I, -CN, NO<sub>2</sub>, (CH<sub>2</sub>)<sub>r</sub>NR<sup>3</sup>R<sup>3a</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)R<sup>3</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)OR<sup>3c</sup>, (CH<sub>2</sub>)<sub>r</sub>NR<sup>3</sup>C(O)R<sup>3a</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)NR<sup>3</sup>R<sup>3a</sup>, (CH<sub>2</sub>)<sub>r</sub>NR<sup>3</sup>C(O)NR<sup>3</sup>R<sup>3a</sup>, (CH<sub>2</sub>)<sub>r</sub>CH(=NOR<sup>3d</sup>), (CH<sub>2</sub>)<sub>r</sub>C(=NR<sup>3</sup>)NR<sup>3</sup>R<sup>3a</sup>, (CH<sub>2</sub>)<sub>r</sub>NR<sup>3</sup>C(=NR<sup>3</sup>)NR<sup>3</sup>R<sup>3a</sup>, (CH<sub>2</sub>)<sub>r</sub>SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, (CH<sub>2</sub>)<sub>r</sub>NR<sup>3</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, (CH<sub>2</sub>)<sub>r</sub>NR<sup>3</sup>SO<sub>2</sub>CF<sub>3</sub>, (CH<sub>2</sub>)<sub>r</sub>NR<sup>3</sup>SO<sub>2</sub>-phenyl, (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>p</sub>CF<sub>3</sub>, (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>p</sub>-C<sub>1-4</sub> alkyl, (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>p</sub>-phenyl, (CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>, phenyl substituted with 0-2 R<sup>6</sup>, naphthyl substituted with 0-2 R<sup>6</sup>, and benzyl substituted with 0-2 R<sup>6</sup>;

 $R^{5a}$ , at each occurrence, is selected from  $C_{1-6}$  alkyl,  $(CH_2)_rOR^3$ ,  $(CH_2)_rNR^3R^{3a}$ ,  $(CH_2)_rC(O)R^3$ ,  $(CH_2)_rC(O)OR^{3c}$ ,  $(CH_2)_rNR^3C(O)R^{3a}$ ,  $(CH_2)_rC(O)NR^3R^{3a}$ ,  $(CF_2)_rCF_3$ , phenyl substituted with 0-2  $R^6$ , naphthyl substituted with 0-2  $R^6$ , and benzyl substituted with 0-2  $R^6$ , provided that  $R^{5a}$  does not form a S-N or  $S(O)_p$ -C(O) bond;

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- $R^6$ , at each occurrence, is selected from H, OH,  $(CH_2)_rOR^2$ , halo,  $C_{1-4}$  alkyl, CN,  $NO_2$ ,  $(CH_2)_rNR^2R^{2a}$ ,  $(CH_2)_rC(O)R^{2b}$ ,  $NR^2C(O)R^{2b}$ ,  $NR^2C(O)NR^2R^{2a}$ ,  $C(=NH)NH_2$ ,  $NHC(=NH)NH_2$ ,  $SO_2NR^2R^{2a}$ ,  $NR^2SO_2NR^2R^{2a}$ , and  $NR^2SO_2C_{1-4}$  alkyl;
- $R^7$ , at each occurrence, is selected from H, OH,  $C_{1-6}$  alkyl,  $C_{1-6}$  alkyl-C(O)-,  $C_{1-6}$  alkyl-O-,  $(CH_2)_n$ -phenyl,  $C_{1-4}$  alkyl-OC(O)-,  $C_{6-10}$  aryl-O-,  $C_{6-10}$  aryl-OC(O)-,  $C_{6-10}$  aryl-CH<sub>2</sub>-C(O)-,  $C_{1-4}$  alkyl-C(O)O-C<sub>1-4</sub> alkyl-OC(O)-,  $C_{6-10}$  aryl-C(O)O-C<sub>1-4</sub> alkyl-OC(O)-,  $C_{1-6}$  alkyl-NH<sub>2</sub>-C(O)-, phenyl-NH<sub>2</sub>-C(O)-, and phenyl-C<sub>1-4</sub> alkyl-C(O)-;
- $R^8$ , at each occurrence, is selected from H,  $C_{1-6}$  alkyl, and  $(CH_2)_n$ -phenyl;
- alternatively, R<sup>7</sup> and R<sup>8</sup>, 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 N, O, and S(O)<sub>D</sub>;
- $R^9$ , at each occurrence, is selected from H,  $C_{1\text{-}6}$  alkyl, and  $(CH_2)_n$ -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:

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 N, O, and S(O)<sub>p</sub>;

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 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)<sub>p</sub>, 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 H,  $C_{1-4}$  alkyl, F, Cl, OH, OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH(CH<sub>3</sub>)<sub>2</sub>, CN, C(=NH)NH<sub>2</sub>, C(=NH)NHOH, C(=NH)NHOCH<sub>3</sub>, NH<sub>2</sub>, NH(C<sub>1-3</sub> alkyl), N(C<sub>1-3</sub> alkyl)<sub>2</sub>, C(=NH)NH<sub>2</sub>,

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 $CH_{2}NH_{2}, CH_{2}NH(C_{1-3} \text{ alkyl}), CH_{2}N(C_{1-3} \text{ alkyl})_{2}, (CR^{8}R^{9})_{t}NR^{7}R^{8}, C(O)NR^{7}R^{8}, \\ CH_{2}C(O)NR^{7}R^{8}, S(O)_{p}NR^{7}R^{8}, CH_{2}S(O)_{p}NR^{7}R^{8}, SO_{2}R^{3}, \\ \text{and OCF}_{3};$ 

alternatively, when 2 R groups are attached to adjacent atoms, they combine to form methylenedioxy or ethylenedioxy;

#### A is selected from:

 $C_{5-10}$  carbocycle substituted with 0-2  $\mathbb{R}^4$ ;

- $R^{1a}$  is selected from H,  $-(CH_2)_r R^{1b}$ ,  $-(CH(CH_3))_r R^{1b}$ ,  $-(C(CH_3)_2)_r R^{1b}$ ,  $NHCH_2R^{1c}$ ,  $OCH_2R^{1c}$ ,  $SCH_2R^{1c}$ ,  $NH(CH_2)_2(CH_2)_tR^{1b}$ , and  $O(CH_2)_2(CH_2)_tR^{1b}$ , provided that  $R^{1a}$  forms other than an N-halo, N-S, or N-CN bond;
- alternatively, when two R<sup>1a</sup> 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)<sub>p</sub>, this ring being substituted with 0-2 R<sup>4b</sup> and 0-3 ring double bonds;
- $R^{1b} \text{ is selected from H, CH}_3, CH_2CH_3, CH_2CH_2CH_3, CH(CH}_3)_2, F, Cl, Br, I, -CN, -CHO, CF}_3, \\ OR^2, NR^2R^{2a}, C(O)R^{2b}, CO_2R^{2b}, OC(O)R^2, CO_2R^{2a}, S(O)_pR^2, NR^2(CH_2)_rOR^2, \\ NR^2C(O)R^{2b}, NR^2C(O)NHR^2, NR^2C(O)_2R^{2a}, OC(O)NR^2R^{2a}, C(O)NR^2R^{2a}, \\ C(O)NR^2(CH_2)_rOR^2, SO_2NR^2R^{2a}, NR^2SO_2R^2, \\ C_{5-6} \text{ carbocycle substituted with 0-2 } R^{4b}, \text{ and}$

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  $R^{4b}$ , provided that  $R^{1b}$  forms other than an O-O, N-halo, N-S, or N-CN bond;

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 $R^{1c}$  is selected from H, CH(CH<sub>2</sub>OR<sup>2</sup>)<sub>2</sub>, C(O)R<sup>2c</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, S(O)R<sup>2</sup>, S(O)<sub>2</sub>R<sup>2</sup>, and SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>;

- R<sup>2</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, C<sub>5-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, a C<sub>5-6</sub> carbocyclic-CH<sub>2</sub>-group substituted with 0-2 R<sup>4b</sup>, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>2a</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, C<sub>5-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- alternatively,  $R^2$  and  $R^{2a}$ , 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  $R^{4b}$  and consisting of: 0-1 additional heteroatoms selected from the group consisting of N, O, and  $S(O)_p$ ;
- R<sup>2b</sup>, at each occurrence, is selected from CF<sub>3</sub>, C<sub>1-4</sub> alkoxy, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>(CH<sub>3</sub>)<sub>2</sub>, CH<sub>(CH<sub>3</sub>)<sub>2</sub>, CH<sub>(CH<sub>3</sub>)<sub>2</sub>, CH<sub>(CH<sub>3</sub>)<sub>3</sub>, Denzyl, C<sub>5-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;</sub></sub></sub></sub>

- R<sup>2c</sup>, at each occurrence, is selected from CF<sub>3</sub>, OH, C<sub>1-4</sub> alkoxy, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>(CH<sub>3</sub>)2</sub>, CH<sub>(CH<sub>3</sub>)2</sub>, CH<sub>(CH<sub>3</sub>)2</sub>, CH<sub>(CH<sub>3</sub>)2</sub>, CH<sub>(CH<sub>3</sub>)3</sub>, benzyl, C<sub>5-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and 5-6 membered heterocycle containing from 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>3</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, and phenyl;
- R<sup>3a</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, and phenyl;
- alternatively, R<sup>3</sup> and R<sup>3a</sup>, 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<sup>3</sup> and R<sup>3a</sup> are attached;
- R<sup>3c</sup>, at each occurrence, is selected from CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, and phenyl;
- R<sup>3d</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>-phenyl, CH<sub>2</sub>CH<sub>2</sub>-phenyl, and C(=O)R<sup>3c</sup>;
- R<sup>4</sup>, at each occurrence, is selected from H, =O, OR<sup>2</sup>, CH<sub>2</sub>OR<sup>2</sup>, (CH<sub>2</sub>)<sub>2</sub>OR<sup>2</sup>, F, Cl, Br, I, C<sub>1-4</sub> alkyl, -CN, NO<sub>2</sub>, NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, (CH<sub>2</sub>)<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2c</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, S(O)<sub>p</sub>R<sup>5a</sup>, CF<sub>3</sub>, CF<sub>2</sub>CF<sub>3</sub>, 5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, 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)<sub>p</sub>, and substituted with 0-1 R<sup>5</sup>;

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R<sup>4a</sup>, at each occurrence, is selected from H, =O, CH<sub>2</sub>OR<sup>2</sup>, OR<sup>2</sup>, CH<sub>2</sub>F, F, CH<sub>2</sub>Br, Br, CH<sub>2</sub>Cl, Cl, C<sub>1-4</sub> alkyl, CH<sub>2</sub>-CN, -CN, CH<sub>2</sub>NO<sub>2</sub>, NO<sub>2</sub>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>-C(O)R<sup>2c</sup>, C(O)R<sup>2c</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>C(O)NR<sup>2</sup>R<sup>2a</sup>, (CH<sub>2</sub>)<sub>r</sub>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, NR<sup>2</sup>SO<sub>2</sub>R<sup>5</sup>, (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>p</sub>R<sup>5a</sup>, CH<sub>2</sub>CF<sub>3</sub>, CF<sub>3</sub>, CH<sub>2</sub>-5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, 5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, and a CH<sub>2</sub>-5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>5</sup>, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>5</sup>;

R<sup>4c</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>,

CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, CH<sub>2</sub>OR<sup>2</sup>, CH<sub>2</sub>F,

CH<sub>2</sub>Br, CH<sub>2</sub>Cl, CH<sub>2</sub>CN, CH<sub>2</sub>NO<sub>2</sub>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2c</sup>, CH<sub>2</sub>C(O)R<sup>2c</sup>,

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CH<sub>2</sub>NR<sup>2</sup>C(O)R<sup>2b</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>C(O)NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>C(O)NR<sup>2</sup>R<sup>2a</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, C(O)NHSO<sub>2</sub>-C<sub>1-4</sub> alkyl, CH<sub>2</sub>C(O)NHSO<sub>2</sub>-C<sub>1-4</sub> alkyl, CH<sub>2</sub>NR<sup>2</sup>SO<sub>2</sub>R<sup>5</sup>, S(O)<sub>p</sub>R<sup>5a</sup>, CH<sub>2</sub>S(O)<sub>p</sub>R<sup>5a</sup>, CF<sub>3</sub>, CH<sub>2</sub>CF<sub>3</sub>, 5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, CH<sub>2</sub>-5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>5</sup>, and a CH<sub>2</sub>-5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>5</sup>;

- R<sup>5</sup>, at each occurrence, is selected from H, =O, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, -CN, NO<sub>2</sub>, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, CH<sub>2</sub>C(O)R<sup>3</sup>, C(O)OR<sup>3c</sup>, CH<sub>2</sub>C(O)OR<sup>3c</sup>, NR<sup>3</sup>C(O)R<sup>3a</sup>, C(O)NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>C(O)NR<sup>3</sup>R<sup>3a</sup>, CH(=NOR<sup>3d</sup>), C(=NR<sup>3</sup>)NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>C(=NR<sup>3</sup>)NR<sup>3</sup>R<sup>3a</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, NR<sup>3</sup>SO<sub>2</sub>CF<sub>3</sub>, NR<sup>3</sup>SO<sub>2</sub>-phenyl, S(O)<sub>p</sub>CF<sub>3</sub>, S(O)<sub>p</sub>-C<sub>1-4</sub> alkyl, S(O)<sub>p</sub>-phenyl, CF<sub>3</sub>, phenyl substituted with 0-2 R<sup>6</sup>, naphthyl substituted with 0-2 R<sup>6</sup>, and benzyl substituted with 0-2 R<sup>6</sup>; and,
- R<sup>6</sup>, at each occurrence, is selected from H, OH, OR<sup>2</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, CN, NO<sub>2</sub>, NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2b</sup>, CH<sub>2</sub>C(O)R<sup>2b</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, NR<sup>2</sup>C(O)NR<sup>2</sup>R<sup>2a</sup>, C(=NH)NH<sub>2</sub>, NHC(=NH)NH<sub>2</sub>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, and NR<sup>2</sup>SO<sub>2</sub>C<sub>1-4</sub> alkyl.

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

G is selected from the group:

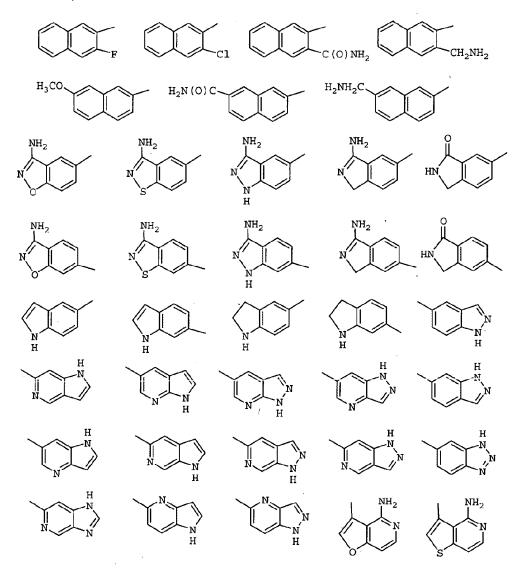
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## Amendment

C(O)NH<sub>2</sub> CH<sub>2</sub>NH<sub>2</sub> **DOCKET NO.: PH-7398** 

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## Amendment



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 $G_1 \text{ is absent or is selected from } (CR^3R^{3a})_{1-3}, (CR^3R^{3a})_uC(O)(CR^3R^{3a})_w, \\ (CR^3R^{3a})_uO(CR^3R^{3a})_w, (CR^3R^{3a})_uNR^{3b}(CR^3R^{3a})_w, (CR^3R^{3a})_uC(O)NR^{3b}(CR^3R^{3a})_w, \\ (CR^3R^{3a})_uNR^{3b}C(O)(CR^3R^{3a})_w, (CR^3R^{3a})_uNR^{3b}C(O)(CR^3R^{3a})_uC(O)NR^{3b}(CR^3R^{3a})_w, \\ (CR^3R^{3a})_uS(CR^3R^{3a})_w, (CR^3R^{3a})_uS(O)(CR^3R^{3a})_w, (CR^3R^{3a})_uS(O)_2(CR^3R^{3a})_w, \\ (CR^3R^{3a})_uS(O)NR^{3b}(CR^3R^{3a})_w, (CR^3R^{3a})_uNR^{3b}S(O)_2(CR^3R^{3a})_w, \text{ and} \\ (CR^3R^{3a})_uS(O)_2NR^{3b}(CR^3R^{3a})_w, \text{ wherein } u+w \text{ total } 0, 1, \text{ or } 2, \text{ provided that } G_1 \text{ does not form a N-S, NCH}_2N, NCH}_2O, \text{ or NCH}_2S \text{ bond with either group to which it is attached;}$ 

A is phenyl substituted with 0-2 R<sup>4</sup>;

- R<sup>1a</sup> is selected from H, R<sup>1b</sup>, CH(CH<sub>3</sub>)R<sup>1b</sup>, C(CH<sub>3</sub>)<sub>2</sub>R<sup>1b</sup>, CH<sub>2</sub>R<sup>1b</sup>, and CH<sub>2</sub>CH<sub>2</sub>R<sup>1b</sup>, provided that R<sup>1a</sup> forms other than an N-halo, N-S, or N-CN bond;
- alternatively, when two R<sup>1a</sup> 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)<sub>p</sub>, this ring being substituted with 0-2 R<sup>4b</sup> and 0-3 ring double bonds;
- R<sup>1b</sup> is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, F, Cl, Br, -CN, -CHO, CF<sub>3</sub>, OR<sup>2</sup>, NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2b</sup>, CO<sub>2</sub>R<sup>2b</sup>, OC(O)R<sup>2</sup>, CO<sub>2</sub>R<sup>2a</sup>, S(O)<sub>p</sub>R<sup>2</sup>, NR<sup>2</sup>(CH<sub>2</sub>)<sub>r</sub>OR<sup>2</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>SO<sub>2</sub>R<sup>2</sup>, phenyl substituted with 0-2 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>, provided that R<sup>1b</sup> forms other than an O-O, N-halo, N-S, or N-CN bond;
- R<sup>2</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, phenyl substituted with 0-2 R<sup>4b</sup>, a benzyl substituted with 0-2 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>2a</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with 0-2 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- alternatively, R<sup>2</sup> and R<sup>2a</sup>, 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<sup>4b</sup>

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and consisting of: 0-1 additional heteroatoms selected from the group consisting of N, O, and  $S(O)_p$ ;

- R<sup>2b</sup>, at each occurrence, is selected from CF<sub>3</sub>, C<sub>1-4</sub> alkoxy, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>,

  CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with 0-2 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>2c</sup>, at each occurrence, is selected from CF<sub>3</sub>, OH, OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>,
  OCH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with
  0-2 R<sup>4b</sup>, and 5-6 membered aromatic heterocycle containing from 1-4 heteroatoms
  selected from the group consisting of N, O, and S(O)<sub>D</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>4</sup>, at each occurrence, is selected from H, CH<sub>2</sub>OR<sup>2</sup>, (CH<sub>2</sub>)<sub>2</sub>OR<sup>2</sup>, OR<sup>2</sup>, F, Cl, Br, I, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, -CN, NO<sub>2</sub>, NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, (CH<sub>2</sub>)<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2c</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, CF<sub>3</sub>, and CF<sub>2</sub>CF<sub>3</sub>;
- $R^{4a}, \text{ at each occurrence, is selected from H, =O, CH}_2OR^2, OR^2, F, Br, Cl, CH}_3, CH}_2CH_3, \\ CH}_2CH}_3, CH(CH_3)_2, CH}_2CH}_2CH}_2CH}_3, CH}_2CH(CH_3)_2, CH(CH_3)CH}_2CH}_3, \\ C(CH_3)_3, -CN, NO}_2, CH}_2NR^2R^{2a}, NR^2R^{2a}, C(O)R^{2c}, NR^2C(O)R^{2b}, C(O)NR^2R^{2a}, \\ NR^2C(O)NR^2R^{2a}, SO}_2NR^2R^{2a}, \text{ and -CF}_3; \\ \\$
- R<sup>4b</sup>, at each occurrence, is selected from H, =O, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>,

  CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, -CN, NO<sub>2</sub>, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, CH<sub>2</sub>-C(O)R<sup>3</sup>,

  C(O)OR<sup>3c</sup>, CH<sub>2</sub>-C(O)OR<sup>3c</sup>, NR<sup>3</sup>C(O)R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>C(O)R<sup>3a</sup>, C(O)NR<sup>3</sup>R<sup>3a</sup>,

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 $\label{eq:ch2-CONR} CH_2\text{-}C(O)NR^3R^{3a},\ SO_2NR^3R^{3a},\ CH_2SO_2NR^3R^{3a},\ NR^3SO_2\text{-}C_{1\text{-}4}\ alkyl, \\ CH_2NR^3SO_2\text{-}C_{1\text{-}4}\ alkyl,\ NR^3SO_2\text{-}phenyl,\ CH_2NR^3SO_2\text{-}phenyl,\ S(O)_pCF_3, \\ CH_2S(O)_pCF_3,\ S(O)_p\text{-}C_{1\text{-}4}\ alkyl,\ CH_2S(O)_p\text{-}C_{1\text{-}4}\ alkyl,\ S(O)_p\text{-}phenyl,\ CH_2S(O)_p\text{-}phenyl, \\ and\ CF_3;$ 

- $R^{4c}$ , at each occurrence, is selected from H,  $CH_3$ ,  $CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH(CH_3)_2$ ,  $CH_2CH_2CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH_2CH_3$ ,  $CH_3$ ,
- R<sup>5</sup>, at each occurrence, is selected from H, =O, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, -CN, NO<sub>2</sub>, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, CH<sub>2</sub>C(O)R<sup>3</sup>, C(O)OR<sup>3c</sup>, CH<sub>2</sub>C(O)OR<sup>3c</sup>, NR<sup>3</sup>C(O)R<sup>3a</sup>, C(O)NR<sup>3</sup>R<sup>3a</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, NR<sup>3</sup>SO<sub>2</sub>CF<sub>3</sub>, NR<sup>3</sup>SO<sub>2</sub>-phenyl, S(O)<sub>p</sub>CF<sub>3</sub>, S(O)<sub>p</sub>-C<sub>1-4</sub> alkyl, S(O)<sub>p</sub>-phenyl, CF<sub>3</sub>, phenyl substituted with 0-2 R<sup>6</sup>, naphthyl substituted with 0-2 R<sup>6</sup>, and benzyl substituted with 0-2 R<sup>6</sup>; and,
- $R^6$ , at each occurrence, is selected from H, OH,  $OR^2$ , F, Cl,  $CH_3$ ,  $CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH(CH_3)_2$ , -CN,  $NO_2$ ,  $NR^2R^{2a}$ ,  $CH_2NR^2R^{2a}$ ,  $C(O)R^{2b}$ ,  $CH_2C(O)R^{2b}$ ,  $NR^2C(O)R^{2b}$ ,  $SO_2NR^2R^{2a}$ , and  $NR^2SO_2C_{1-4}$  alkyl.

Claim 4 (Previously presented) A compound according to Claim 3, wherein;

G is selected from the group:

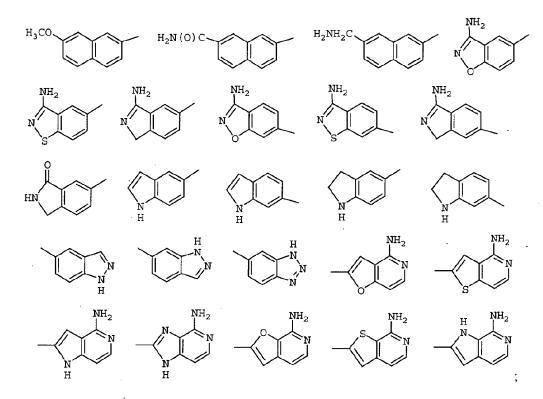
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$$\begin{array}{c} NH_2 \\ NH$$

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G<sub>1</sub> is absent or is selected from CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>O, OCH<sub>2</sub>, NH, CH<sub>2</sub>NH, NHCH<sub>2</sub>, CH<sub>2</sub>C(O), C(O)CH<sub>2</sub>, C(O)NH, NHC(O), CH<sub>2</sub>S(O)<sub>2</sub>, S(O)<sub>2</sub>(CH<sub>2</sub>), SO<sub>2</sub>NH, and NHSO<sub>2</sub>, provided that G<sub>1</sub> does not form a N-S, NCH<sub>2</sub>N, NCH<sub>2</sub>O, or NCH<sub>2</sub>S bond with either group to which it is attached;

 $R^{1a}$  is selected from H,  $R^{1b}$ ,  $C(CH_3)_2R^{1b}$ , and  $CH_2R^{1b}$ , provided that  $R^{1a}$  forms other than an N-halo, N-S, or N-CN bond;

 $R^{1b}$  is selected from  $CH_3$ ,  $CH_2CH_3$ , F, Cl, Br, -CN,  $CF_3$ ,  $OR^2$ ,  $NR^2R^{2a}$ ,  $C(O)R^{2b}$ ,  $CO_2R^{2b}$ ,  $CO_2R^{2a}$ ,  $S(O)_pR^2$ ,  $C(O)NR^2R^{2a}$ ,  $SO_2NR^2R^{2a}$ ,  $SO_2NR^2R^{2a}$ ,  $SO_2R^2$ , 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 N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>, provided that R<sup>1b</sup> forms other than an O-O, N-halo, N-S, or N-CN bond;

- R<sup>2</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, phenyl substituted with 0-1 R<sup>4b</sup>, benzyl substituted with 0-1 R<sup>4b</sup>, 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)<sub>D</sub>, and substituted with 0-1 R<sup>4b</sup>;
- R<sup>2a</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with 0-1 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-1 R<sup>4b</sup>;
- alternatively, R<sup>2</sup> and R<sup>2a</sup>, 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<sup>4b</sup> and consisting of: 0-1 additional heteroatoms selected from the group consisting of N, O, and S(O)<sub>D</sub>;
- R<sup>2b</sup>, at each occurrence, is selected from OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with 0-1 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-1 R<sup>4b</sup>;
- R<sup>2c</sup>, at each occurrence, is selected from OH, OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, OCH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with 0-1 R<sup>4b</sup>, and 5-6 membered aromatic heterocycle containing from 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>4b</sup>;

- $R^4$ , at each occurrence, is selected from OH,  $OR^2$ ,  $CH_2OR^2$ ,  $(CH_2)_2OR^2$ , F, Br, Cl, I,  $CH_3$ ,  $CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH_2CH_3$ ,  $CH_3$ , CH
- $R^{4a}$ , at each occurrence, is selected from H, =O, CH<sub>2</sub>OR<sup>2</sup>, OR<sup>2</sup>, F, Br, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>CH<sub>3</sub>CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2c</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, and CF<sub>3</sub>;
- $R^{4b}$ , at each occurrence, is selected from H, =O, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH
- R<sup>4c</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, phenyl substituted with 0-1 R<sup>5</sup>, and benzyl substituted with 0-1 R<sup>5</sup>;
- $R^5$ , at each occurrence, is selected from H, =O,  $CH_3$ ,  $CH_2CH_3$ ,  $CH_2CH_3$ ,  $CH(CH_3)_2$ ,  $OR^3$ ,  $CH_2OR^3$ , F, Cl, -CN,  $NO_2$ ,  $NR^3R^{3a}$ ,  $CH_2NR^3R^{3a}$ ,  $C(O)R^3$ ,  $C(O)OR^{3c}$ ,  $NR^3C(O)R^{3a}$ ,  $C(O)NR^3R^{3a}$ ,  $SO_2NR^3R^{3a}$ ,  $NR^3SO_2$ - $C_{1-4}$  alkyl,  $NR^3SO_2$ -phenyl,  $S(O)_p$ - $C_{1-4}$  alkyl,  $S(O)_p$ -phenyl,  $CF_3$ , phenyl substituted with 0-2  $R^6$ , naphthyl substituted with 0-2  $R^6$ , and benzyl substituted with 0-2  $R^6$ ; and,
- $R^6$ , at each occurrence, is selected from H, OH, OR<sup>2</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, -CN, NO<sub>2</sub>, NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2b</sup>, CH<sub>2</sub>C(O)R<sup>2b</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, and SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>.

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# Claim 5. (Previously presented) A compound according to Claim 4, wherein;

# G is selected from:

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A is selected from the group: phenyl, 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:

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R¹a is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>F, CH<sub>2</sub>Cl, Br, CH<sub>2</sub>Br, -CN, CH<sub>2</sub>CN, CF<sub>3</sub>, CH<sub>2</sub>CF<sub>3</sub>, OCH<sub>3</sub>, CH<sub>2</sub>OH, C(CH<sub>3</sub>)<sub>2</sub>OH, CH<sub>2</sub>OCH<sub>3</sub>, NH<sub>2</sub>, CH<sub>2</sub>NH<sub>2</sub>, NHCH<sub>3</sub>, CH<sub>2</sub>NHCH<sub>3</sub>, N(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, CO<sub>2</sub>H, COCH<sub>3</sub>, CO<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CO<sub>2</sub>CH<sub>3</sub>, SCH<sub>3</sub>, CH<sub>2</sub>SCH<sub>3</sub>, S(O)CH<sub>3</sub>, CH<sub>2</sub>S(O)CH<sub>3</sub>, S(O)<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>S(O)<sub>2</sub>CH<sub>3</sub>, C(O)NH<sub>2</sub>, CH<sub>2</sub>C(O)NH<sub>2</sub>, SO<sub>2</sub>NH<sub>2</sub>, CH<sub>2</sub>SO<sub>2</sub>NH<sub>2</sub>, NHSO<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>NHSO<sub>2</sub>CH<sub>3</sub>, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyridin-2-yl-N-oxide, pyridin-3-yl-N-oxide, pyridin-4-yl-N-oxide, imidazol-1-yl, CH<sub>2</sub>-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, CH<sub>2</sub>-1,2,3,4-tetrazol-1-yl, provided that R¹a forms other than an N-halo, N-S, or N-CN bond;

R<sup>2</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, phenyl substituted with 0-1 R<sup>4b</sup>, benzyl substituted with 0-1 R<sup>4b</sup>, and 5 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>D</sub>, and substituted with 0-1 R<sup>4b</sup>;

R<sup>2a</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, and CH<sub>2</sub>CH<sub>3</sub>;

alternatively, R<sup>2</sup> and R<sup>2a</sup>, 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<sup>4b</sup> and consisting of: 0-1 additional heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;

 $R^{2b}$ , at each occurrence, is selected from OCH3, OCH2CH3, CH3, and CH2CH3;

 $R^{2c}$ , at each occurrence, is selected from OH, OCH3, OCH2CH3, CH3, and CH2CH3;

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R<sup>4a</sup>, at each occurrence, is selected from H, =O, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, and C(CH<sub>3</sub>)<sub>3</sub>;

- $R^{4b}$ , at each occurrence, is selected from H, =O, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, C(O)OR<sup>3c</sup>, NR<sup>3</sup>C(O)R<sup>3a</sup>, C(O)NR<sup>3</sup>R<sup>3a</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>-phenyl, S(O)<sub>2</sub>CH<sub>3</sub>, S(O)<sub>2</sub>-phenyl, and CF<sub>3</sub>;
- R<sup>5</sup>, at each occurrence, is selected from H, =O, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, C(O)OR<sup>3c</sup>, NR<sup>3</sup>C(O)R<sup>3a</sup>, C(O)NR<sup>3</sup>R<sup>3a</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, NR<sup>3</sup>SO<sub>2</sub>-phenyl, S(O)<sub>2</sub>-CH<sub>3</sub>, S(O)<sub>2</sub>-phenyl, CF<sub>3</sub>, phenyl substituted with 0-2 R<sup>6</sup>, naphthyl substituted with 0-2 R<sup>6</sup>, and benzyl substituted with 0-2 R<sup>6</sup>; and
- R<sup>6</sup>, at each occurrence, is selected from H, OH, OR<sup>2</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2b</sup>, CH<sub>2</sub>C(O)R<sup>2b</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, and SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>.

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:

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-7*H*-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-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-(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-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-tetrahydro-7*H*-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-7*H*-pyrazolo[3,4-*c*]pyridin-7-one;

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

- 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;
- 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;
- $N-\{1-(4-\text{methoxyphenyl})-7-\text{oxo-}6-[4-(2-\text{oxo-piperidin-}1-\text{yl})\text{phenyl}]-4,5,6,7-\text{tetrahydro-}1H-\text{pyrazolo}[3,4-c]\text{pyridin-}3-\text{ylmethyl}\}-2-\text{pyridin-}2-\text{yl-acetamide};$
- *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-ethyl)-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 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. (Previously presented) 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-

pyrazolo[3,4-c]pyridine-3-carboxamide

or a pharmaceutically acceptable salt form thereof.

Claim 32. (Canceled)

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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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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 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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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

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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 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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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. (Previously 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.

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

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 CH<sub>2</sub>Cl<sub>2</sub>/ 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 CH<sub>2</sub>Cl<sub>2</sub>/ EtOAc.

Claim 134. (New) A compound according to Claim 122 is prepared by a process comprising recrystallization from isopropyl alcohol or CH<sub>2</sub>Cl<sub>2</sub>/ 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  $CH_2Cl_2$ / 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 122-136 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

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

**Bristol-Myers SquibbCompany** 

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

**PATENT** 

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: D. Pinto et al.

Examiner:

Kifle, B.

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Serial No.:

10/245,122

Group Art Unit:

1624

SEP 1 6 2004

Filed:

**September 17, 2002** 

Confirmation No. 6870

OFFICE OF PETITIONS

LACTAM-CONTAINING COMPOUNDS AND DERIVATIVES THEREOF AS

**FACTOR XA INHIBITORS** 

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)phenyl]-4,5,6,7-tetrahydro-1H-pyrazoleo[3,4-c]pyridine-3-carboxamide

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

Part E. To iodo compound from Part D (25 g, 0.048mol) was added  $\gamma$ -valerolactam (6.7 g, 0.067mol), K<sub>2</sub>CO<sub>3</sub> (8 g, 0.058 mol), degassed DMSO (100 mL) and CuI (1.84 g, 0.009 mol). The reaction was heated to 130 °C for 24 h. The reaction was cooled, partitioned with EtOAc/H<sub>2</sub>O, extracted and dried (MgSO<sub>4</sub>). Purification by silica gel chromatography using 0-10% MeOH/ CH<sub>2</sub>Cl<sub>2</sub> as eluent afforded 5 g (21%) of ethyl 1-(4-mety-hoxyphenyl)-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; <sup>1</sup>H NMR (CDCl<sub>3</sub>)  $\delta$  7.49 (d,j=9.2Hz, 2H), 7.35 (d,j=8.8Hz, 2H), 7.26 (d,j=8.1Hz, 2H), 6.92 (d,j=8.8Hz, 2H), 4.49(q,j=7.3Hz, 2H), 4.13 (t,j=6.6Hz, 2H), 3.81 (s, 3H), 3.59 (m, 2H), 3.39 (t,j=6.6Hz, 2H), 2.55 (m, 2H), 1.91 (m, 4H), 1.45 (t,j=7.3Hz, 3H) ppm.

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Please amend Example 27:

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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*]pyridine-3-carboxylate (0.57 g, 1.1 mmol), 2-hydroxypyridine (0.125 g, 1.3 mmol), K<sub>2</sub>CO<sub>3</sub> (0.18 g, 1.3 mmol) were combined in DMSO (5 mL) and dcgassed with N<sub>2</sub>. Copper (I) iodide (41 mg, 0.21 mmol) was added and the reaction was heated to 130 °C for 24 h. The reaction was quenched with dilute NH<sub>4</sub>OH solution and filtered. The filtrate was extracted with EtOAc and dried (MgSO<sub>4</sub>). Purification on silica gel using 0-5% MeOH/CH<sub>2</sub>Cl<sub>2</sub> as eluent afforded 70 mg (13%) of the ester; Mass Spec (M+H)+ 485.2.

Please amend Example 89:

From line 6 to line 7 on page 273

The title compound was made in **E** A of Example **18** <u>27</u>. High Resolution Mass Spec  $(M+H)^+$  for  $C_{27}H_{25}N_4O_5$  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 <u>using the product of Part A of Example 27</u>. ESI MS m/z 471 (M+H).

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#### Amendment

## 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  $R^{1a}$  and is

ring P, including  $P_1$ ,  $P_2$ , and  $P_3$ , is  $P_4$ 

 $M_4$  is -A-B;

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 $P_4$  is  $-G_1$ -G;

G is a group of Formula IIa or 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 N, O, and S(O)<sub>D</sub>;

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 N, O, and S(O)<sub>p</sub>, 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 H,  $C_{1-4}$  alkyl, F, Cl, Br, I, OH, OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH(CH<sub>3</sub>)<sub>2</sub>, OCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CN, C(=NR<sup>8</sup>)NR<sup>7</sup>R<sup>9</sup>, NHC(=NR<sup>8</sup>)NR<sup>7</sup>R<sup>9</sup>, ONHC(=NR<sup>8</sup>)NR<sup>7</sup>R<sup>9</sup>,

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$$\begin{split} &NR^8CH(=NR^7),\,NH_2,\,NH(C_{1\text{-}3}\text{ alkyl}),\,N(C_{1\text{-}3}\text{ alkyl})_2,\,C(=NH)NH_2,\,CH_2NH_2,\\ &CH_2NH(C_{1\text{-}3}\text{ alkyl}),\,CH_2N(C_{1\text{-}3}\text{ alkyl})_2,\,CH_2CH_2NH_2,\,CH_2CH_2NH(C_{1\text{-}3}\text{ alkyl}),\\ &CH_2CH_2N(C_{1\text{-}3}\text{ alkyl})_2,\,(CR^8R^9)_tC(O)H,\,(CR^8R^9)_tC(O)R^{2c},\,(CR^8R^9)_tNR^7R^8,\\ &(CR^8R^9)_tC(O)NR^7R^8,\,(CR^8R^9)_tNR^7C(O)R^7,\,(CR^8R^9)_tOR^3,\,(CR^8R^9)_tS(O)_pNR^7R^8,\\ &(CR^8R^9)_tNR^7S(O)_pR^7,\,(CR^8R^9)_tSR^3,\,(CR^8R^9)_tS(O)R^3,\,(CR^8R^9)_tS(O)_2R^3,\,\text{and }OCF_3; \end{split}$$

alternatively, when 2 R groups are attached to adjacent atoms, they combine to form methylenedioxy or ethylenedioxy;

A is selected from:

 $C_{3-10}$  carbocycle substituted with 0-2  $\mathbb{R}^4$ ;

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 N-N-N group;

 $Q_1$  is C=O;

ring Q is a 6 membered monocyclic ring, wherein:

0-2 double bonds are 0 double bond is present within the ring and the ring is substituted with 0-2  $R^{4a}$ ;

X is absent;

 $\begin{aligned} G_1 \text{ is absent or is selected from } &(CR^3R^{3a})_{1\text{-}5}, (CR^3R^{3a})_{0\text{-}2}CR^3 = CR^3(CR^3R^{3a})_{0\text{-}2}, \\ &(CR^3R^{3a})_{0\text{-}2}C \equiv C(CR^3R^{3a})_{0\text{-}2}, (CR^3R^{3a})_{u}C(O)(CR^3R^{3a})_{w}, (CR^3R^{3a})_{u}C(O)O(CR^3R^{3a})_{w}, \\ &(CR^3R^{3a})_{u}OC(O)(CR^3R^{3a})_{w}, (CR^3R^{3a})_{u}O(CR^3R^{3a})_{w}, (CR^3R^{3a})_{u}N^{3b}(CR^3R^{3a})_{w}, \end{aligned}$ 

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(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>C(O)N<sup>3b</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>N<sup>3b</sup>C(O)(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>,
(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>OC(O)N<sup>3b</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>N<sup>3b</sup>C(O)O(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>,
(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>N<sup>3b</sup>C(O)N<sup>3b</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>N<sup>3b</sup>C(S)N<sup>3b</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>,
(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>S(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>S(O)(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>S(O)<sub>2</sub>(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>,
(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>S(O)N<sup>3b</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>N<sup>3b</sup>S(O)<sub>2</sub>(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>,
(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>S(O)<sub>2</sub>N<sup>3b</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>N<sup>3b</sup>S(O)<sub>2</sub>N<sup>3b</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>,
(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>NR<sup>3e</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>C(O)(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>C(O)(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>,
(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>NR<sup>3b</sup>C(O)(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>C(O)NR<sup>3b</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>,
(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>NR<sup>3b</sup>C(O)(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>C(O)NR<sup>3b</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>,
(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>NR<sup>3b</sup>C(O)(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>C(O)NR<sup>3b</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>,
(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>NR<sup>3b</sup>C(O)(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>C(O)NR<sup>3b</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>,
(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>NR<sup>3b</sup>C(O)(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>C(O)NR<sup>3b</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>,
(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>NR<sup>3b</sup>C(O)(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>C(O)NR<sup>3b</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>,
(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>S(O)NR<sup>3b</sup>C(O)(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>C(O)NR<sup>3b</sup>C(O)(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>, and
(CR<sup>3</sup>R<sup>3a</sup>)<sub>u</sub>S(O)NR<sup>3b</sup>C(O)(CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>w</sub>, wherein u + w total 0, 1, 2, 3, or 4, provided that G<sub>1</sub> does not form an N-S, NCH<sub>2</sub>N, NCH<sub>2</sub>O, or NCH<sub>2</sub>S bond with either group to which it is attached;

R<sup>1a</sup>, at each occurrence, is selected from H, -(CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>-R<sup>1b</sup>, -(CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>-CR<sup>3</sup>R<sup>1b</sup>R<sup>1b</sup>,
-(CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>-O-(CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>-R<sup>1b</sup>, -C<sub>2-6</sub> alkenylene-R<sup>1b</sup>, -C<sub>2-6</sub> alkynylene-R<sup>1b</sup>,
-(CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>-C(=NR<sup>1b</sup>)NR<sup>3</sup>R<sup>1b</sup>, NR<sup>3</sup>CR<sup>3</sup>R<sup>3a</sup>R<sup>1c</sup>, OCR<sup>3</sup>R<sup>3a</sup>R<sup>1c</sup>, SCR<sup>3</sup>R<sup>3a</sup>R<sup>1c</sup>,
NR<sup>3</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>2</sub>(CR<sup>3</sup>R<sup>3a</sup>)<sub>t</sub>R<sup>1b</sup>, C(O)NR<sup>2</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>2</sub>(CR<sup>3</sup>R<sup>3a</sup>)<sub>t</sub>R<sup>1b</sup>,
CO<sub>2</sub>(CR<sup>3</sup>R<sup>3a</sup>)<sub>2</sub>(CR<sup>3</sup>R<sup>3a</sup>)<sub>t</sub>R<sup>1b</sup>, O(CR<sup>3</sup>R<sup>3a</sup>)<sub>2</sub>(CR<sup>3</sup>R<sup>3a</sup>)<sub>t</sub>R<sup>1b</sup>, S(CR<sup>3</sup>R<sup>3a</sup>)<sub>2</sub>(CR<sup>3</sup>R<sup>3a</sup>)<sub>t</sub>R<sup>1b</sup>,
S(O)<sub>p</sub>(CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>R<sup>1d</sup>, O(CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>R<sup>1d</sup>, NR<sup>3</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>R<sup>1d</sup>, OC(O)NR<sup>3</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>R<sup>1d</sup>,
NR<sup>3</sup>C(O)NR<sup>3</sup>(CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>R<sup>1d</sup>, NR<sup>3</sup>C(O)O(CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>R<sup>1d</sup>, and NR<sup>3</sup>C(O)(CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>R<sup>1d</sup>,
provided that R<sup>1a</sup> forms other than an N-halo, N-S, O-O, or N-CN bond;

alternatively, when two R<sup>1a</sup> 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

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0-2 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, this ring being substituted with 0-2 R<sup>4b</sup> and 0-3 ring double bonds;

- R<sup>1b</sup> is selected from H, C<sub>1-3</sub> alkyl, F, Cl, Br, I, -CN, -NO<sub>2</sub>, -CHO, (CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>OR<sup>2</sup>, NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2b</sup>, CO<sub>2</sub>R<sup>2b</sup>, OC(O)R<sup>2</sup>, (CF<sub>2</sub>)<sub>r</sub>CO<sub>2</sub>R<sup>2a</sup>, S(O)<sub>p</sub>R<sup>2b</sup>, NR<sup>2</sup>(CH<sub>2</sub>)<sub>r</sub>OR<sup>2</sup>, C(=NR<sup>2c</sup>)NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, NR<sup>2</sup>C(O)NHR<sup>2</sup>, NR<sup>2</sup>C(O)<sub>2</sub>R<sup>2a</sup>, OC(O)NR<sup>2</sup>R<sup>2a</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, C(O)NR<sup>2</sup>(CH<sub>2</sub>)<sub>r</sub>OR<sup>2</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>SO<sub>2</sub>R<sup>2</sup>, C(O)NR<sup>2</sup>SO<sub>2</sub>R<sup>2</sup>, C<sub>3-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>, provided that R<sup>1b</sup> forms other than an O-O, N-halo, N-S, or N-CN bond;
- $R^{1c}$  is selected from H,  $CH(CH_2OR^2)_2$ ,  $C(O)R^{2c}$ ,  $C(O)NR^2R^{2a}$ ,  $S(O)R^2$ ,  $S(O)_2R^2$ , and  $SO_2NR^2R^{2a}$ ;
- R<sup>1d</sup> is selected from C<sub>3-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup> 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)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>, provided that R<sup>1d</sup> forms other than an N-S bond;
- R<sup>2</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, C<sub>1-6</sub> alkyl, benzyl, -(CH<sub>2</sub>)<sub>r</sub>-C<sub>3-10</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and -(CH<sub>2</sub>)<sub>r</sub>-5-10 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>2a</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, C<sub>1-6</sub> alkyl, benzyl, -(CH<sub>2</sub>)<sub>r</sub>-C<sub>3-10</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and -(CH<sub>2</sub>)<sub>r</sub>-5-10 membered heterocycle consisting of: carbon

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atoms and 1-4 heteroatoms selected from the group consisting of N, O, and  $S(O)_p$ , and substituted with 0-2  $R^{4b}$ ;

- alternatively, R<sup>2</sup> and R<sup>2a</sup>, 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<sup>4b</sup> and consisting of: 0-1 additional heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;
- R<sup>2b</sup>, at each occurrence, is selected from CF<sub>3</sub>, C<sub>1-4</sub> alkoxy substituted with 0-2 R<sup>4b</sup>, C<sub>1-6</sub> alkyl substituted with 0-2 R<sup>4b</sup>, -(CH<sub>2</sub>)<sub>r</sub>-C<sub>3-10</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and -(CH<sub>2</sub>)<sub>r</sub>-5-10 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>2c</sup>, at each occurrence, is selected from CF<sub>3</sub>, OH, C<sub>1-4</sub> alkoxy, C<sub>1-6</sub> alkyl, -(CH<sub>2</sub>)<sub>r</sub>-C<sub>3-10</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and -(CH<sub>2</sub>)<sub>r</sub>-5-10 membered heterocycle containing from 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>3</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, and phenyl;
- R<sup>3a</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, and phenyl;
- alternatively, R<sup>3</sup> and R<sup>3a</sup>, 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 R<sup>3</sup> and R<sup>3a</sup> are attached, and 0-1 additional heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;

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- R<sup>3b</sup>, at each occurrence, is selected from H, C<sub>1-6</sub> alkyl substituted with 0-2 R<sup>1a</sup>, C<sub>2-6</sub> alkenyl substituted with 0-2 R<sup>1a</sup>, C<sub>2-6</sub> alkynyl substituted with 0-2 R<sup>1a</sup>,

  -(C<sub>0-4</sub> alkyl)-5-10 membered carbocycle substituted with 0-3 R<sup>1a</sup>, and -(C<sub>0-4</sub> alkyl)-5-10 membered heterocycle substituted with 0-3 R<sup>1a</sup> and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;
- R<sup>3c</sup>, at each occurrence, is selected from CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, and phenyl;
- R<sup>3d</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C<sub>1-4</sub> alkyl-phenyl, and C(=O)R<sup>3c</sup>;
- R<sup>3e</sup>, at each occurrence, is selected from H, SO<sub>2</sub>NHR<sup>3</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3</sup>, C(O)R<sup>3</sup>, C(O)NHR<sup>3</sup>, C(O)OR<sup>3f</sup>, S(O)R<sup>3f</sup>, S(O)<sub>2</sub>R<sup>3f</sup>, C<sub>1-6</sub> alkyl substituted with 0-2 R<sup>1a</sup>, C<sub>2-6</sub> alkenyl substituted with 0-2 R<sup>1a</sup>, -(C<sub>0-4</sub> alkyl)-5-10 membered carbocycle substituted with 0-3 R<sup>1a</sup>, and -(C<sub>0-4</sub> alkyl)-5-10 membered heterocycle substituted with 0-3 R<sup>1a</sup> and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;
- R<sup>3f</sup>, at each occurrence, is selected from: C<sub>1-6</sub> alkyl substituted with 0-2 R<sup>1a</sup>, C<sub>2-6</sub> alkenyl substituted with 0-2 R<sup>1a</sup>, C<sub>2-6</sub> alkynyl substituted with 0-2 R<sup>1a</sup>, -(C<sub>0-4</sub> alkyl)-5-10 membered carbocycle substituted with 0-3 R<sup>1a</sup>, and -(C<sub>0-4</sub> alkyl)-5-10 membered heterocycle substituted with 0-3 R<sup>1a</sup> and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;

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R<sup>4</sup>, at each occurrence, is selected from H, =O, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>OR<sup>2</sup>, F, Cl, Br, I, C<sub>1-4</sub> alkyl, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>CN, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NO<sub>2</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>C(O)R<sup>2c</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>C(O)R<sup>2b</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>C(O)NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>C(O)NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>C(=NS(O)<sub>2</sub>R<sup>5</sup>)NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NHC(=NR<sup>2</sup>)NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>C(O)NHC(=NR<sup>2</sup>)NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>SO<sub>2</sub>R<sup>5</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>S(O)<sub>p</sub>R<sup>5a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>(CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>, NHCH<sub>2</sub>R<sup>1c</sup>, OCH<sub>2</sub>R<sup>1c</sup>, SCH<sub>2</sub>R<sup>1c</sup>, NH(CH<sub>2</sub>)<sub>2</sub>(CH<sub>2</sub>)<sub>t</sub>R<sup>1b</sup>, O(CH<sub>2</sub>)<sub>2</sub>(CH<sub>2</sub>)<sub>t</sub>R<sup>1b</sup>, S(CH<sub>2</sub>)<sub>2</sub>(CH<sub>2</sub>)<sub>t</sub>R<sup>1b</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>-5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, and a (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>-5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>5</sup>;

 $R^{4a}, \text{ at each occurrence, is selected from } H, =O, (CR^3R^{3a})_rOR^2, (CR^3R^{3a})_rF, (CR^3R^{3a})_rBr, \\ (CR^3R^{3a})_rCl, C_{1-4} \text{ alkyl, } (CR^3R^{3a})_rCN, (CR^3R^{3a})_rNO_2, (CR^3R^{3a})_rNR^2R^{2a}, \\ (CR^3R^{3a})_rC(O)R^{2c}, (CR^3R^{3a})_rNR^2C(O)R^{2b}, (CR^3R^{3a})_rC(O)NR^2R^{2a}, \\ (CR^3R^{3a})_rN=CHOR^3, (CR^3R^{3a})_rC(O)NH(CH_2)_2NR^2R^{2a}, (CR^3R^{3a})_rNR^2C(O)NR^2R^{2a}, \\ (CR^3R^{3a})_rC(=NR^2)NR^2R^{2a}, (CR^3R^{3a})_rNHC(=NR^2)NR^2R^{2a}, (CR^3R^{3a})_rSO_2NR^2R^{2a}, \\ (CR^3R^{3a})_rNR^2SO_2NR^2R^{2a}, (CR^3R^{3a})_rNR^2SO_2-C_{1-4} \text{ alkyl, } (CR^3R^{3a})_rC(O)NHSO_2-C_{1-4} \\ \text{ alkyl, } (CR^3R^{3a})NR^2SO_2R^5, (CR^3R^{3a})_rS(O)_pR^{5a}, (CR^3R^{3a})_r(CF_2)_rCF_3, (CR^3R^{3a})_r-5-6 \\ \text{ membered carbocycle substituted with } 0-1 R^5, \text{ and a } (CR^3R^{3a})_r-5-6 \\ \text{ membered heterocycle consisting of: carbon atoms and } 1-4 \\ \text{ heteroatoms selected from the group consisting of } N, O, \text{ and } S(O)_p, \text{ and substituted with } 0-1 R^5; \\ \end{array}$ 

$$\begin{split} R^{4b}, \text{ at each occurrence, is selected from } H, =&O, (CH_2)_r OR^3, (CH_2)_r F, (CH_2)_r CI, (CH_2)_r Br, \\ &(CH_2)_r I, C_{1-4} \text{ alkyl}, (CH_2)_r CN, (CH_2)_r NO_2, (CH_2)_r NR^3 R^{3a}, (CH_2)_r C(O)R^3, \\ &(CH_2)_r C(O)OR^{3c}, (CH_2)_r NR^3 C(O)R^{3a}, (CH_2)_r - C(O)NR^3 R^{3a}, (CH_2)_r NR^3 C(O)NR^3 R^{3a}, \\ &(CH_2)_r - C(=NR^3)NR^3 R^{3a}, (CH_2)_r NR^3 C(=NR^3)NR^3 R^{3a}, (CH_2)_r SO_2 NR^3 R^{3a}, \end{split}$$

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 $(CH_2)_rNR^3SO_2NR^3R^{3a}, (CH_2)_rNR^3SO_2-C_{1-4} \ alkyl, (CH_2)_rNR^3SO_2CF_3, \\ (CH_2)_rNR^3SO_2-phcnyl, (CH_2)_rS(O)_pCF_3, (CH_2)_rS(O)_p-C_{1-4} \ alkyl, (CH_2)_rS(O)_p-phenyl, \\ and (CH_2)_r(CF_2)_rCF_3;$ 

- $R^{4c}, \text{ at each occurrence, is selected from H, $C_{1-4}$ alkyl $(CR^3R^{3a})_{r1}OR^2$, $(CR^3R^{3a})_{r1}F$, $(CR^3R^{3a})_{r1}Br$, $(CR^3R^{3a})_{r1}Cl$, $(CR^3R^{3a})_{r1}CN$, $(CR^3R^{3a})_{r1}NO_2$, $(CR^3R^{3a})_{r1}NR^2R^{2a}$, $(CR^3R^{3a})_{r}C(O)R^{2c}$, $(CR^3R^{3a})_{r1}NR^2C(O)R^{2b}$, $(CR^3R^{3a})_{r}C(O)NR^2R^{2a}$, $(CR^3R^{3a})_{r1}N=CHOR^3$, $(CR^3R^{3a})_{r}C(O)NH(CH_2)_2NR^2R^{2a}$, $(CR^3R^{3a})_{r1}NR^2C(O)NR^2R^{2a}$, $(CR^3R^{3a})_{r1}NR^2C(O)NR^2R^{2a}$, $(CR^3R^{3a})_{r1}C(=NR^2)NR^2R^{2a}$, $(CR^3R^{3a})_{r1}NHC(=NR^2)NR^2R^{2a}$, $(CR^3R^{3a})_{r}SO_2NR^2R^{2a}$, $(CR^3R^{3a})_{r1}NR^2SO_2NR^2R^{2a}$, $(CR^3R^{3a})_{r1}NR^2SO_2-C_{1-4}$ alkyl$, $(CR^3R^{3a})_{r}C(O)NHSO_2-C_{1-4}$ alkyl$, $(CR^3R^{3a})_{r1}NR^2SO_2R^5$, $(CR^3R^{3a})_{r}S(O)_{p}R^{5a}$, $(CR^3R^{3a})_{r}C(CF_2)_{r}CF_3$, $(CR^3R^{3a})_{r-5-6}$ membered carbocycle substituted with 0-1 $R^5$, and a $(CR^3R^{3a})_{r-5-6}$ 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 $R^5$;$
- R<sup>5</sup>, at each occurrence, is selected from H,  $C_{1-6}$  alkyl, =O,  $(CH_2)_rOR^3$ , F, Cl, Br, I, -CN, NO<sub>2</sub>,  $(CH_2)_rNR^3R^{3a}$ ,  $(CH_2)_rC(O)R^3$ ,  $(CH_2)_rC(O)OR^{3c}$ ,  $(CH_2)_rNR^3C(O)R^{3a}$ ,  $(CH_2)_rC(O)NR^3R^{3a}$ ,  $(CH_2)_rNR^3C(O)NR^3R^{3a}$ ,  $(CH_2)_rCH(=NOR^{3d})$ ,  $(CH_2)_rC(=NR^3)NR^3R^{3a}$ ,  $(CH_2)_rNR^3C(=NR^3)NR^3R^{3a}$ ,  $(CH_2)_rSO_2NR^3R^{3a}$ ,  $(CH_2)_rNR^3SO_2NR^3R^{3a}$ ,  $(CH_2)_rNR^3SO_2-C_{1-4}$  alkyl,  $(CH_2)_rNR^3SO_2CF_3$ ,  $(CH_2)_rNR^3SO_2$ -phenyl,  $(CH_2)_rS(O)_pCF_3$ ,  $(CH_2)_rS(O)_p-C_{1-4}$  alkyl,  $(CH_2)_rS(O)_p$ -phenyl,  $(CF_2)_rCF_3$ , phenyl substituted with 0-2 R<sup>6</sup>, naphthyl substituted with 0-2 R<sup>6</sup>, and benzyl substituted with 0-2 R<sup>6</sup>;
- $R^{5a}, \text{ at each occurrence, is selected from } C_{1\text{-}6} \text{ alkyl}, (CH_2)_r OR^3, (CH_2)_r NR^3 R^{3a}, (CH_2)_r C(O)R^3, \\ (CH_2)_r C(O)OR^{3c}, (CH_2)_r NR^3 C(O)R^{3a}, (CH_2)_r C(O)NR^3 R^{3a}, (CF_2)_r CF_3, \text{ phenyl} \\ (CH_2)_r C(O)OR^{3c}, (CH_2)_r NR^3 C(O)R^{3a}, (CH_2)_r C(O)NR^3 R^{3a}, (CF_2)_r CF_3, \text{ phenyl} \\ (CH_2)_r C(O)OR^{3c}, (CH_2)_r NR^3 C(O)R^{3a}, (CH_2)_r C(O)NR^3 R^{3a}, (CH_2)_r CF_3, \text{ phenyl} \\ (CH_2)_r C(O)OR^{3c}, (CH_2)_r NR^3 C(O)R^{3a}, (CH_2)_r C(O)NR^3 R^{3a}, (CH_2)_r CF_3, \text{ phenyl} \\ (CH_2)_r C(O)OR^{3c}, (CH_2)_r NR^3 C(O)R^{3a}, (CH_2)_r C(O)NR^3 R^{3a}, (CH_2)_r CF_3, \text{ phenyl} \\ (CH_2)_r C(O)OR^{3c}, (CH_2)_r C(O)R^{3c}, (CH_2)_r C(O)R^{3c$

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substituted with 0-2 R<sup>6</sup>, naphthyl substituted with 0-2 R<sup>6</sup>, and benzyl substituted with 0-2 R<sup>6</sup>, provided that R<sup>5a</sup> does not form a S-N or S(O)<sub>D</sub>-C(O) bond;

- $R^6,$  at each occurrence, is selected from H, OH,  $(CH_2)_r\mathrm{OR}^2,$  halo,  $C_{1\text{-}4}$  alkyl, CN, NO<sub>2</sub>,  $(CH_2)_r\mathrm{NR}^2\mathrm{R}^{2a}, (CH_2)_r\mathrm{C(O)}\mathrm{R}^{2b}, \mathrm{NR}^2\mathrm{C(O)}\mathrm{R}^{2b}, \mathrm{NR}^2\mathrm{C(O)}\mathrm{NR}^2\mathrm{R}^{2a}, \mathrm{C(=NH)}\mathrm{NH}_2,$   $\mathrm{NHC(=NH)}\mathrm{NH}_2, \mathrm{SO}_2\mathrm{NR}^2\mathrm{R}^{2a}, \mathrm{NR}^2\mathrm{SO}_2\mathrm{NR}^2\mathrm{R}^{2a}, \mathrm{and} \ \mathrm{NR}^2\mathrm{SO}_2\mathrm{C}_{1\text{-}4} \ \mathrm{alkyl};$
- R<sup>7</sup>, at each occurrence, is selected from H, OH,  $C_{1-6}$  alkyl,  $C_{1-6}$  alkyl-C(O)-,  $C_{1-6}$  alkyl-O-,  $(CH_2)_n$ -phenyl,  $C_{1-4}$  alkyl-OC(O)-,  $C_{6-10}$  aryl-O-,  $C_{6-10}$  aryl-OC(O)-,  $C_{6-10}$  aryl-CH<sub>2</sub>-C(O)-,  $C_{1-4}$  alkyl-C(O)O-C<sub>1-4</sub> alkyl-OC(O)-,  $C_{6-10}$  aryl-C(O)O-C<sub>1-4</sub> alkyl-OC(O)-,  $C_{1-6}$  alkyl-NH<sub>2</sub>-C(O)-, phenyl-NH<sub>2</sub>-C(O)-, and phenyl- $C_{1-4}$  alkyl-C(O)-;

 $R^8$ , at each occurrence, is selected from H,  $C_{1-6}$  alkyl, and  $(CH_2)_n$ -phenyl;

alternatively, R<sup>7</sup> and R<sup>8</sup>, 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 N, O, and S(O)<sub>p</sub>;

 $R^9$ , at each occurrence, is selected from H,  $C_{1-6}$  alkyl, and  $(CH_2)_n$ -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:

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 N, O, and S(O)<sub>D</sub>;

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 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)<sub>p</sub>, wherein the 5 membered heterocycle is substituted with 0-1 carbonyl and 1-2 R and there are 0-3 ring double bonds;

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R is selected from H, C<sub>1-4</sub> alkyl, F, Cl, OH, OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH(CH<sub>3</sub>)<sub>2</sub>, CN, C(=NH)NH<sub>2</sub>, C(=NH)NHOH, C(=NH)NHOCH<sub>3</sub>, NH<sub>2</sub>, NH(C<sub>1-3</sub> alkyl), N(C<sub>1-3</sub> alkyl)<sub>2</sub>, C(=NH)NH<sub>2</sub>, CH<sub>2</sub>NH<sub>2</sub>, CH<sub>2</sub>NH(C<sub>1-3</sub> alkyl), CH<sub>2</sub>N(C<sub>1-3</sub> alkyl)<sub>2</sub>, (CR<sup>8</sup>R<sup>9</sup>)<sub>t</sub>NR<sup>7</sup>R<sup>8</sup>, C(O)NR<sup>7</sup>R<sup>8</sup>, CH<sub>2</sub>C(O)NR<sup>7</sup>R<sup>8</sup>, CH<sub>2</sub>S(O)<sub>p</sub>NR<sup>7</sup>R<sup>8</sup>, SO<sub>2</sub>R<sup>3</sup>, and OCF<sub>3</sub>;

alternatively, when 2 R groups are attached to adjacent atoms, they combine to form methylenedioxy or ethylenedioxy;

#### A is selected from:

C<sub>5-10</sub> carbocycle substituted with 0-2 R<sup>4</sup>;

- R<sup>1a</sup> is selected from H, -(CH<sub>2</sub>)<sub>r</sub>-R<sup>1b</sup>, -(CH(CH<sub>3</sub>))<sub>r</sub>-R<sup>1b</sup>, -(C(CH<sub>3</sub>)<sub>2</sub>)<sub>r</sub>-R<sup>1b</sup>, NHCH<sub>2</sub>R<sup>1c</sup>, OCH<sub>2</sub>R<sup>1c</sup>, SCH<sub>2</sub>R<sup>1c</sup>, NH(CH<sub>2</sub>)<sub>2</sub>(CH<sub>2</sub>)<sub>t</sub>R<sup>1b</sup>, and O(CH<sub>2</sub>)<sub>2</sub>(CH<sub>2</sub>)<sub>t</sub>R<sup>1b</sup>, provided that R<sup>1a</sup> forms other than an N-halo, N-S, or N-CN bond;
- alternatively, when two R<sup>1a</sup> 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)<sub>p</sub>, this ring being substituted with 0-2 R<sup>4b</sup> and 0-3 ring double bonds;
- $R^{1b}$  is selected from H,  $CH_3$ ,  $CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH(CH_3)_2$ , F, Cl, Br, I, -CN, -CHO,  $CF_3$ ,  $OR^2$ ,  $NR^2R^{2a}$ ,  $C(O)R^{2b}$ ,  $CO_2R^{2b}$ ,  $OC(O)R^2$ ,  $CO_2R^{2a}$ ,  $S(O)_pR^2$ ,  $NR^2(CH_2)_rOR^2$ ,  $NR^2C(O)R^{2b}$ ,  $NR^2C(O)NHR^2$ ,  $NR^2C(O)_2R^{2a}$ ,  $OC(O)NR^2R^{2a}$ ,  $C(O)NR^2R^{2a}$ ,  $C(O)NR^2R^2$ ,  $C(O)NR^2R^2$ ,  $C_{5-6}$  carbocycle substituted with 0-2  $R^{4b}$ , and 5-6 membered heterocycle consisting of carbon atoms and from 1-4 heteroatoms selected from the group consisting of N, O, and  $S(O)_D$ , and substituted with 0-2  $R^{4b}$ , provided that

R1b forms other than an O-O, N-halo, N-S, or N-CN bond;

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 $R^{1c}$  is selected from H,  $CH(CH_2OR^2)_2$ ,  $C(O)R^{2c}$ .  $C(O)NR^2R^{2a}$ ,  $S(O)R^2$ ,  $S(O)_2R^2$ , and  $SO_2NR^2R^{2a}$ ;

- R<sup>2</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, C<sub>5-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, a C<sub>5-6</sub> carbocyclic-CH<sub>2</sub>-group substituted with 0-2 R<sup>4b</sup>, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>2a</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, C<sub>5-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- alternatively, R<sup>2</sup> and R<sup>2a</sup>, 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<sup>4b</sup> and consisting of: 0-1 additional heteroatoms selected from the group consisting of N, O, and S(O)<sub>D</sub>;
- R<sup>2b</sup>, at each occurrence, is selected from CF<sub>3</sub>, C<sub>1-4</sub> alkoxy, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)<sub>3</sub>, benzyl, C<sub>5-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;

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- R<sup>2c</sup>, at each occurrence, is selected from CF<sub>3</sub>, OH, C<sub>1-4</sub> alkoxy, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, C<sub>5-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and 5-6 membered heterocycle containing from 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>:
- R<sup>3</sup>, at each occurrence, is selected from H, CII<sub>3</sub>, CII<sub>2</sub>CII<sub>3</sub>, CII<sub>2</sub>CII<sub>3</sub>, CII<sub>(CH<sub>3</sub>)<sub>2</sub>, benzyl, and phenyl;</sub>
- R<sup>3a</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, and phenyl;
- alternatively, R<sup>3</sup> and R<sup>3a</sup>, 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<sup>3</sup> and R<sup>3a</sup> are attached;
- R<sup>3c</sup>, at each occurrence, is selected from CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, and phenyl;
- R<sup>3d</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>-phenyl, CH<sub>2</sub>CH<sub>2</sub>-phenyl, and C(=O)R<sup>3c</sup>;
- $R^4$ , at each occurrence, is selected from H, =O,  $OR^2$ ,  $CH_2OR^2$ ,  $(CH_2)_2OR^2$ , F, Cl, Br, I,  $C_{1-4}$  alkyl, -CN,  $NO_2$ ,  $NR^2R^{2a}$ ,  $CH_2NR^2R^{2a}$ ,  $(CH_2)_2NR^2R^{2a}$ ,  $C(O)R^{2c}$ ,  $NR^2C(O)R^{2b}$ ,  $C(O)NR^2R^{2a}$ ,  $SO_2NR^2R^{2a}$ ,  $S(O)_pR^{5a}$ ,  $CF_3$ ,  $CF_2CF_3$ , 5-6 membered carbocycle substituted with 0-1  $R^5$ , 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  $R^5$ ;

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- R<sup>4a</sup>, at each occurrence, is selected from H, =O, CH<sub>2</sub>OR<sup>2</sup>, OR<sup>2</sup>, CH<sub>2</sub>F, F, CH<sub>2</sub>Br, Br, CH<sub>2</sub>Cl, Cl, C<sub>1-4</sub> alkyl, CH<sub>2</sub>-CN, -CN, CH<sub>2</sub>NO<sub>2</sub>, NO<sub>2</sub>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>-C(O)R<sup>2c</sup>, C(O)R<sup>2c</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>C(O)NR<sup>2</sup>R<sup>2a</sup>, (CH<sub>2</sub>)<sub>r</sub>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, NR<sup>2</sup>SO<sub>2</sub>R<sup>5</sup>, (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>p</sub>R<sup>5a</sup>, CH<sub>2</sub>CF<sub>3</sub>, CF<sub>3</sub>, CH<sub>2</sub>-5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, 5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, and a CH<sub>2</sub>-5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>5</sup>, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>5</sup>;
- R<sup>4b</sup>, at each occurrence, is selected from H, =O, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, -CN, NO<sub>2</sub>, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, CH<sub>2</sub>-C(O)R<sup>3</sup>, C(O)OR<sup>3c</sup>, CH<sub>2</sub>C(O)OR<sup>3c</sup>, NR<sup>3</sup>C(O)R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>C(O)R<sup>3a</sup>, C(O)NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>C(O)NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>C(O)NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>C(O)NR<sup>3</sup>R<sup>3a</sup>, C(=NR<sup>3</sup>)NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>C(=NR<sup>3</sup>)NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>C(=NR<sup>3</sup>)NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>C(=NR<sup>3</sup>)NR<sup>3</sup>R<sup>3a</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, CH<sub>2</sub>NR<sup>3</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, NR<sup>3</sup>SO<sub>2</sub>CF<sub>3</sub>, CH<sub>2</sub>NR<sup>3</sup>SO<sub>2</sub>CF<sub>3</sub>, NR<sup>3</sup>SO<sub>2</sub>-phenyl, CH<sub>2</sub>NR<sup>3</sup>SO<sub>2</sub>-phenyl, S(O)<sub>p</sub>CF<sub>3</sub>, CH<sub>2</sub>S(O)<sub>p</sub>CF<sub>3</sub>, S(O)<sub>p</sub>-C<sub>1-4</sub> alkyl, CH<sub>2</sub>S(O)<sub>p</sub>-C<sub>1-4</sub> alkyl, S(O)<sub>p</sub>-phenyl, CH<sub>2</sub>S(O)<sub>p</sub>-phenyl, CF<sub>3</sub>, and CH<sub>2</sub>-CF<sub>3</sub>;
- R<sup>4c</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>,

  CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, CH<sub>2</sub>OR<sup>2</sup>, CH<sub>2</sub>F,

  CH<sub>2</sub>Br, CH<sub>2</sub>Cl, CH<sub>2</sub>CN, CH<sub>2</sub>NO<sub>2</sub>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2c</sup>, CH<sub>2</sub>C(O)R<sup>2c</sup>,

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CH<sub>2</sub>NR<sup>2</sup>C(O)R<sup>2b</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>C(O)NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>C(O)NR<sup>2</sup>R<sup>2a</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, C(O)NHSO<sub>2</sub>-C<sub>1-4</sub> alkyl, CH<sub>2</sub>C(O)NHSO<sub>2</sub>-C<sub>1-4</sub> alkyl, CH<sub>2</sub>NR<sup>2</sup>SO<sub>2</sub>R<sup>5</sup>, S(O)<sub>p</sub>R<sup>5a</sup>, CH<sub>2</sub>S(O)<sub>p</sub>R<sup>5a</sup>, CF<sub>3</sub>, CH<sub>2</sub>CF<sub>3</sub>, 5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, CH<sub>2</sub>-5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>5</sup>, and a CH<sub>2</sub>-5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>5</sup>;

- R<sup>5</sup>, at each occurrence, is selected from H, =O, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, -CN, NO<sub>2</sub>, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, CH<sub>2</sub>C(O)R<sup>3</sup>, C(O)OR<sup>3c</sup>, CH<sub>2</sub>C(O)OR<sup>3c</sup>, NR<sup>3</sup>C(O)NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>C(O)NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>C(O)NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>CF<sub>3</sub>, NR<sup>3</sup>SO<sub>2</sub>-Cl<sub>1-4</sub> alkyl, NR<sup>3</sup>SO<sub>2</sub>CF<sub>3</sub>, NR<sup>3</sup>SO<sub>2</sub>-phenyl, S(O)<sub>p</sub>CF<sub>3</sub>, S(O)<sub>p</sub>-Cl<sub>1-4</sub> alkyl, S(O)<sub>p</sub>-phenyl, CF<sub>3</sub>, phenyl substituted with 0-2 R<sup>6</sup>, naphthyl substituted with 0-2 R<sup>6</sup>, and benzyl substituted with 0-2 R<sup>6</sup>; and,
- R<sup>6</sup>, at each occurrence, is selected from H, OH, OR<sup>2</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, CN, NO<sub>2</sub>, NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2b</sup>, CH<sub>2</sub>C(O)R<sup>2b</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, NR<sup>2</sup>C(O)NR<sup>2</sup>R<sup>2a</sup>, C(=NH)NH<sub>2</sub>, NHC(=NH)NH<sub>2</sub>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, and NR<sup>2</sup>SO<sub>2</sub>C<sub>1-4</sub> alkyl.
- Claim 3. (Previously presented) A compound according to Claim 2, wherein;

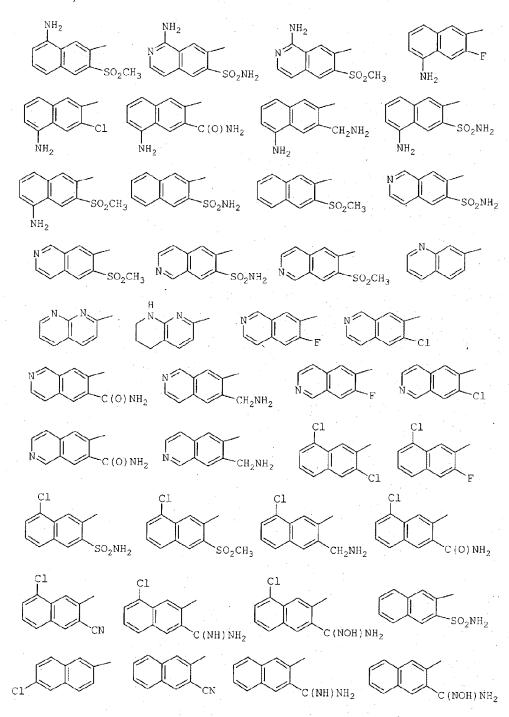
G is selected from the group:

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# Amendment

# Amendment

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## Amendment

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 $G_1$  is absent or is selected from  $(CR^3R^{3a})_{1-3}$ ,  $(CR^3R^{3a})_uC(O)(CR^3R^{3a})_w$ ,

 $(CR^3R^{3a})_uO(CR^3R^{3a})_w, (CR^3R^{3a})_uNR^{3b}(CR^3R^{3a})_w, (CR^3R^{3a})_uC(O)NR^{3b}(CR^3R^{3a})_w, \\ (CR^3R^{3a})_uNR^{3b}C(O)(CR^3R^{3a})_w, (CR^3R^{3a})_uNR^{3b}C(O)(CR^3R^{3a})_uC(O)NR^{3b}(CR^3R^{3a})_w, \\ (CR^3R^{3a})_uS(CR^3R^{3a})_w, (CR^3R^{3a})_uS(O)(CR^3R^{3a})_w, (CR^3R^{3a})_uS(O)_2(CR^3R^{3a})_w, \\ (CR^3R^{3a})_uS(O)NR^{3b}(CR^3R^{3a})_w, (CR^3R^{3a})_uNR^{3b}S(O)_2(CR^3R^{3a})_w, \\ (CR^3R^{3a})_uS(O)NR^{3b}(CR^3R^{3a})_w, (CR^3R^{3a})_uNR^{3b}S(O)_2(CR^3R^{3a})_w, \\ (CR^3R^{3a})_uS(O)_2NR^{3b}(CR^3R^{3a})_w, \\ (CR^3R^{3a})_uS(O)_2NR^{3b}(CR^{3a})_w, \\ (CR^3R^{3a})_uS(O)_2NR^{3b}(CR^{3a})_w, \\ (CR^3R^{3a})_uS(O)_2NR^{3b}(CR^{3a})_w, \\ (CR^3R^{3a})_uS(O)_2NR^{3b}(CR^{3a})_w, \\ (CR^3R^{3a})_uS(O)_2NR^{3b}(CR^{3a})_w, \\ (CR^3R^{3a})_uS(O)_2NR^{3b}(CR^{3$ 

A is phenyl substituted with  $0-2 R^4$ ;

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- R<sup>1a</sup> is selected from H, R<sup>1b</sup>, CH(CH<sub>3</sub>)R<sup>1b</sup>, C(CH<sub>3</sub>)<sub>2</sub>R<sup>1b</sup>, CH<sub>2</sub>R<sup>1b</sup>, and CH<sub>2</sub>CH<sub>2</sub>R<sup>1b</sup>, provided that R<sup>1a</sup> forms other than an N-halo, N-S, or N-CN bond;
- alternatively, when two R<sup>1a</sup> 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)<sub>p</sub>, this ring being substituted with 0-2 R<sup>4b</sup> and 0-3 ring double bonds;
- R<sup>1b</sup> is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, F, Cl, Br, -CN, -CHO, CF<sub>3</sub>, OR<sup>2</sup>, NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2b</sup>, CO<sub>2</sub>R<sup>2b</sup>, OC(O)R<sup>2</sup>, CO<sub>2</sub>R<sup>2a</sup>, S(O)<sub>p</sub>R<sup>2</sup>, NR<sup>2</sup>(CH<sub>2</sub>)<sub>r</sub>OR<sup>2</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>SO<sub>2</sub>R<sup>2</sup>, phenyl substituted with 0-2 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>, provided that R<sup>1b</sup> forms other than an O-O, N-halo, N-S, or N-CN bond;
- R<sup>2</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, phenyl substituted with 0-2 R<sup>4b</sup>, a benzyl substituted with 0-2 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>2a</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with 0-2 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- alternatively,  $R^2$  and  $R^{2a}$ , 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  $R^{4b}$

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and consisting of: 0-1 additional heteroatoms selected from the group consisting of N, O, and  $S(O)_p$ ;

- R<sup>2b</sup>, at each occurrence, is selected from CF<sub>3</sub>, C<sub>1-4</sub> alkoxy, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>,

  CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with 0-2 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>2c</sup>, at each occurrence, is selected from CF<sub>3</sub>, OH, OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>,
  OCH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with
  0-2 R<sup>4b</sup>, and 5-6 membered aromatic heterocycle containing from 1-4 heteroatoms
  selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>4a</sup>, at each occurrence, is selected from H, =O, CH<sub>2</sub>OR<sup>2</sup>, OR<sup>2</sup>, F, Br, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>CH<sub>3</sub>CH<sub>3</sub>CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, -CN, NO<sub>2</sub>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2c</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>C(O)NR<sup>2</sup>R<sup>2a</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, and -CF<sub>3</sub>;
- R<sup>4b</sup>, at each occurrence, is selected from H, =O, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>,

  CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, -CN, NO<sub>2</sub>, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, CH<sub>2</sub>-C(O)R<sup>3</sup>,

  C(O)OR<sup>3c</sup>, CH<sub>2</sub>-C(O)OR<sup>3c</sup>, NR<sup>3</sup>C(O)R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>C(O)R<sup>3a</sup>, C(O)NR<sup>3</sup>R<sup>3a</sup>,

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Amendment

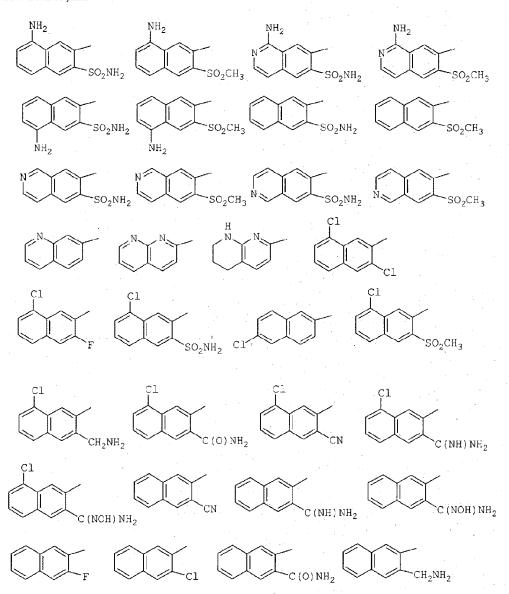
 $\label{eq:ch2-constraint} CH_2\text{-}C(O)NR^3R^3a,\ SO_2NR^3R^3a,\ CH_2SO_2NR^3R^3a,\ NR^3SO_2\text{-}C_{1\text{-}4}\ alkyl, \\ CH_2NR^3SO_2\text{-}C_{1\text{-}4}\ alkyl,\ NR^3SO_2\text{-}phenyl,\ CH_2NR^3SO_2\text{-}phenyl,\ S(O)_pCF_3, \\ CH_2S(O)_pCF_3,\ S(O)_p\text{-}C_{1\text{-}4}\ alkyl,\ CH_2S(O)_p\text{-}C_{1\text{-}4}\ alkyl,\ S(O)_p\text{-}phenyl,\ CH_2S(O)_p\text{-}phenyl, \\ and\ CF_3;$ 

- $R^{4c}$ , at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CII<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, CH<sub>2</sub>OR<sup>2</sup>, CH<sub>2</sub>F, CH<sub>2</sub>Br, CH<sub>2</sub>Cl, CH<sub>2</sub>CN, CH<sub>2</sub>NO<sub>2</sub>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2c</sup>, CH<sub>2</sub>C(O)R<sup>2c</sup>, CH<sub>2</sub>C(O)R<sup>2c</sup>, CH<sub>2</sub>NR<sup>2</sup>C(O)R<sup>2b</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>C(O)NR<sup>2</sup>R<sup>2a</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, S(O)<sub>p</sub>R<sup>5a</sup>, CH<sub>2</sub>S(O)<sub>p</sub>R<sup>5a</sup>, CF<sub>3</sub>, phenyl substituted with 0-1 R<sup>5</sup>, and benzyl substituted with 0-1 R<sup>5</sup>;
- $R^5$ , at each occurrence, is selected from H, =O, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, -CN, NO<sub>2</sub>, NR<sup>3</sup>R<sup>3</sup>a, CH<sub>2</sub>NR<sup>3</sup>R<sup>3</sup>a, C(O)R<sup>3</sup>, CH<sub>2</sub>C(O)R<sup>3</sup>, C(O)OR<sup>3</sup>c, CH<sub>2</sub>C(O)OR<sup>3</sup>c, NR<sup>3</sup>C(O)R<sup>3</sup>a, C(O)NR<sup>3</sup>R<sup>3</sup>a, SO<sub>2</sub>NR<sup>3</sup>R<sup>3</sup>a, NR<sup>3</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, NR<sup>3</sup>SO<sub>2</sub>CF<sub>3</sub>, NR<sup>3</sup>SO<sub>2</sub>-phenyl, S(O)<sub>p</sub>CF<sub>3</sub>, S(O)<sub>p</sub>-C<sub>1-4</sub> alkyl, S(O)<sub>p</sub>-phenyl, CF<sub>3</sub>, phenyl substituted with 0-2 R<sup>6</sup>, naphthyl substituted with 0-2 R<sup>6</sup>, and benzyl substituted with 0-2 R<sup>6</sup>; and,
- $R^6$ , at each occurrence, is selected from H, OH,  $OR^2$ , F, Cl,  $CH_3$ ,  $CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH(CH_3)_2$ , -CN,  $NO_2$ ,  $NR^2R^{2a}$ ,  $CH_2NR^2R^{2a}$ ,  $C(O)R^{2b}$ ,  $CH_2C(O)R^{2b}$ ,  $NR^2C(O)R^{2b}$ ,  $SO_2NR^2R^{2a}$ , and  $NR^2SO_2C_{1-4}$  alkyl.

Claim 4 (Previously presented) A compound according to Claim 3, wherein;

G is selected from the group:

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## Amendment

G<sub>1</sub> is absent or is selected from CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>O, OCH<sub>2</sub>, NH, CH<sub>2</sub>NH, NHCH<sub>2</sub>, CH<sub>2</sub>C(O), C(O)CH<sub>2</sub>, C(O)NH, NHC(O), CH<sub>2</sub>S(O)<sub>2</sub>, S(O)<sub>2</sub>(CH<sub>2</sub>), SO<sub>2</sub>NH, and NHSO<sub>2</sub>, provided that G<sub>1</sub> does not form a N-S, NCH<sub>2</sub>N, NCH<sub>2</sub>O, or NCH<sub>2</sub>S bond with either group to which it is attached;

 $R^{1a}$  is selected from H,  $R^{1b}$ ,  $C(CH_3)_2R^{1b}$ , and  $CH_2R^{1b}$ , provided that  $R^{1a}$  forms other than an N-halo, N-S, or N-CN bond;

R<sup>1b</sup> is selected from CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, F, Cl, Br, -CN, CF<sub>3</sub>, OR<sup>2</sup>, NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2b</sup>, CO<sub>2</sub>R<sup>2b</sup>, CO<sub>2</sub>R<sup>2a</sup>, S(O)<sub>p</sub>R<sup>2</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>SO<sub>2</sub>R<sup>2</sup>, 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 N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>, provided that R<sup>1b</sup> forms other than an O-O, N-halo, N-S, or N-CN bond;

- R<sup>2</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, phenyl substituted with 0-1 R<sup>4b</sup>, benzyl substituted with 0-1 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-1 R<sup>4b</sup>;
- R<sup>2a</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with 0-1 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-1 R<sup>4b</sup>;
- alternatively, R<sup>2</sup> and R<sup>2a</sup>, 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<sup>4b</sup> and consisting of: 0-1 additional heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;
- R<sup>2b</sup>, at each occurrence, is selected from OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with 0-1 R<sup>4b</sup>, 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)<sub>b</sub>, and substituted with 0-1 R<sup>4b</sup>;
- R<sup>2c</sup>, at each occurrence, is selected from OH, OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, OCH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with 0-1 R<sup>4b</sup>, and 5-6 membered aromatic heterocycle containing from 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>4b</sup>;

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- $R^{4a}$ , at each occurrence, is selected from H, =O,  $CH_2OR^2$ ,  $OR^2$ , F, Br, Cl,  $CH_3$ ,  $CH_2CH_3$ ,  $CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH_2CH_3$ ,  $CH_2CH_3$ ,  $CH_3$ ,  $CH_2CH_3$ ,  $CH_3$ ,  $CH_$
- $R^{4b}$ , at each occurrence, is selected from H, =O, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CII(CH<sub>3</sub>)<sub>2</sub>, -CN, NO<sub>2</sub>, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, C(O)OR<sup>3c</sup>, NR<sup>3</sup>C(O)R<sup>3a</sup>, C(O)NR<sup>3</sup>R<sup>3a</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, NR<sup>3</sup>SO<sub>2</sub>-phenyl, S(O)<sub>p</sub>-C<sub>1-4</sub> alkyl, S(O)<sub>p</sub>-phenyl, and CF<sub>3</sub>;
- R<sup>4c</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, phenyl substituted with 0-1 R<sup>5</sup>, and benzyl substituted with 0-1 R<sup>5</sup>;
- R<sup>5</sup>, at each occurrence, is selected from H, =O, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, -CN, NO<sub>2</sub>, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, C(O)OR<sup>3c</sup>, NR<sup>3</sup>C(O)R<sup>3a</sup>, C(O)NR<sup>3</sup>R<sup>3a</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, NR<sup>3</sup>SO<sub>2</sub>-phenyl, S(O)<sub>p</sub>-C<sub>1-4</sub> alkyl, S(O)<sub>p</sub>-phenyl, CF<sub>3</sub>, phenyl substituted with 0-2 R<sup>6</sup>, naphthyl substituted with 0-2 R<sup>6</sup>, and benzyl substituted with 0-2 R<sup>6</sup>; and,
- $R^6$ , at each occurrence, is selected from H, OH, OR<sup>2</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, -CN, NO<sub>2</sub>, NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2b</sup>, CH<sub>2</sub>C(O)R<sup>2b</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, and SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>.

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Claim 5. (Currently Amended) A compound according to Claim 4, wherein;

# G is selected from:

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A is selected from the group: phenyl, 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:

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$$\mathbb{R}^{4a}$$

$$\mathbb{R}^{4a}$$

$$\mathbb{R}^{4a}$$

$$\mathbb{R}^{4a}$$

$$\mathbb{R}^{4a}$$

R¹a is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>F, CH<sub>2</sub>CI, Br, CH<sub>2</sub>Br, -CN, CH<sub>2</sub>CN, CF<sub>3</sub>, CH<sub>2</sub>CF<sub>3</sub>, OCH<sub>3</sub>, CH<sub>2</sub>OH, C(CH<sub>3</sub>)<sub>2</sub>OH, CH<sub>2</sub>OCH<sub>3</sub>, NH<sub>2</sub>, CH<sub>2</sub>NH<sub>2</sub>, NHCH<sub>3</sub>, CH<sub>2</sub>NHCH<sub>3</sub>, N(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, CO<sub>2</sub>H, COCH<sub>3</sub>, CO<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CO<sub>2</sub>CH<sub>3</sub>, SCH<sub>3</sub>, CH<sub>2</sub>SCH<sub>3</sub>, S(O)CH<sub>3</sub>, CH<sub>2</sub>S(O)CH<sub>3</sub>, S(O)<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>S(O)<sub>2</sub>CH<sub>3</sub>, C(O)NII<sub>2</sub>, CH<sub>2</sub>C(O)NH<sub>2</sub>, SO<sub>2</sub>NH<sub>2</sub>, CH<sub>2</sub>SO<sub>2</sub>NH<sub>2</sub>, NHSO<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>NHSO<sub>2</sub>CH<sub>3</sub>, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyridin-2-yl-N-oxide, pyridin-3-yl-N-oxide, pyridin-4-yl-N-oxide, imidazol-1-yl, CH<sub>2</sub>-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, CH<sub>2</sub>-1,2,3,4-tetrazol-1-yl, provided that R¹a forms other than an N-halo, N-S, or N-CN bond;

R<sup>2</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, phenyl substituted with 0-1 R<sup>4b</sup>, benzyl substituted with 0-1 R<sup>4b</sup>, and 5 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>4b</sup>;

R<sup>2a</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, and CH<sub>2</sub>CH<sub>3</sub>;

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alternatively, R<sup>2</sup> and R<sup>2a</sup>, 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<sup>4b</sup> and consisting of: 0-1 additional heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;

 $R^{2b}$ , at each occurrence, is selected from  $OCII_3$ ,  $OCII_2CH_3$ ,  $CH_3$ , and  $CH_2CH_3$ ;

R<sup>2c</sup>, at each occurrence, is selected from OH, OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, CH<sub>3</sub>, and CH<sub>2</sub>CH<sub>3</sub>;

- R<sup>4a</sup>, at each occurrence, is selected from H, =O, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, and C(CH<sub>3</sub>)<sub>3</sub>;
- $R^{4b}$ , at each occurrence, is selected from H, =O, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, C(O)OR<sup>3c</sup>, NR<sup>3</sup>C(O)R<sup>3a</sup>, C(O)NR<sup>3</sup>R<sup>3a</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>-phenyl, S(O)<sub>2</sub>CH<sub>3</sub>, S(O)<sub>2</sub>-phenyl, and CF<sub>3</sub>;
- R<sup>5</sup>, at each occurrence, is selected from H, =O, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>c, NR<sup>3</sup>C(O)R<sup>3a</sup>, C(O)NR<sup>3</sup>R<sup>3a</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, NR<sup>3</sup>SO<sub>2</sub>-phenyl, S(O)<sub>2</sub>-CH<sub>3</sub>, S(O)<sub>2</sub>-phenyl, CF<sub>3</sub>, phenyl substituted with 0-2 R<sup>6</sup>, naphthyl substituted with 0-2 R<sup>6</sup>, and benzyl substituted with 0-2 R<sup>6</sup>; and
- $R^6$ , at each occurrence, is selected from H, OH, OR<sup>2</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2b</sup>, CH<sub>2</sub>C(O)R<sup>2b</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, and SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>.

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

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P<sub>4</sub> is -G;

## G is selected from:

and,

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A-B is selected from:

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

## 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;

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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-7*H*-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-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-(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*-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-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-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-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-7*H*-pyrazolo[3,4-*c*]pyridin-7-one;
- 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-carboxamide;
- 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;
- 1-(4-methoxyphenyl) 6 (4 (2 oxo 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-7*H*-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;

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

- 1-(3-chlorophenyl)-*N*,*N*-dimethyl-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-chloro-4-fluorophenyl)-7-oxo-6-[4-(2-oxo-1-piperidinyl)phenyl]-4,5,6,7-tetrahydro-1*H*-pyrazolo[3,4-e]pyridine-3-carboxamide;
- 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-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-tetrahydro-1*H*-pyrazolo[3,4-c]pyridine-3-carboxamide;
- 1-(2,3-dihydro 1*H*-indol 6-yl) 6-[4-(2-oxo-1(2*H*)-pyridinyl)phenyl] 3 (trifluoromethyl)-1,4,5,6-tetrahydro 7*H*-pyrazolo[3,4-c]pyridin 7-one;
- 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-(2,3-dihydro-1*H*-isoindol-5-yl)-6-[4-(2-oxo-2*H*-pyridin-1-yl)phenyl]-3-trifluoromethyl-1,4,5,6-tetrahydropyrazolo[3,4-e]pyridin-7-one;

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- 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-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;
- 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(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;
- 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;

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- 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-e]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-e]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-e]pyridin-7-one;
- 2-dimethylamino-*N*-{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo<u>-</u>piperidin-1-yl)phenyl]-4,5,6,7-tetrahydro-1*H*-pyrazolo[3,4-*c*]pyridin-3-ylmethyl}-*N*-methylacetamide;

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- 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;
- *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-{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-e]pyridin-1-yl}-benzenesulfonamide;

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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-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-e]pyridin-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

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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- $\underline{o}$ [3,4-c]pyridine-3-carboxamide

or a pharmaceutically acceptable salt form thereof.

Claim 32. (Canceled)

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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.

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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 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 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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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 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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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

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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 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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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. (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.

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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 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. (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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#### Amendment

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, wherein 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 CH<sub>2</sub>Cl<sub>2</sub>/ EtOAc.

Claim 132. (New) 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 CH<sub>2</sub>Cl<sub>2</sub>/ EtOAc.

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#### REMARKS

#### Status

Claims 1-8, 16-19, 31, 33-34, 38-45, 47-48, 52-79, 87-100 and 122-133 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 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 16, 2004

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

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





CASE PH7398 NP

## FILING BY "EXPRESS MAIL" UNDER 37 CFR 1.10

EV323500201US Express Mail Label Number November 19, 2003 Date of Deposit

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF

Examiner: Kifle, B.

PINTO ET AL.

Group Art Unit: 1624

**APPLICATION NO: 10/245,122** 

Confirmation No.: 6870

FILED: SEPTEMBER 17, 2002

FOR: LACTAM-CONTAINING COMPOUNDS AND DERIVATIVES

THEREOF AS FACTOR XA INHIBITORS

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 RECEIVED

NOV 2 6 2003
TECH CENTER 1600/2900

Sir:

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

#### Fee calculation:

Multiple Depende For	nt Claims (\$ 2 Number Presented	<del>,                                    </del>			mber			Rate		\$
TOTAL CLAIMS	103	-	30	=	73	х	\$	18	=	\$ 1314.00
INDEPENDENT CLAIMS		-	3	=		х	\$	86	ıı	\$
TOTAL FEE										\$ 1314.00

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

Enclosed is a Petition for Extension of Time.

Bristol-Myers Squibb Company Patent Department P.O. Box 4000 Princeton, NJ 08543-4000 (609) 252-3791 Date: November 19, 2003 Respectfully submitted,

Jing S. Belfield, Ph.D. Agent for Applicants

Reg. No. 45,914

## FILING BY "EXPRESS MAIL" UNDER 37 CFR 1.10

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Express Mail Label Number

November 19, 2003

Date of Deposit

#### 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:

**September 17, 2002** 

Confirmation No. 6870

For:

LACTAM-CONTAINING COMPOUNDS AND DERIVATIVES THEREOF AS

FACTOR XA INHIBITORS

NOV 2 6 2003

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 TECH CENTER 1600/2900

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.

11/24/2003 NMEKONEN 00000049 193880 10245122

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**Amendment** 

#### **AMENDMENT**

Subject matter to be added is in bold and underlined.

Subject matter to be deleted is in bold and strikethrough.

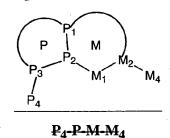
## In the Claims:

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:



I

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or a stereoisomer or pharmaceutically acceptable salt thereof, wherein;

N. M4

ring M, including  $P_1$ ,  $P_2$ ,  $M_1$ , and  $M_2$ , is substituted with 0-2  $R^{1a}$  and is

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**Amendment** 

ring P, including 
$$P_1$$
,  $P_2$ , and  $P_3$ , is  $P_4$ 

M is a 3-10 membered carbocycle or a 4-10 membered heterocycle, consisting of: carbon atoms and 1-3 heteroatoms selected from O,  $S(O)_p$ , N, and  $NZ^2$ ;

ring M is substituted with 0-3  $R^{1a}$  and 0-2 carbonyl groups, and there are 0-3 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 1-3 heteroatoms selected from O,  $S(O)_p$ , and N;

ring P is substituted with 0-3 R<sup>1a</sup> and 0-2 carbonyl groups, and there are 0-3 ring double bonds;

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 1,4 positions of ring M;

one of  $P_4$  and  $M_4$  is  $\underline{-A-B}$  - $\overline{Z-A-B}$  and the other - $\overline{G_4-G}$ ;

# $\underline{P_4}$ is $\underline{-G_1}$ - $\underline{G}$ ;

G is a group of Formula IIa or IIb:

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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 N, O, and S(O)<sub>p</sub>;

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 N, O, and S(O)<sub>p</sub>, 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 H,  $C_{1-4}$  alkyl, F, Cl, Br, I, OH, OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH(CH<sub>3</sub>)<sub>2</sub>, OCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CN, C(=NR<sup>8</sup>)NR<sup>7</sup>R<sup>9</sup>, NHC(=NR<sup>8</sup>)NR<sup>7</sup>R<sup>9</sup>, ONHC(=NR<sup>8</sup>)NR<sup>7</sup>R<sup>9</sup>, NR<sup>8</sup>CH(=NR<sup>7</sup>), NH<sub>2</sub>, NH(C<sub>1-3</sub> alkyl), N(C<sub>1-3</sub> alkyl)<sub>2</sub>, C(=NH)NH<sub>2</sub>, CH<sub>2</sub>NH<sub>2</sub>, CH<sub>2</sub>NH(C<sub>1-3</sub> alkyl), CH<sub>2</sub>N(C<sub>1-3</sub> alkyl)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>NH(C<sub>1-3</sub> alkyl), CH<sub>2</sub>CH<sub>2</sub>NH(C<sub>1-3</sub> alkyl), (CR<sup>8</sup>R<sup>9</sup>)<sub>t</sub>C(O)H, (CR<sup>8</sup>R<sup>9</sup>)<sub>t</sub>C(O)R<sup>2c</sup>, (CR<sup>8</sup>R<sup>9</sup>)<sub>t</sub>NR<sup>7</sup>R<sup>8</sup>, (CR<sup>8</sup>R<sup>9</sup>)<sub>t</sub>C(O)NR<sup>7</sup>R<sup>8</sup>, (CR<sup>8</sup>R<sup>9</sup>)<sub>t</sub>NR<sup>7</sup>C(O)R<sup>7</sup>, (CR<sup>8</sup>R<sup>9</sup>)<sub>t</sub>OR<sup>3</sup>, (CR<sup>8</sup>R<sup>9</sup>)<sub>t</sub>S(O)<sub>p</sub>NR<sup>7</sup>R<sup>8</sup>, (CR<sup>8</sup>R<sup>9</sup>)<sub>t</sub>NR<sup>7</sup>S(O)<sub>p</sub>R<sup>7</sup>, (CR<sup>8</sup>R<sup>9</sup>)<sub>t</sub>SR<sup>3</sup>, (CR<sup>8</sup>R<sup>9</sup>)<sub>t</sub>S(O)R<sup>3</sup>, (CR<sup>8</sup>R<sup>9</sup>)<sub>t</sub>S(O)<sub>2</sub>R<sup>3</sup>, and OCF<sub>3</sub>;

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alternatively, when 2 R groups are attached to adjacent atoms, they combine to form methylenedioxy or ethylenedioxy;

A is selected from:

 $C_{3-10}$  carbocycle substituted with 0-2  $R^4$ , and

5-12 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  $\mathbb{R}^4$ ; provided that  $\Lambda$  is other than a dihydro-benzopyran;

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 N-N-N group;

provided that B is other than triazolone, quinolone, or isoquinolone, wherein the triazolone, quinolone, and isoquinolone groups are substituted or unsubstituted;

Q<sub>1</sub> is selected from C=O and SO<sub>2</sub>;

ring Q is a 6 4-8 membered monocyclic or bieyelie ring consisting of, in addition to the N-Q<sub>1</sub> group shown, carbon atoms and 0-2 heteroatoms selected from NR<sup>4e</sup>, O, S, S(O), and S(O)<sub>2</sub>, wherein:

0-2 double bonds are present within the ring and the ring is substituted with 0-2 R<sup>4a</sup>;

alternatively, ring Q is a 4-8 membered monocyclic or bicyclic ring to which another ring is fused, wherein:

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the 4-7 membered ring consists of, in addition to the shown amide group, carbon atoms and 0-2 heteroatoms selected from NR<sup>4e</sup>, O, S, S(O), and S(O)<sub>2</sub>, and 0-2 double bonds are present within the ring;

the fusion ring is phenyl or a 5 6 membered heteroaromatic consisting of carbon atoms and 1 2 heteroatoms selected from NR<sup>4e</sup>, O, S, S(O), and S(O)<sub>2</sub>;

ring Q, which includes the 4.7 membered ring and the fusion ring, is substituted with 0.3 R<sup>4a</sup>:

alternatively, two non adjacent atoms of one of the rings of ring Q are bridged with 1-2 atoms selected from: carbon atoms, NR<sup>4e</sup>, O, S, S(O), and S(O)<sub>2</sub>, provided bonds other than O-O, S(O)<sub>B</sub>-O, S(O)<sub>B</sub>-S(O)<sub>B</sub>, N-O, and N-S(O)<sub>B</sub> are present;

X is absent or is selected from  $(CR^2R^{2n})_{1-4}$ ,  $CR^2(CR^2R^{2b})(CH_2)_{1-4}$ , -C(O),  $-C(=NR^{1e})$ ,  $-CR^2(NR^{1e}R^2)$ ,  $-CR^2(OR^2)$ ,  $-CR^2(SR^2)$ ,  $-C(O)CR^2R^{2n}$ ,  $-CR^2R^{2n}C(O)$ , -S(O), -S(O),  $-S(O)_{2-7}$ ,  $-S(O)_{2-7}$ ,  $-S(O)CR^2R^{2n}$ ,  $-S(O)_{2-7}$ ,  $-S(O)_{2-7}$ ,  $-CR^2R^{2n}$ ,  $-CR^2R^$ 

 $G_1 \text{ is absent or is selected from } (CR^3R^{3a})_{1-5}, (CR^3R^{3a})_{0-2}CR^3 = CR^3(CR^3R^{3a})_{0-2}, (CR^3R^{3a})_{0-2}, (CR^3R^{3a})_{0-$ 

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 $(CR^{3}R^{3a})_{u}S(O)_{2}N^{3b}(CR^{3}R^{3a})_{w}, (CR^{3}R^{3a})_{u}N^{3b}S(O)_{2}N^{3b}(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}NR^{3e}(CR^{3}R^{3a})_{w}, (CR^{3}R^{3a})_{u}C(O)(CR^{3}R^{3a})_{u}C(O)(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}NR^{3b}(CR^{3}R^{3a})_{u}C(O)NR^{3b}(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}NR^{3b}C(O)(CR^{3}R^{3a})_{u}C(O)(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}C(O)(CR^{3}R^{3a})_{u}C(O)NR^{3b}(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}NR^{3b}C(O)(CR^{3}R^{3a})_{u}C(O)NR^{3b}(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}NR^{3b}C(O)(CR^{3}R^{3a})_{u}C(O)NR^{3b}(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}S(O)NR^{3b}C(O)(CR^{3}R^{3a})_{w}, (CR^{3}R^{3a})_{u}C(O)NR^{3b}S(O)_{2}(CR^{3}R^{3a})_{w}, \\ (CR^{3}R^{3a})_{u}S(O)_{2}NR^{3b}C(O)NR^{3b}CR^{3}R^{3a})_{w}, wherein u + w total 0, 1, 2, 3, or 4, provided that G_{1} does not form an \\ N-S, NCH_{2}N, NCH_{2}O, or NCH_{2}S bond with either group to which it is attached;$ 

 $\begin{array}{l} (CR^3R^{3e})_{q}NR^{3b}(CR^3R^{3e})_{q1}, (CR^3R^{3e})_{q}C(O)(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q}C(O)O(CR^3R^{3e})_{q1}, (CR^3R^{3e})_{q}OC(O)(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q}C(O)NR^{3b}(CR^3R^{3e})_{q1}, (CR^3R^{3e})_{q}NR^{3b}C(O)(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q}OC(O)O(CR^3R^{3e})_{q1}, (CR^3R^{3e})_{q}OC(O)NR^{3b}(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q}NR^{3b}C(O)O(CR^3R^{3e})_{q1}, (CR^3R^{3e})_{q}NR^{3b}C(O)NR^{3b}(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q}C(O)(CR^3R^{3e})_{q}C(O)(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q}NR^{3b}(CR^3R^{3e})_{q}C(O)NR^{3b}(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q}NR^{3b}C(O)(CR^3R^{3e})_{q}C(O)(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q}NR^{3b}C(O)(CR^3R^{3e})_{q}C(O)NR^{3b}(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q}NR^{3b}C(O)(CR^3R^{3e})_{q}C(O)NR^{3b}(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q}NR^{3b}C(O)(CR^3R^{3e})_{q}C(O)NR^{3b}(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q}NR^{3b}C(O)(CR^3R^{3e})_{q}C(O)NR^{3b}(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q}NR^{3b}C(O)(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q}NR^{3b}C(O)(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q}NR^{3b}C(O)(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q}NR^{3b}C(O)(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q}NR^{3b}(CR^3R^{3e})_{q1}, \\ (CR^3R^{3e})_{q1}, \\$ 

Z is selected from a bond, -(CR<sup>3</sup>R<sup>3e</sup>)<sub>1.4</sub>-, (CR<sup>3</sup>R<sup>3e</sup>)<sub>0</sub>O(CR<sup>3</sup>R<sup>3e</sup>)<sub>0</sub>1,

 $(CR^3R^{3e})_{\sigma}S(O)NR^{3b}C(O)(CR^3R^{3e})_{\sigma1}, (CR^3R^{3e})_{\sigma}C(O)NR^{3b}S(O)_2(CR^3R^{3e})_{\sigma1}, and$ 

 $(CR^{3}R^{3e})_{q}NR^{3b}SO_{2}NR^{3b}(CR^{3}R^{3e})_{q1},\ wherein\ q+q1\ total\ 0,\ 1,\ 2,\ 3,\ or\ 4,\ provided$ 

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that Z does not form a N-S, NCH<sub>2</sub>N, NCH<sub>2</sub>O, or NCH<sub>2</sub>S bond with either group to which it is attached;

- provided that B-A-Z form other than a pyridone-phenyl-CH<sub>2</sub>, pyridone-pyridyl-CH<sub>2</sub>, or pyridone-pyrimidyl-CH<sub>2</sub>, wherein the pyridone, phenyl, pyridyl, and pyrimidyl groups are substituted or unsubstituted;
- $Z^2 \text{ is selected from H, S(O)}_2 \text{NHR}^{3b}, C(O) \text{R}^{3b}, C(O) \text{NHR}^{3b}, C(O) \text{OR}^{3f}, S(O) \text{R}^{3f}, S(O)_2 \text{R}^{3f}, S(O$
- $R^{1a}, \text{ at each occurrence, is selected from } H, -(CR^3R^{3a})_r R^{1b}, -(CR^3R^{3a})_r CR^3R^{1b}R^{1b}, \\ -(CR^3R^{3a})_r O -(CR^3R^{3a})_r R^{1b}, -C_{2-6} \text{ alkenylene-} R^{1b}, -C_{2-6} \text{ alkynylene-} R^{1b}, \\ -(CR^3R^{3a})_r C(=NR^{1b})NR^3R^{1b}, NR^3CR^3R^{3a}R^{1c}, OCR^3R^{3a}R^{1c}, SCR^3R^{3a}R^{1c}, \\ -(CR^3R^{3a})_r C(=NR^{1b})NR^3R^{1b}, NR^3CR^3R^{3a}R^{1c}, OCR^3R^{3a}R^{1c}, SCR^3R^{3a}R^{1c}, \\ -(CR^3R^{3a})_r C(=NR^{1b})NR^3R^{1b}, NR^3C(R^3R^{3a})_r (CR^3R^{3a})_r (CR^3R^{3a})_r$
- alternatively, when two R<sup>1a</sup> 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)<sub>p</sub>, this ring being substituted with 0-2 R<sup>4b</sup> and 0-3 ring double bonds;

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- R<sup>1b</sup> is selected from H, C<sub>1-3</sub> alkyl, F, Cl, Br, I, -CN, -NO<sub>2</sub>, -CHO, (CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>OR<sup>2</sup>, NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2b</sup>, CO<sub>2</sub>R<sup>2b</sup>, OC(O)R<sup>2</sup>, (CF<sub>2</sub>)<sub>r</sub>CO<sub>2</sub>R<sup>2a</sup>, S(O)<sub>p</sub>R<sup>2b</sup>, NR<sup>2</sup>(CH<sub>2</sub>)<sub>r</sub>OR<sup>2</sup>, C(=NR<sup>2c</sup>)NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, NR<sup>2</sup>C(O)NHR<sup>2</sup>, NR<sup>2</sup>C(O)<sub>2</sub>R<sup>2a</sup>, OC(O)NR<sup>2</sup>R<sup>2a</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, C(O)NR<sup>2</sup>(CH<sub>2</sub>)<sub>r</sub>OR<sup>2</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>SO<sub>2</sub>R<sup>2</sup>, C(O)NR<sup>2</sup>SO<sub>2</sub>R<sup>2</sup>, C<sub>3-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>, provided that R<sup>1b</sup> forms other than an O-O, N-halo, N-S, or N-CN bond;
  - $R^{1c}$  is selected from H,  $CH(CH_2OR^2)_2$ ,  $C(O)R^{2c}$ ,  $C(O)NR^2R^{2a}$ ,  $S(O)R^2$ ,  $S(O)_2R^2$ , and  $SO_2NR^2R^{2a}$ ;
  - $R^{1d}$  is selected from  $C_{3-6}$  carbocycle substituted with 0-2  $R^{4b}$  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  $R^{4b}$ , provided that  $R^{1d}$  forms other than an N-S bond;
  - R<sup>2</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, C<sub>1-6</sub> alkyl, benzyl, -(CH<sub>2</sub>)<sub>r</sub>-C<sub>3-10</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and -(CH<sub>2</sub>)<sub>r</sub>-5-10 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>2a</sup>, at each occurrence, is selected from H, CF<sub>3</sub>,

  C<sub>1-6</sub> alkyl, benzyl, -(CH<sub>2</sub>)<sub>r</sub>-C<sub>3-10</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and -(CH<sub>2</sub>)<sub>r</sub>-5-10 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;

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- alternatively, R<sup>2</sup> and R<sup>2a</sup>, 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<sup>4b</sup> and consisting of: 0-1 additional heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;
- $R^{2b}$ , at each occurrence, is selected from  $CF_3$ ,  $C_{1-4}$  alkoxy substituted with 0-2  $R^{4b}$ ,  $C_{1-6}$  alkyl substituted with 0-2  $R^{4b}$ ,  $-(CH_2)_r$ - $C_{3-10}$  carbocycle substituted with 0-2  $R^{4b}$ , and  $-(CH_2)_r$ -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  $R^{4b}$ ;
- R<sup>2c</sup>, at each occurrence, is selected from CF<sub>3</sub>, OH, C<sub>1-4</sub> alkoxy, C<sub>1-6</sub> alkyl, -(CH<sub>2</sub>)<sub>r</sub>-C<sub>3-10</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and -(CH<sub>2</sub>)<sub>r</sub>-5-10 membered heterocycle containing from 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>3</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, and phenyl;
- R<sup>3a</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)<sub>3</sub>, benzyl, and phenyl;
- alternatively, R<sup>3</sup> and R<sup>3a</sup>, 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 R<sup>3</sup> and R<sup>3a</sup> are attached, and 0-1 additional heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;
- $R^{3b}$ , at each occurrence, is selected from H,  $C_{1-6}$  alkyl substituted with 0-2  $R^{1a}$ ,  $C_{2-6}$  alkenyl substituted with 0-2  $R^{1a}$ ,  $C_{2-6}$  alkynyl substituted with 0-2  $R^{1a}$ ,

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-( $C_{0-4}$  alkyl)-5-10 membered carbocycle substituted with 0-3 R<sup>1a</sup>, and -( $C_{0-4}$  alkyl)- 5-10 membered heterocycle substituted with 0-3 R<sup>1a</sup> and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;

- R<sup>3c</sup>, at each occurrence, is selected from CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>,

  CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, and phenyl;
- R<sup>3d</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>,

  CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C<sub>1-4</sub> alkyl-phenyl, and C(=O)R<sup>3c</sup>;
- R<sup>3e</sup>, at each occurrence, is selected from H, SO<sub>2</sub>NHR<sup>3</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3</sup>, C(O)R<sup>3</sup>, C(O)NHR<sup>3</sup>, C(O)OR<sup>3f</sup>, S(O)R<sup>3f</sup>, S(O)<sub>2</sub>R<sup>3f</sup>, C<sub>1-6</sub> alkyl substituted with 0-2 R<sup>1a</sup>, C<sub>2-6</sub> alkenyl substituted with 0-2 R<sup>1a</sup>, -(C<sub>0-4</sub> alkyl)-5-10 membered carbocycle substituted with 0-3 R<sup>1a</sup>, and -(C<sub>0-4</sub> alkyl)-5-10 membered heterocycle substituted with 0-3 R<sup>1a</sup> and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;
- R<sup>3f</sup>, at each occurrence, is selected from: C<sub>1-6</sub> alkyl substituted with 0-2 R<sup>1a</sup>, C<sub>2-6</sub> alkenyl substituted with 0-2 R<sup>1a</sup>, C<sub>2-6</sub> alkynyl substituted with 0-2 R<sup>1a</sup>,

  -(C<sub>0-4</sub> alkyl)-5-10 membered carbocycle substituted with 0-3 R<sup>1a</sup>, and -(C<sub>0-4</sub> alkyl)-5-10 membered heterocycle substituted with 0-3 R<sup>1a</sup> and consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>D</sub>;
- R<sup>4</sup>, at each occurrence, is selected from H, =O,  $(CR^3R^{3a})_rOR^2$ , F, Cl, Br, I, C<sub>1-4</sub> alkyl,  $(CR^3R^{3a})_rCN$ ,  $(CR^3R^{3a})_rNO_2$ ,  $(CR^3R^{3a})_rNR^2R^{2a}$ ,  $(CR^3R^{3a})_rC(O)R^{2c}$ ,  $(CR^3R^{3a})_rNR^2C(O)R^{2b}$ ,  $(CR^3R^{3a})_rC(O)NR^2R^{2a}$ ,  $(CR^3R^{3a})_rNR^2C(O)NR^2R^{2a}$ ,  $(CR^3R^{3a})_rC(=NR^2)NR^2R^{2a}$ ,  $(CR^3R^{3a})_rC(=NS(O)_2R^5)NR^2R^{2a}$ ,

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 $(CR^3R^{3a})_rNHC(=NR^2)NR^2R^{2a}, (CR^3R^{3a})_rC(O)NHC(=NR^2)NR^2R^{2a},\\ (CR^3R^{3a})_rSO_2NR^2R^{2a}, (CR^3R^{3a})_rNR^2SO_2NR^2R^{2a}, (CR^3R^{3a})_rNR^2SO_2-C_{1-4} alkyl,\\ (CR^3R^{3a})_rNR^2SO_2R^5, (CR^3R^{3a})_rS(O)_pR^{5a}, (CR^3R^{3a})_r(CF_2)_rCF_3, NHCH_2R^{1c},\\ OCH_2R^{1c}, SCH_2R^{1c}, NH(CH_2)_2(CH_2)_tR^{1b}, O(CH_2)_2(CH_2)_tR^{1b}, S(CH_2)_2(CH_2)_tR^{1b},\\ (CR^3R^{3a})_r-5-6 \text{ membered carbocycle substituted with 0-1 R^5, and a } (CR^3R^{3a})_r-5-6\\ membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)_p, and substituted with 0-1 R^5;$ 

R<sup>4a</sup>, at each occurrence, is selected from H, =O, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>OR<sup>2</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>F, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>Br, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>Cl, C<sub>1-4</sub> alkyl, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>CN, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NO<sub>2</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>C(O)R<sup>2c</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>C(O)R<sup>2b</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>C(O)NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>C(O)NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>C(O)NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>C(=NR<sup>2</sup>)NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NHC(=NR<sup>2</sup>)NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>NR<sup>2</sup>SO<sub>2</sub>Cl<sub>1-4</sub> alkyl, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>C(O)NHSO<sub>2</sub>-Cl<sub>1-4</sub> alkyl, (CR<sup>3</sup>R<sup>3a</sup>)NR<sup>2</sup>SO<sub>2</sub>R<sup>5</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>S(O)<sub>p</sub>R<sup>5a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>(CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>-5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, and a (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>-5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>5</sup>;

 $R^{4b}, \text{ at each occurrence, is selected from } H, =O, (CH_2)_rOR^3, (CH_2)_rF, (CH_2)_rCI, (CH_2)_rBr, \\ (CH_2)_rI, C_{1-4} \text{ alkyl, } (CH_2)_rCN, (CH_2)_rNO_2, (CH_2)_rNR^3R^{3a}, (CH_2)_rC(O)R^3, \\ (CH_2)_rC(O)OR^{3c}, (CH_2)_rNR^3C(O)R^{3a}, (CH_2)_r-C(O)NR^3R^{3a}, (CH_2)_rNR^3C(O)NR^3R^{3a}, \\ (CH_2)_r-C(=NR^3)NR^3R^{3a}, (CH_2)_rNR^3C(=NR^3)NR^3R^{3a}, (CH_2)_rSO_2NR^3R^{3a}, \\ (CH_2)_rNR^3SO_2NR^3R^{3a}, (CH_2)_rNR^3SO_2-C_{1-4} \text{ alkyl, } (CH_2)_rNR^3SO_2CF_3, \\ (CH_2)_rNR^3SO_2-phenyl, (CH_2)_rS(O)_pCF_3, (CH_2)_rS(O)_p-C_{1-4} \text{ alkyl, } (CH_2)_rS(O)_p-phenyl, \\ \text{and } (CH_2)_r(CF_2)_rCF_3; \\ \end{cases}$ 

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R<sup>4c</sup>, at each occurrence, is selected from H, C<sub>1-4</sub> alkyl (CR<sup>3</sup>R<sup>3a</sup>)<sub>r1</sub>OR<sup>2</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r1</sub>F, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r1</sub>Br, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r1</sub>Cl, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r1</sub>CN, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r1</sub>NO<sub>2</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r1</sub>NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>C(O)R<sup>2c</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r1</sub>NR<sup>2</sup>C(O)R<sup>2b</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>C(O)NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r1</sub>N=CHOR<sup>3</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>C(O)NH(CH<sub>2</sub>)<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r1</sub>NR<sup>2</sup>C(O)NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r1</sub>NR<sup>2</sup>C(O)NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r1</sub>NHC(=NR<sup>2</sup>)NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r1</sub>NR<sup>2</sup>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r1</sub>NR<sup>2</sup>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r1</sub>NR<sup>2</sup>SO<sub>2</sub>Cl<sub>1-4</sub> alkyl, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r1</sub>NR<sup>2</sup>SO<sub>2</sub>R<sup>5</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>S(O)<sub>p</sub>R<sup>5a</sup>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>(CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>, (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>-5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, and a (CR<sup>3</sup>R<sup>3a</sup>)<sub>r</sub>-5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>5</sup>;

R<sup>5</sup>, at each occurrence, is selected from H, C<sub>1-6</sub> alkyl, =O, (CH<sub>2</sub>)<sub>r</sub>OR<sup>3</sup>, F, Cl, Br, I, -CN, NO<sub>2</sub>, (CH<sub>2</sub>)<sub>r</sub>NR<sup>3</sup>R<sup>3a</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)R<sup>3</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)OR<sup>3c</sup>, (CH<sub>2</sub>)<sub>r</sub>NR<sup>3</sup>C(O)R<sup>3a</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)NR<sup>3</sup>R<sup>3a</sup>, (CH<sub>2</sub>)<sub>r</sub>NR<sup>3</sup>C(O)NR<sup>3</sup>R<sup>3a</sup>, (CH<sub>2</sub>)<sub>r</sub>CH(=NOR<sup>3d</sup>), (CH<sub>2</sub>)<sub>r</sub>C(=NR<sup>3</sup>)NR<sup>3</sup>R<sup>3a</sup>, (CH<sub>2</sub>)<sub>r</sub>NR<sup>3</sup>C(=NR<sup>3</sup>)NR<sup>3</sup>R<sup>3a</sup>, (CH<sub>2</sub>)<sub>r</sub>SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, (CH<sub>2</sub>)<sub>r</sub>NR<sup>3</sup>SO<sub>2</sub>CF<sub>3</sub>, (CH<sub>2</sub>)<sub>r</sub>NR<sup>3</sup>SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, (CH<sub>2</sub>)<sub>r</sub>NR<sup>3</sup>SO<sub>2</sub>CF<sub>3</sub>, (CH<sub>2</sub>)<sub>r</sub>NR<sup>3</sup>SO<sub>2</sub>-phenyl, (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>p</sub>CF<sub>3</sub>, (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>p</sub>-C<sub>1-4</sub> alkyl, (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>p</sub>-phenyl, (CF<sub>2</sub>)<sub>r</sub>CF<sub>3</sub>, phenyl substituted with 0-2 R<sup>6</sup>, naphthyl substituted with 0-2 R<sup>6</sup>, and benzyl substituted with 0-2 R<sup>6</sup>;

 $R^{5a}$ , at each occurrence, is selected from  $C_{1-6}$  alkyl,  $(CH_2)_rOR^3$ ,  $(CH_2)_rNR^3R^{3a}$ ,  $(CH_2)_rC(O)R^3$ ,  $(CH_2)_rC(O)OR^{3c}$ ,  $(CH_2)_rNR^3C(O)R^{3a}$ ,  $(CH_2)_rC(O)NR^3R^{3a}$ ,  $(CF_2)_rCF_3$ , phenyl substituted with 0-2  $R^6$ , naphthyl substituted with 0-2  $R^6$ , and benzyl substituted with 0-2  $R^6$ , provided that  $R^{5a}$  does not form a S-N or  $S(O)_p$ -C(O) bond;

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- R<sup>6</sup>, at each occurrence, is selected from H, OH,  $(CH_2)_rOR^2$ , halo,  $C_{1-4}$  alkyl, CN, NO<sub>2</sub>,  $(CH_2)_rNR^2R^{2a}$ ,  $(CH_2)_rC(O)R^{2b}$ ,  $NR^2C(O)R^{2b}$ ,  $NR^2C(O)NR^2R^{2a}$ ,  $C(=NH)NH_2$ ,  $NHC(=NH)NH_2$ ,  $SO_2NR^2R^{2a}$ ,  $NR^2SO_2NR^2R^{2a}$ , and  $NR^2SO_2C_{1-4}$  alkyl;
- R<sup>7</sup>, at each occurrence, is selected from H, OH,  $C_{1-6}$  alkyl,  $C_{1-6}$  alkyl-C(O)-,  $C_{1-6}$  alkyl-O-,  $C_{1-6}$  alkyl-OC(O)-,  $C_{1-6}$  alkyl-OC(O)-,  $C_{6-10}$  aryl-OC(O)-,  $C_{6-10}$  aryl-OC(O)-,  $C_{6-10}$  aryl-OC(O)-,  $C_{1-4}$  alkyl-OC(O)-,  $C_{1-6}$  alkyl-OC(O)-, and phenyl-OC(O)-;
- $R^8$ , at each occurrence, is selected from H,  $C_{1-6}$  alkyl, and  $(CH_2)_n$ -phenyl;
- alternatively, R<sup>7</sup> and R<sup>8</sup>, 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 N, O, and S(O)<sub>p</sub>;
- $R^9$ , at each occurrence, is selected from H,  $C_{1-6}$  alkyl, and  $(CH_2)_n$ -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;
- t, at each occurrence, is selected from 0, 1, 2, and 3; and,

#### provided that when:

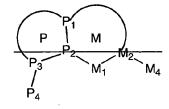
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(a) ring M is phenyl and is substituted 1,2 by  $M_4$  and  $P_4$  and  $G_1$  is present, then Z-A is other than

NHC(O)-thienyl, NHCH2-thienyl, NHC(O)-benzothienyl, and NHCH2-benzothienyl; and,

(b) B is 2-oxo-1-pyrrolidinyl and rings P-M are 1,7-dihydro-2-methyl-6H-purin-6-one, then G- $G_1$  is other then unsubstituted phenyl.

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



H

or a stereoisomer or pharmaceutically acceptable salt thereof, wherein;

ring M, including  $P_1$ ,  $P_2$ ,  $M_1$ , and  $M_2$ , is a 5, 6, or 7 membered carbocycle or a 5, 6, or 7 membered heterocycle, consisting of: carbon atoms and 1-3 heteroatoms selected from O,  $S(O)_p$ , N, and  $NZ^2$ ;

ring M is substituted with 0-2 R<sup>1n</sup> and 0-2 carbonyl groups, and there are 0-3 ring double bonds:

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 O,  $S(O)_p$ , and N;

alternatively, ring P, including  $P_1$ ,  $P_2$ , and  $P_3$ , is a 5 or 6 membered dihydro-aromatic heterocycle, consisting of: carbon atoms and 1-3 heteroatoms selected from O,  $S(O)_n$ , and N;

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ring P is substituted with 0-2 R<sup>1a</sup>;

### one of P<sub>4</sub> and M<sub>4</sub> is -Z-A-B and the other -G<sub>4</sub>-G;

G is a group of Formula IIa or 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 N, O, and S(O)<sub>D</sub>;

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 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)<sub>p</sub>, wherein the 5 membered heterocycle is substituted with 0-1 carbonyl and 1-2 R and there are 0-3 ring double bonds;

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R is selected from H,  $C_{1-4}$  alkyl, F, Cl, OH, OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH(CH<sub>3</sub>)<sub>2</sub>, CN, C(=NH)NH<sub>2</sub>, C(=NH)NHOH, C(=NH)NHOCH<sub>3</sub>, NH<sub>2</sub>, NH(C<sub>1-3</sub> alkyl), N(C<sub>1-3</sub> alkyl)<sub>2</sub>, C(=NH)NH<sub>2</sub>, CH<sub>2</sub>NH<sub>2</sub>, CH<sub>2</sub>NH(C<sub>1-3</sub> alkyl), CH<sub>2</sub>N(C<sub>1-3</sub> alkyl)<sub>2</sub>, (CR<sup>8</sup>R<sup>9</sup>)<sub>t</sub>NR<sup>7</sup>R<sup>8</sup>, C(O)NR<sup>7</sup>R<sup>8</sup>, CH<sub>2</sub>C(O)NR<sup>7</sup>R<sup>8</sup>, S(O)<sub>p</sub>NR<sup>7</sup>R<sup>8</sup>, CH<sub>2</sub>S(O)<sub>p</sub>NR<sup>7</sup>R<sup>8</sup>, SO<sub>2</sub>R<sup>3</sup>, and OCF<sub>3</sub>;

alternatively, when 2 R groups are attached to adjacent atoms, they combine to form methylenedioxy or ethylenedioxy;

A is selected from:

C<sub>5-10</sub> carbocycle substituted with 0-2 R<sup>4</sup>, and

5-10 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4</sup>;

provided that A is other than a dihydro-benzopyran;

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 N-N-N group;

provided that B is other than triazolone, quinolone, or isoquinolone, wherein the triazolone, quinolone, and isoquinolone groups are substituted or unsubstituted;

Q<sub>1</sub> is selected from C=O and SO<sub>2</sub>;

ring Q is a 4-7 membered monocyclic or tricyclic ring consisting of, in addition to the N-Q<sub>1</sub> group shown, carbon atoms and 0-2 heteroatoms selected from NR<sup>4e</sup>, O, S, S(O), and S(O)<sub>2</sub>, wherein:

0-2 double bonds are present within the ring and the ring is substituted with 0-2  $R^{4a}$ ;

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alternatively, ring Q is a 4-7 membered ring to which another ring is fused, wherein: the 4-7 membered ring consists of, in addition to the shown amide group, carbon atoms and 0-2 heteroatoms selected from  $NR^{4e}$ , O, S, S(O), and  $S(O)_2$  and 0-1 double bonds are present within the ring;

 $\frac{\text{the fusion ring is phenyl or a 5-6 membered heteroaromatic consisting of carbon atoms and 1-2 heteroatoms selected from NR^{4e}, O, and S;}{}$ 

ring Q, which includes the 4-7 membered ring and the fusion ring, is substituted with 0-3 R<sup>4n</sup>;

- X is absent or is selected from  $-(CR^2R^{2n})_{1-4}$ , -C(O)-,  $-C(O)CR^2R^{2n}$ -,  $-CR^2R^{2n}C(O)$ ,  $-S(O)_2$ -,  $-S(O)_2CR^2R^{2n}$ -,  $-CR^2R^{2n}S(O)_2$ -,  $-NR^2S(O)_2$ -,  $-NR^2CR^2R^{2n}$ -, and  $-OCR^2R^{2n}$ -;
- Z is selected from a bond, CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>O, OCH<sub>2</sub>, C(O), NH, CH<sub>2</sub>NH, NHCH<sub>2</sub>,

  CH<sub>2</sub>C(O), C(O)CH<sub>2</sub>, C(O)NH, NHC(O), NHC(O)CH<sub>2</sub>C(O)NH, S(O)<sub>2</sub>, CH<sub>2</sub>S(O)<sub>2</sub>,

  S(O)<sub>2</sub>(CH<sub>2</sub>), SO<sub>2</sub>NH, and NHSO<sub>2</sub>, provided that Z does not form a N-S, NCH<sub>2</sub>N,

  NCH<sub>2</sub>O, or NCH<sub>2</sub>S bond with either group to which it is attached;

 $Z^2 \text{ is selected from $H$, $C_{1-4}$-alkyl, phenyl, benzyl, $C(O)R^{3b}$, $S(O)R^{3f}$, and $S(O)_2R^{3f}$;}$ 

- $R^{1a}$  is selected from H, -(CH<sub>2</sub>)<sub>r</sub>-R<sup>1b</sup>, -(CH(CH<sub>3</sub>))<sub>r</sub>-R<sup>1b</sup>, -(C(CH<sub>3</sub>)<sub>2</sub>)<sub>r</sub>-R<sup>1b</sup>, NHCH<sub>2</sub>R<sup>1c</sup>, OCH<sub>2</sub>R<sup>1c</sup>, SCH<sub>2</sub>R<sup>1c</sup>, NH(CH<sub>2</sub>)<sub>2</sub>(CH<sub>2</sub>)<sub>t</sub>R<sup>1b</sup>, and O(CH<sub>2</sub>)<sub>2</sub>(CH<sub>2</sub>)<sub>t</sub>R<sup>1b</sup>, provided that R<sup>1a</sup> forms other than an N-halo, N-S, or N-CN bond;
- alternatively, when two R<sup>1a</sup> 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

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0-2 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, this ring being substituted with 0-2 R<sup>4b</sup> and 0-3 ring double bonds;

R<sup>1b</sup> is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, F, Cl, Br, I, -CN, -CHO, CF<sub>3</sub>, OR<sup>2</sup>, NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2b</sup>, CO<sub>2</sub>R<sup>2b</sup>, OC(O)R<sup>2</sup>, CO<sub>2</sub>R<sup>2a</sup>, S(O)<sub>p</sub>R<sup>2</sup>, NR<sup>2</sup>(CH<sub>2</sub>)<sub>r</sub>OR<sup>2</sup>, NR<sup>2</sup>C(O)NHR<sup>2</sup>, NR<sup>2</sup>C(O)<sub>2</sub>R<sup>2a</sup>, OC(O)NR<sup>2</sup>R<sup>2a</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>SO<sub>2</sub>R<sup>2</sup>, C<sub>5-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>, provided that R<sup>1b</sup> forms other than an O-O, N-halo, N-S, or N-CN bond;

- $R^{1c}$  is selected from H,  $CH(CH_2OR^2)_2$ ,  $C(O)R^{2c}$ ,  $C(O)NR^2R^{2a}$ ,  $S(O)R^2$ ,  $S(O)_2R^2$ , and  $SO_2NR^2R^{2a}$ ;
- R<sup>2</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, C<sub>5-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, a C<sub>5-6</sub> carbocyclic-CH<sub>2</sub>-group substituted with 0-2 R<sup>4b</sup>, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>2a</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, C<sub>5-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;

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- alternatively, R<sup>2</sup> and R<sup>2a</sup>, 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<sup>4b</sup> and consisting of: 0-1 additional heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;
- R<sup>2b</sup>, at each occurrence, is selected from CF<sub>3</sub>, C<sub>1-4</sub> alkoxy, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>(CH<sub>3</sub>)<sub>2</sub>, CH<sub>(CH<sub>3</sub>)</sub>CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, C<sub>5-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;</sub></sub>
- R<sup>2c</sup>, at each occurrence, is selected from CF<sub>3</sub>, OH, C<sub>1-4</sub> alkoxy, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, benzyl, C<sub>5-6</sub> carbocycle substituted with 0-2 R<sup>4b</sup>, and 5-6 membered heterocycle containing from 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>3</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, and phenyl;
- R<sup>3a</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, and phenyl;
- alternatively, R<sup>3</sup> and R<sup>3a</sup>, 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<sup>3</sup> and R<sup>3a</sup> are attached;

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R<sup>3c</sup>, at each occurrence, is selected from CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, and phenyl;

- R<sup>3d</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>-phenyl, CH<sub>2</sub>CH<sub>2</sub>-phenyl, and C(=O)R<sup>3c</sup>;
- R<sup>4</sup>, at each occurrence, is selected from H, =O, OR<sup>2</sup>, CH<sub>2</sub>OR<sup>2</sup>, (CH<sub>2</sub>)<sub>2</sub>OR<sup>2</sup>, F, Cl, Br, I, C<sub>1-4</sub> alkyl, -CN, NO<sub>2</sub>, NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, (CH<sub>2</sub>)<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2c</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, S(O)<sub>p</sub>R<sup>5a</sup>, CF<sub>3</sub>, CF<sub>2</sub>CF<sub>3</sub>, 5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, 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)<sub>p</sub>, and substituted with 0-1 R<sup>5</sup>;
- R<sup>4a</sup>, at each occurrence, is selected from H, =O, CH<sub>2</sub>OR<sup>2</sup>, OR<sup>2</sup>, CH<sub>2</sub>F, F, CH<sub>2</sub>Br, Br, CH<sub>2</sub>Cl, Cl, C<sub>1-4</sub> alkyl, CH<sub>2</sub>-CN, -CN, CH<sub>2</sub>NO<sub>2</sub>, NO<sub>2</sub>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>-C(O)R<sup>2c</sup>, C(O)R<sup>2c</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, (CH<sub>2</sub>)<sub>r</sub>C(O)NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>C(O)NR<sup>2</sup>R<sup>2a</sup>, (CH<sub>2</sub>)<sub>r</sub>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, NR<sup>2</sup>SO<sub>2</sub>R<sup>5</sup>, (CH<sub>2</sub>)<sub>r</sub>S(O)<sub>p</sub>R<sup>5a</sup>, CH<sub>2</sub>CF<sub>3</sub>, CF<sub>3</sub>, CH<sub>2</sub>-5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, 5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, and a CH<sub>2</sub>-5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>5</sup>, and 5-6 membered heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>5</sup>;
- R<sup>4b</sup>, at each occurrence, is selected from H, =O, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, -CN, NO<sub>2</sub>, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, CH<sub>2</sub>-C(O)R<sup>3</sup>, C(O)OR<sup>3c</sup>,

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 $\begin{array}{l} CH_2C(O)OR^{3c},\ NR^3C(O)R^{3a},\ CH_2NR^3C(O)R^{3a},\ C(O)NR^3R^{3a},\ CH_2C(O)NR^3R^{3a},\ NR^3C(O)NR^3R^{3a},\ CH_2NR^3C(O)NR^3R^{3a},\ C(=NR^3)NR^3R^{3a},\ CH_2C(=NR^3)NR^3R^{3a},\ NR^3C(=NR^3)NR^3R^{3a},\ CH_2NR^3C(=NR^3)NR^3R^{3a},\ SO_2NR^3R^{3a},\ CH_2SO_2NR^3R^{3a},\ NR^3SO_2NR^3R^{3a},\ CH_2NR^3SO_2NR^3R^{3a},\ NR^3SO_2-C_{1-4}\ alkyl,\ CH_2NR^3SO_2-C_{1-4}\ alkyl,\ NR^3SO_2CF_3,\ CH_2NR^3SO_2CF_3,\ NR^3SO_2-phenyl,\ CH_2NR^3SO_2-phenyl,\ S(O)_pCF_3,\ CH_2S(O)_pCF_3,\ S(O)_p-C_{1-4}\ alkyl,\ CH_2S(O)_p-C_{1-4}\ alkyl,\ S(O)_p-phenyl,\ CH_2S(O)_p-phenyl,\ CH_2S(O)_p-phenyl,\ CH_2S(O)_p-phenyl,\ CH_2S(O)_p-phenyl,\ CF_3,\ and\ CH_2-CF_3; \end{array}$ 

R<sup>4c</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>,

CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, CH<sub>2</sub>OR<sup>2</sup>, CH<sub>2</sub>F,

CH<sub>2</sub>Br, CH<sub>2</sub>Cl, CH<sub>2</sub>CN, CH<sub>2</sub>NO<sub>2</sub>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2c</sup>, CH<sub>2</sub>C(O)R<sup>2c</sup>,

CH<sub>2</sub>NR<sup>2</sup>C(O)R<sup>2b</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>C(O)NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>C(O)NR<sup>2</sup>R<sup>2a</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>,

CH<sub>2</sub>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, C(O)NHSO<sub>2</sub>-C<sub>1-4</sub>

alkyl, CH<sub>2</sub>C(O)NHSO<sub>2</sub>-C<sub>1-4</sub> alkyl, CH<sub>2</sub>NR<sup>2</sup>SO<sub>2</sub>R<sup>5</sup>, S(O)<sub>p</sub>R<sup>5a</sup>, CH<sub>2</sub>S(O)<sub>p</sub>R<sup>5a</sup>, CF<sub>3</sub>,

CH<sub>2</sub>CF<sub>3</sub>, 5-6 membered carbocycle substituted with 0-1 R<sup>5</sup>, CH<sub>2</sub>-5-6 membered

carbocycle substituted with 0-1 R<sup>5</sup>, 5-6 membered heterocycle consisting of: carbon

atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and

substituted with 0-1 R<sup>5</sup>, and a CH<sub>2</sub>-5-6 membered heterocycle consisting of: carbon

atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and

substituted with

0-1 R<sup>5</sup>:

R<sup>5</sup>, at each occurrence, is selected from H, =O, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, -CN, NO<sub>2</sub>, NR<sup>3</sup>R<sup>3</sup>a, CH<sub>2</sub>NR<sup>3</sup>R<sup>3</sup>a, C(O)R<sup>3</sup>, CH<sub>2</sub>C(O)R<sup>3</sup>, C(O)OR<sup>3</sup>c, CH<sub>2</sub>C(O)OR<sup>3</sup>c, NR<sup>3</sup>C(O)R<sup>3</sup>a, C(O)NR<sup>3</sup>R<sup>3</sup>a, NR<sup>3</sup>C(O)NR<sup>3</sup>R<sup>3</sup>a, CH(=NOR<sup>3</sup>d), C(=NR<sup>3</sup>)NR<sup>3</sup>R<sup>3</sup>a, NR<sup>3</sup>C(=NR<sup>3</sup>)NR<sup>3</sup>R<sup>3</sup>a, NR<sup>3</sup>SO<sub>2</sub>NR<sup>3</sup>R<sup>3</sup>a, NR<sup>3</sup>SO<sub>2</sub>CF<sub>3</sub>, NR<sup>3</sup>C(=NR<sup>3</sup>)NR<sup>3</sup>R<sup>3</sup>a, SO<sub>2</sub>NR<sup>3</sup>R<sup>3</sup>a, NR<sup>3</sup>SO<sub>2</sub>NR<sup>3</sup>R<sup>3</sup>a, NR<sup>3</sup>SO<sub>2</sub>CF<sub>3</sub>,

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 $NR^3SO_2$ -phenyl,  $S(O)_pCF_3$ ,  $S(O)_p-C_{1-4}$  alkyl,  $S(O)_p$ -phenyl,  $CF_3$ , phenyl substituted with 0-2  $R^6$ , naphthyl substituted with 0-2  $R^6$ , and benzyl substituted with 0-2  $R^6$ ; and,

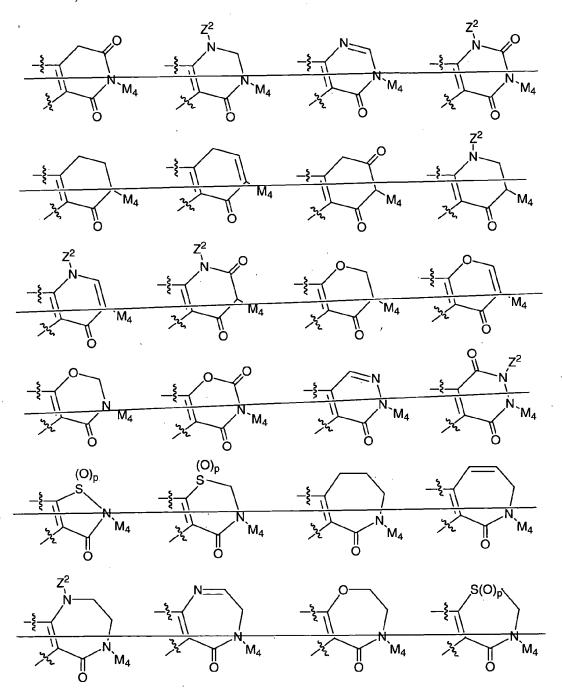
 $R^{6}, \text{ at each occurrence, is selected from H, OH, OR}^{2}, F, Cl, CH_{3}, CH_{2}CH_{3}, CH_{2}CH_{2}CH_{3}, \\ CH(CH_{3})_{2}, CH_{2}CH_{2}CH_{2}CH_{3}, CH_{2}CH(CH_{3})_{2}, CH(CH_{3})CH_{2}CH_{3}, C(CH_{3})_{3}, CN, NO_{2}, \\ NR^{2}R^{2a}, CH_{2}NR^{2}R^{2a}, C(O)R^{2b}, CH_{2}C(O)R^{2b}, NR^{2}C(O)R^{2b}, NR^{2}C(O)NR^{2}R^{2a}, \\ C(=NH)NH_{2}, NHC(=NH)NH_{2}, SO_{2}NR^{2}R^{2a}, NR^{2}SO_{2}NR^{2}R^{2a}, \text{ and } NR^{2}SO_{2}C_{1-4} \text{ alkyl.}$ 

Claim 3. (Currently Amended) A compound according to Claim 2, wherein;

## ring M is substituted with 0-2 R<sup>1a</sup> and is selected from the group:

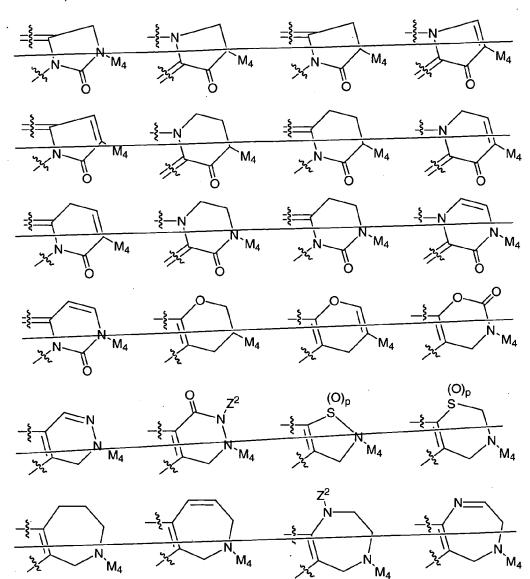
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# Amendment



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## Amendment



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# ring P, including $P_1$ , $P_2$ , $P_3$ , and $P_4$ is selected from group:

Amendment

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# Amendment

# one of P<sub>4</sub> and M<sub>4</sub> is -Z-A-B and the other -G<sub>1</sub>-G;

G is selected from the group:

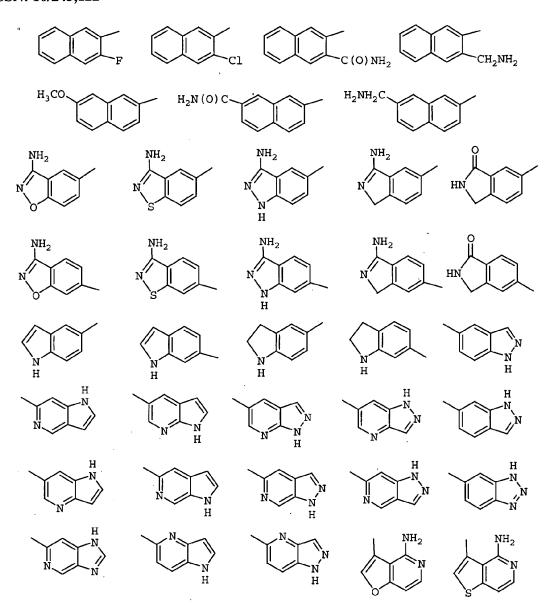
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### **Amendment**

$$\begin{array}{c} \operatorname{MH_2} \\ \operatorname{MH_2} \\ \operatorname{NH_2} \\ \operatorname{NH_2} \\ \operatorname{NH_2} \\ \operatorname{C1} \\ \operatorname{NH_2} \\ \operatorname{SO_2CH_3} \\ \operatorname{NH_2} \\ \operatorname{SO_2NH_2} \\ \operatorname{NH_2} \\ \operatorname{SO_2CH_3} \\ \operatorname{NH_2} \\ \operatorname{SO_2CH_3} \\ \operatorname{NH_2} \\ \operatorname{SO_2NH_2} \\ \operatorname{NH_2} \\ \operatorname{SO_2CH_3} \\ \operatorname{NH_2} \\ \operatorname{N$$

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# Amendment



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### **Amendment**

 $G_1$  is absent or is selected from  $(CR^3R^{3a})_{1-3}$ ,  $(CR^3R^{3a})_uC(O)(CR^3R^{3a})_w$ ,

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

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A is selected from one of the following carbocyclic and heterocyclic groups which are phenyl substituted with 0-2 R<sup>4</sup>;

phenyl, piperidinyl, piperazinyl, pyridyl, pyrimidyl, furanyl, morpholinyl, thienyl, pyrrolyl, pyrrolidinyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl, pyrazolyl, imidazolyl, 1,2,3-oxadiazolyl, 1,2,4-oxadiazolyl, 1,2,5-oxadiazolyl, 1,3,4-oxadiazolyl, 1,2,3-thiadiazolyl, 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, benzothiofuranyl, indolinyl, indolyl, benzimidazolyl, benzoxazolyl, benzthiazolyl, indazolyl, benzisoxazolyl, benzisothiazolyl, and isoindazolyl;

B is ; 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, quinolone, and isoquinolone groups are substituted or unsubstituted;

Q<sub>1</sub> is selected from C=O and SO<sub>2</sub>;

ring Q is a 5-7 membered ring consisting of, in addition to the N-Q $_1$ -group shown, carbon atoms and 0-2 heteroatoms selected from NR<sup>4e</sup>, O, S, S(O), and S(O) $_2$ , wherein: 0-2 double bonds are present within the ring and the ring is substituted with 0-2 R<sup>4a</sup>:

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,
carbon atoms and 0-2 heteroatoms selected from NR<sup>4e</sup>, O, S, S(O), and S(O)<sub>2</sub>, and
0-1 double bonds are present within the ring;

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the fusion ring is phenyl or a 5-6 membered heteroaromatic consisting of carbon atoms and 1-2 heteroatoms selected from NR<sup>4e</sup>, O, and S; ring Q, which includes the 5-7 membered ring and the fusion ring, is substituted with 0-3 R<sup>4a</sup>;

- R<sup>1a</sup> is selected from H, R<sup>1b</sup>, CH(CH<sub>3</sub>)R<sup>1b</sup>, C(CH<sub>3</sub>)<sub>2</sub>R<sup>1b</sup>, CH<sub>2</sub>R<sup>1b</sup>, and CH<sub>2</sub>CH<sub>2</sub>R<sup>1b</sup>, provided that R<sup>1a</sup> forms other than an N-halo, N-S, or N-CN bond;
- alternatively, when two R<sup>1a</sup> 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)<sub>p</sub>, this ring being substituted with 0-2 R<sup>4b</sup> and 0-3 ring double bonds;
- R<sup>1b</sup> is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, F, Cl, Br, -CN, -CHO, CF<sub>3</sub>, OR<sup>2</sup>, NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2b</sup>, CO<sub>2</sub>R<sup>2b</sup>, OC(O)R<sup>2</sup>, CO<sub>2</sub>R<sup>2a</sup>, S(O)<sub>p</sub>R<sup>2</sup>, NR<sup>2</sup>(CH<sub>2</sub>)<sub>r</sub>OR<sup>2</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>SO<sub>2</sub>R<sup>2</sup>, phenyl substituted with 0-2 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>, provided that R<sup>1b</sup> forms other than an O-O, N-halo, N-S, or N-CN bond;
- R<sup>2</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, phenyl substituted with 0-2 R<sup>4b</sup>, a benzyl substituted with 0-2 R<sup>4b</sup>, 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)<sub>D</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>2a</sup>, at each occurrence, is selected from H, CF<sub>3</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with 0-2 R<sup>4b</sup>, and 5-6 membered aromatic heterocycle

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consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of
 N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;

- alternatively, R<sup>2</sup> and R<sup>2a</sup>, 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<sup>4b</sup> and consisting of: 0-1 additional heteroatoms selected from the group consisting of N, O, and S(O)<sub>D</sub>;
- R<sup>2b</sup>, at each occurrence, is selected from CF<sub>3</sub>, C<sub>1-4</sub> alkoxy, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with 0-2 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>2c</sup>, at each occurrence, is selected from CF<sub>3</sub>, OH, OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>,
  OCH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with
  0-2 R<sup>4b</sup>, and 5-6 membered aromatic heterocycle containing from 1-4 heteroatoms
  selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>;
- R<sup>4</sup>, at each occurrence, is selected from H, CH<sub>2</sub>OR<sup>2</sup>, (CH<sub>2</sub>)<sub>2</sub>OR<sup>2</sup>, OR<sup>2</sup>, F, Cl, Br, I, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, -CN, NO<sub>2</sub>, NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, (CH<sub>2</sub>)<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2c</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, CF<sub>3</sub>, and CF<sub>2</sub>CF<sub>3</sub>;
- $R^{4a}$ , at each occurrence, is selected from H, =O,  $CH_2OR^2$ ,  $OR^2$ , F, Br, Cl,  $CH_3$ ,  $CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH_2CH_3$ ,  $CH_2CH_3$ ,  $CH_3$ ,  $CH_$

- $R^{4b}, \text{ at each occurrence, is selected from } H, =O, OR^3, CH_2OR^3, F, Cl, CH_3, CH_2CH_3, \\ CH_2CH_2CH_3, CH(CH_3)_2, -CN, NO_2, NR^3R^{3a}, CH_2NR^3R^{3a}, C(O)R^3, CH_2-C(O)R^3, \\ C(O)OR^{3c}, CH_2-C(O)OR^{3c}, NR^3C(O)R^{3a}, CH_2NR^3C(O)R^{3a}, C(O)NR^3R^{3a}, CH_2-C(O)NR^3R^{3a}, SO_2NR^3R^{3a}, CH_2SO_2NR^3R^{3a}, \\ NR^3SO_2-C_{1-4} \text{ alkyl}, CH_2NR^3SO_2-C_{1-4} \text{ alkyl}, NR^3SO_2-phenyl, \\ CH_2NR^3SO_2-phenyl, S(O)_pCF_3, CH_2S(O)_pCF_3, \\ S(O)_p-C_{1-4} \text{ alkyl}, CH_2S(O)_p-C_{1-4} \text{ alkyl}, S(O)_p-phenyl, CH_2S(O)_p-phenyl, and CF_3; \\ S(O)_p-C_{1-4} \text{ alkyl}, CH_2S(O)_p-C_{1-4} \text{ alkyl}, S(O)_p-phenyl, CH_2S(O)_p-phenyl, and CF_3; \\ S(O)_p-C_{1-4} \text{ alkyl}, CH_2S(O)_p-C_{1-4} \text{ alkyl}, S(O)_p-phenyl, CH_2S(O)_p-phenyl, and CF_3; \\ S(O)_p-C_{1-4} \text{ alkyl}, CH_2S(O)_p-C_{1-4} \text{ alkyl}, S(O)_p-phenyl, CH_2S(O)_p-phenyl, and CF_3; \\ S(O)_p-C_{1-4} \text{ alkyl}, CH_2S(O)_p-C_{1-4} \text{ alkyl}, S(O)_p-phenyl, CH_2S(O)_p-phenyl, and CF_3; \\ S(O)_p-C_{1-4} \text{ alkyl}, CH_2S(O)_p-C_{1-4} \text{ alkyl}, S(O)_p-phenyl, CH_2S(O)_p-phenyl, CH_2S(O)_p-phen$
- R<sup>4c</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, C(CH<sub>3</sub>)<sub>3</sub>, CH<sub>2</sub>OR<sup>2</sup>, CH<sub>2</sub>F, CH<sub>2</sub>Br, CH<sub>2</sub>Cl, CH<sub>2</sub>CN, CH<sub>2</sub>NO<sub>2</sub>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2c</sup>, CH<sub>2</sub>C(O)R<sup>2c</sup>, CH<sub>2</sub>C(O)R<sup>2b</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>C(O)NR<sup>2</sup>R<sup>2a</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, S(O)<sub>p</sub>R<sup>5a</sup>, CH<sub>2</sub>S(O)<sub>p</sub>R<sup>5a</sup>, CF<sub>3</sub>, phenyl substituted with 0-1 R<sup>5</sup>, and benzyl substituted with 0-1 R<sup>5</sup>;
- R<sup>5</sup>, at each occurrence, is selected from H, =O, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, -CN, NO<sub>2</sub>, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, CH<sub>2</sub>C(O)R<sup>3</sup>, C(O)OR<sup>3c</sup>, CH<sub>2</sub>C(O)OR<sup>3c</sup>, NR<sup>3</sup>C(O)R<sup>3a</sup>, C(O)NR<sup>3</sup>R<sup>3a</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, NR<sup>3</sup>SO<sub>2</sub>CF<sub>3</sub>, NR<sup>3</sup>SO<sub>2</sub>-phenyl, S(O)<sub>p</sub>CF<sub>3</sub>, S(O)<sub>p</sub>-C<sub>1-4</sub> alkyl, S(O)<sub>p</sub>-phenyl, CF<sub>3</sub>, phenyl substituted with 0-2 R<sup>6</sup>, naphthyl substituted with 0-2 R<sup>6</sup>, and benzyl substituted with 0-2 R<sup>6</sup>; and,
- $R^6$ , at each occurrence, is selected from H, OH, OR<sup>2</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, -CN, NO<sub>2</sub>, NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2b</sup>, CH<sub>2</sub>C(O)R<sup>2b</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, and NR<sup>2</sup>SO<sub>2</sub>C<sub>1-4</sub> alkyl.

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Claim 4 (Currently Amended) A compound according to Claim 3, wherein;

# ring M is substituted with 0-2 $R^{1\alpha}$ and is selected from the group:

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# Amendment

ring P, including  $P_1$ ,  $P_2$ ,  $P_3$ , and  $P_4$  is selected from group:

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# one of P<sub>4</sub> and M<sub>4</sub> is -A-B and the other -G;

G is selected from the group:

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> C (NOH) NH<sub>2</sub>  $H_2NH_2C$ H<sub>2</sub>N(O)C-

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G<sub>1</sub> is absent or is selected from CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>O, OCH<sub>2</sub>, NH, CH<sub>2</sub>NH, NHCH<sub>2</sub>, CH<sub>2</sub>C(O), C(O)CH<sub>2</sub>, C(O)NH, NHC(O), CH<sub>2</sub>S(O)<sub>2</sub>, S(O)<sub>2</sub>(CH<sub>2</sub>), SO<sub>2</sub>NH, and NHSO<sub>2</sub>, provided that G<sub>1</sub> does not form a N-S, NCH<sub>2</sub>N, NCH<sub>2</sub>O, or NCH<sub>2</sub>S bond with either group to which it is attached;

A is selected from phenyl, pyridyl, and pyrimidyl, and is substituted with 0-2 R4;

B is ; 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, quinolone, and isoquinolone groups are substituted or unsubstituted;

Q<sub>1</sub> is selected from C=O and SO<sub>2</sub>;

ring Q is a 6-7 membered ring consisting of, in addition to the N-Q $_1$ -group shown, carbon atoms and 0-1 heteroatoms selected from NR<sup>4e</sup>, O, S, S(O), and S(O) $_2$ , wherein: 0-2 double bonds are present within the ring and the ring is substituted with 0-2 R<sup>4a</sup>;

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,
carbon atoms and 0-1 heteroatoms selected from NR<sup>4e</sup>, O, S, S(O), and S(O)<sub>2</sub>, 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  $0-2R^{4n}$ ;

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R<sup>1a</sup> is selected from H, R<sup>1b</sup>, C(CH<sub>3</sub>)<sub>2</sub>R<sup>1b</sup>, and CH<sub>2</sub>R<sup>1b</sup>, provided that R<sup>1a</sup> forms other than an N-halo, N-S, or N-CN bond;

- R<sup>1b</sup> is selected from CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, F, Cl, Br, -CN, CF<sub>3</sub>, OR<sup>2</sup>, NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2b</sup>, CO<sub>2</sub>R<sup>2b</sup>, CO<sub>2</sub>R<sup>2a</sup>, S(O)<sub>p</sub>R<sup>2</sup>, C(O)NR<sup>2</sup>R<sup>2a</sup>, SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, NR<sup>2</sup>SO<sub>2</sub>R<sup>2</sup>, 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)<sub>p</sub>, and substituted with 0-2 R<sup>4b</sup>, provided that R<sup>1b</sup> forms other than an O-O, N-halo, N-S, or N-CN bond;
- R<sup>2</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, phenyl substituted with 0-1 R<sup>4b</sup>, benzyl substituted with 0-1 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-1 R<sup>4b</sup>;
- R<sup>2a</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with 0-1 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-1 R<sup>4b</sup>;
- alternatively, R<sup>2</sup> and R<sup>2a</sup>, 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<sup>4b</sup> and consisting of: 0-1 additional heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>;
- R<sup>2b</sup>, at each occurrence, is selected from OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, OCH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with 0-1 R<sup>4b</sup>, 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)<sub>p</sub>, and substituted with 0-1 R<sup>4b</sup>;

- R<sup>2c</sup>, at each occurrence, is selected from OH, OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, OCH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, OCH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, benzyl, phenyl substituted with 0-1 R<sup>4b</sup>, and 5-6 membered aromatic heterocycle containing from 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>4b</sup>;
- R<sup>4</sup>, at each occurrence, is selected from OH, OR<sup>2</sup>, CH<sub>2</sub>OR<sup>2</sup>, (CH<sub>2</sub>)<sub>2</sub>OR<sup>2</sup>, F, Br, Cl, I, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>3</sub>, and CF<sub>2</sub>CF<sub>3</sub>;
- $R^{4a}$ , at each occurrence, is selected from H, =O,  $CH_2OR^2$ ,  $OR^2$ , F, Br, Cl,  $CH_3$ ,  $CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH_2CH_2CH_3$ ,  $CH_2CH_3$ ,  $CH_2CH_3$ ,  $CH_3$ ,  $CH_3$ ,  $CH_2CH_3$ ,  $CH_3$ ,
- $R^{4b}$ , at each occurrence, is selected from H, =O, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, -CN, NO<sub>2</sub>, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, C(O)OR<sup>3c</sup>, NR<sup>3</sup>C(O)R<sup>3a</sup>, C(O)NR<sup>3</sup>R<sup>3a</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, NR<sup>3</sup>SO<sub>2</sub>-phenyl, S(O)<sub>p</sub>-C<sub>1-4</sub> alkyl, S(O)<sub>p</sub>-phenyl, and CF<sub>3</sub>;
- R<sup>4c</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, phenyl substituted with 0-1 R<sup>5</sup>, and benzyl substituted with 0-1 R<sup>5</sup>;
- R<sup>5</sup>, at each occurrence, is selected from H, =O, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, -CN, NO<sub>2</sub>, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, C(O)OR<sup>3c</sup>, NR<sup>3</sup>C(O)R<sup>3a</sup>, C(O)NR<sup>3</sup>R<sup>3a</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>-C<sub>1-4</sub> alkyl, NR<sup>3</sup>SO<sub>2</sub>-phenyl, S(O)<sub>p</sub>-C<sub>1-4</sub> alkyl,

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 $S(O)_p$ -phenyl,  $CF_3$ , phenyl substituted with 0-2  $R^6$ , naphthyl substituted with 0-2  $R^6$ , and benzyl substituted with 0-2  $R^6$ ; and,

 $R^6$ , at each occurrence, is selected from H, OH, OR<sup>2</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, -CN, NO<sub>2</sub>, NR<sup>2</sup>R<sup>2a</sup>, CH<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>, C(O)R<sup>2b</sup>, CH<sub>2</sub>C(O)R<sup>2b</sup>, NR<sup>2</sup>C(O)R<sup>2b</sup>, and SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>.

Claim 5. (Currently Amended) A compound according to Claim 4, wherein;

### ring M is substituted with 0-1 R<sup>1a</sup> and is selected from the group:

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# ring P, including $P_1$ , $P_2$ , $P_3$ , and $P_4$ is selected from group:

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### one of P4 and M4 is -A-B and the other -G;

# G is selected from:

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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

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2-methoxyphenyl;

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

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- R¹a is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>F, CH<sub>2</sub>Cl, Br, CH<sub>2</sub>Br, -CN, CH<sub>2</sub>CN, CF<sub>3</sub>, CH<sub>2</sub>CF<sub>3</sub>, OCH<sub>3</sub>, CH<sub>2</sub>OH, C(CH<sub>3</sub>)<sub>2</sub>OH, CH<sub>2</sub>OCH<sub>3</sub>, NH<sub>2</sub>, CH<sub>2</sub>NH<sub>2</sub>, NHCH<sub>3</sub>, CH<sub>2</sub>NHCH<sub>3</sub>, N(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>, CO<sub>2</sub>H, COCH<sub>3</sub>, CO<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CO<sub>2</sub>CH<sub>3</sub>, SCH<sub>3</sub>, CH<sub>2</sub>SCH<sub>3</sub>, S(O)CH<sub>3</sub>, CH<sub>2</sub>S(O)CH<sub>3</sub>, S(O)<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>S(O)<sub>2</sub>CH<sub>3</sub>, C(O)NH<sub>2</sub>, CH<sub>2</sub>C(O)NH<sub>2</sub>, SO<sub>2</sub>NH<sub>2</sub>, CH<sub>2</sub>SO<sub>2</sub>NH<sub>2</sub>, NHSO<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>NHSO<sub>2</sub>CH<sub>3</sub>, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyridin-2-yl-N-oxide, pyridin-3-yl-N-oxide, pyridin-4-yl-N-oxide, imidazol-1-yl, CH<sub>2</sub>-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, CH<sub>2</sub>-1,2,3,4-tetrazol-1-yl, and CH<sub>2</sub>-1,2,3,4-tetrazol-5-yl, provided that R¹a forms other than an N-halo, N-S, or N-CN bond;
- R<sup>2</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, phenyl substituted with 0-1 R<sup>4b</sup>, benzyl substituted with 0-1 R<sup>4b</sup>, and 5 membered aromatic heterocycle consisting of: carbon atoms and 1-4 heteroatoms selected from the group consisting of N, O, and S(O)<sub>p</sub>, and substituted with 0-1 R<sup>4b</sup>;

R<sup>2a</sup>, at each occurrence, is selected from H, CH<sub>3</sub>, and CH<sub>2</sub>CH<sub>3</sub>;

alternatively,  $R^2$  and  $R^{2a}$ , 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  $R^{4b}$  and consisting of: 0-1 additional heteroatoms selected from the group consisting of N, O, and  $S(O)_D$ ;

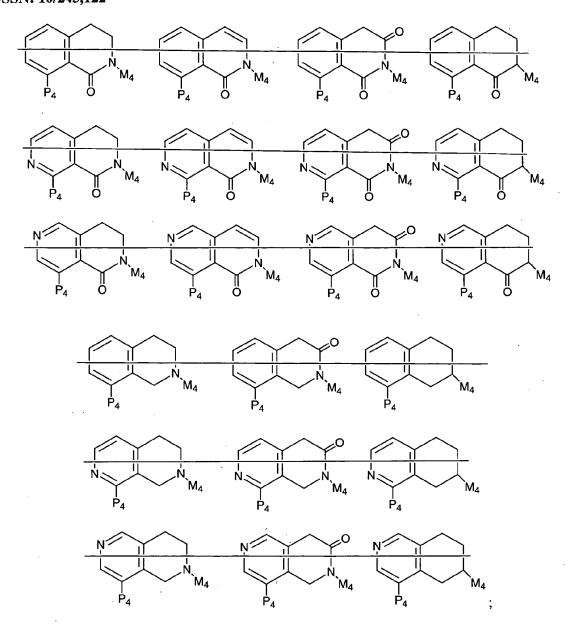
 $R^{2b}$ , at each occurrence, is selected from OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, CH<sub>3</sub>, and CH<sub>2</sub>CH<sub>3</sub>;

R<sup>2c</sup>, at each occurrence, is selected from OH, OCH<sub>3</sub>, OCH<sub>2</sub>CH<sub>3</sub>, CH<sub>3</sub>, and CH<sub>2</sub>CH<sub>3</sub>;

- R<sup>4a</sup>, at each occurrence, is selected from H, =O, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH(CH<sub>3</sub>)<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>3</sub>, CH<sub>2</sub>CH(CH<sub>3</sub>)<sub>2</sub>, CH(CH<sub>3</sub>)CH<sub>2</sub>CH<sub>3</sub>, and C(CH<sub>3</sub>)<sub>3</sub>;
- $R^{4b}$ , at each occurrence, is selected from H, =O, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, C(O)OR<sup>3c</sup>, NR<sup>3</sup>C(O)R<sup>3a</sup>, C(O)NR<sup>3</sup>R<sup>3a</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>-phenyl, S(O)<sub>2</sub>CH<sub>3</sub>, S(O)<sub>2</sub>-phenyl, and CF<sub>3</sub>;
- R<sup>5</sup>, at each occurrence, is selected from H, =O, CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub>, OR<sup>3</sup>, CH<sub>2</sub>OR<sup>3</sup>, F, Cl, NR<sup>3</sup>R<sup>3a</sup>, CH<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, C(O)R<sup>3</sup>, C(O)OR<sup>3c</sup>, NR<sup>3</sup>C(O)R<sup>3a</sup>, C(O)NR<sup>3</sup>R<sup>3a</sup>, SO<sub>2</sub>NR<sup>3</sup>R<sup>3a</sup>, NR<sup>3</sup>SO<sub>2</sub>-Cl<sub>1-4</sub> alkyl, NR<sup>3</sup>SO<sub>2</sub>-phenyl, S(O)<sub>2</sub>-CH<sub>3</sub>, S(O)<sub>2</sub>-phenyl, CF<sub>3</sub>, phenyl substituted with 0-2 R<sup>6</sup>, naphthyl substituted with 0-2 R<sup>6</sup>, and benzyl substituted with 0-2 R<sup>6</sup>; and,
- $R^6$ , at each occurrence, is selected from H, OH,  $OR^2$ , F, Cl,  $CH_3$ ,  $CH_2CH_3$ ,  $NR^2R^{2a}$ ,  $CH_2NR^2R^{2a}$ ,  $C(O)R^{2b}$ ,  $CH_2C(O)R^{2b}$ ,  $NR^2C(O)R^{2b}$ , and  $SO_2NR^2R^{2a}$ .
- Claim 6. (Currently Amended) A compound according to Claim 5, wherein the compound is selected from:

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P<sub>4</sub> is -G;

# $M_4$ -is-A-B;

G is selected from:

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and,

### A-B is selected from:

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

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 $P_4$  is -G;

M<sub>4</sub>-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-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;

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- 1-[3-(aminomethyl)-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-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-one;
- 1-(4-methoxyphenyl)-6-[4-(2-oxohexahydro-1*H*-azepin-1-yl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7*H*-pyrazolo[3,4-c]pyridin-7-one;
- 1-(4-methoxyphenyl)-6-[4-(2-oxo-1-piperazinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7*H*-pyrazolo[3,4-c]pyridin-7-one;
- 1-(4-methoxyphenyl)-6-[4-(2-oxo-1-imidazolidinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7*H*-pyrazolo[3,4-c]pyridin-7-one;
- 1-(4-methoxyphenyl)-6-[4-(2-oxotetrahydro-1(2H)-pyrimidinyl)phenyl]-3-(trifluoromethyl)1,4,5,6-tetrahydro-7H-pyrazolo[3,4-c]pyridin-7-one;
- 6-[4-(3-ethyl-2-oxo-2,3-dihydro-1*H*-benzimidazol-1-yl)phenyl]-1-(4-methoxyphenyl)-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-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*-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-tetrahydro-7*H*-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-7*H*-pyrazolo[3,4-*c*]pyridin-7-one;
- 1-(4-methoxyphenyl)-7-oxo-6-[5-(2-oxo-1-piperidinyl)-2-pyridinyl]-4,5,6,7-tetrahydro-1*H*-pyrazolo[3,4-c]pyridine-3-carboxamide;
- 1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-1(2*H*)-pyridinyl)phenyl]-4,5,6,7-tetrahydro-1*H*-pyrazolo[3,4-*c*]pyridine-3-carboxamide;

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

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- 1-(3-amino-1,2-benzisoxazol-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-(2,3-dihydro-1*H*-indol-6-yl)-6-[4-(2-oxo-1(2*H*)-pyridinyl)phenyl]-3-(trifluoromethyl)-1,4,5,6-tetrahydro-7*H*-pyrazolo[3,4-*c*]pyridin-7-one;
- 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-(2,3-dihydro-1*H*-isoindol-5-yl)-6-[4-(2-oxo-2*H*-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(2*H*)-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(2*H*)-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(2*H*)-pyridinyl)phenyl]-4,5,6,7-tetrahydro-1*H*-pyrazolo[3,4-*c*]pyridine-3-carboxamide;
- $N-(\{1-(4-\text{methoxyphenyl})-7-\text{oxo}-6-[4-(2-\text{oxo}-1(2H)-\text{pyridinyl})\text{phenyl}]-4,5,6,7-\text{tetrahydro}-1H-\text{pyrazolo}[3,4-c]\text{pyridin}-3-yl\}\text{carbonyl})\text{methanesulfonamide};$
- 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;

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

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- 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]-4,5,6,7-tetrahydro-1*H*-pyrazolo[3,4-*c*]pyridin-3-ylmethyl}-*N*-methylacetamide;
- 2-dimethylamino-*N*-{1-(4-methoxyphenyl)-7-oxo-6-[4-(2-oxo-2*H*-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*H*-pyrazolo[3,4-c]pyridin-3-ylmethyl}-2-(1-oxypyridin-2-yl)acetamide;
- 6-[4-(1,1-dioxo-116-isothiazolidin-2-yl)-phenyl]-1-(4-methoxy-phenyl)-7-oxo-4,5,6,7-tetrahydro-1H-pyrazolo[3,4-c]pyridine-3-carboxylic acid amide;

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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,

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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.

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(2*H*)-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

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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(2*H*)pyridinyl)phenyl]-4,5,6,7-tetrahydro-1*H*-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(2*H*)-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

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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.

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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.

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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.

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

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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,

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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 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, 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. (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

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

Claim 75. (New) 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

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.

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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.

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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 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 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.

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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.

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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 115, 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,

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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.

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#### 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,	Original Claim 17
101, 108, 115	
53, 56, 59, 62, 65, 68, 71, 74, 81, 88, 95,	Original Claim 18
102, 109, 116	
54, 57, 60, 63, 66, 69, 72, 75-79, 82-86, 89-	Original Claim 19
93, 96-100, 103-107, 110-114, 117-121	

#### 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

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USSN: 10/245,122

#### Amendment

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** 

Patent Department P.O. Box 4000 Princeton, NJ 08543-4000 (609) 252-3791 (phone) (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)	
Application Type:	Utility under 35 USC 111(a)	

# Payment information:

Submitted with Payment	no
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# File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Certificate of Correction	ReqExpeditedCOC03822000	7510381	no	243
Triequest for Gertificate of Gorrection	010.pdf	5164be3d7595c51727517f0be49173ad b44aa2e2		240	

Information:

7510381

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.

SPE RESPONSE FO	R CERTIFICATE OF CORRECTION
	Paper No.:
DATE : 9/8/08	
TO SPE OF : ART UNIT	James Wilson Spe
SUBJECT : Request for Certificate of Correcti	on for Appl. No.: 16 245127 Patent No.: 6967208
Please respond to this request for a certi	ficate of correction within 7 days.
FOR IFW FILES:	·
	errections as shown in the <b>COCIN</b> document(s) in ter should be introduced, nor should the scope or
Please complete the response (see belousing document code COCX.	w) and forward the completed response to scanning
FOR PAPER FILES	
Please review the requested changes/cocorrection. Please complete this form (s	ee below) and forward it with the file to:
Certificates of Correction Branc South Tower - 9A22 Palm Location 7580	ch (CofC)
	Certificates of Correction Branch
	703-308-9390 ext.
Thank You For Your Assistance	
The request for issuing the above-ide Note your decision on the appropriate box.	ntified correction(s) is hereby:
☐ Approved	All changes apply.
☐ Approved in Part	Specify below which changes do not apply.
☐ Denied	State the reasons for denial below.
Comments:	
,	
,	
	Page 246

PTOL-306 (REV. 7/03)

SPE Art Unit
U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office

# UNITED STATES PATENT AND TRADEMARK OFFICE

## **CERTIFICATE OF CORRECTION**

PATENT NO.

: 6,967,208 B2

Page 1 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:

#### 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 --CHCl3--; and

Line 49, "CDCl3" should read --CHCl3--.

#### COLUMN 175:

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

#### COLUMN 237:

Lines 15-20, " " should read --ring M, including P<sub>1</sub>,

P<sub>2</sub>, M<sub>1</sub>, and M<sub>2</sub>, is substituted with 0-2R<sup>1a</sup> and is

Lines 22-23, "ring M, including P<sup>1</sup>, P<sub>2</sub>, and M<sub>1</sub>, and M<sub>2</sub> is substituted with 0-2 R<sup>la</sup> and is" should be deleted;

Lines 25-30, " " should read --ring P, including P<sub>1</sub>,

## UNITED STATES PATENT AND TRADEMARK OFFICE

## **CERTIFICATE OF CORRECTION**

Page 2 of 13

PATENT NO. : 6,967,208 B2 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  $P_4$ 

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;  $P_4$  is — $G_1$  —G;--.

#### COLUMN 238:

Line 1, " $S(O)^p$ ," should read -- $S(O)_p$ ,--;

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, "NR<sup>2c</sup>(O)NHR<sup>2</sup>," should read --NR<sup>2</sup>C(O)NHR<sup>2</sup>,--.

#### **COLUMN 241**:

Line 27, " $(CR_3R^{3a})_{r,1}$  Cl," should read -- $(CR^3R^{3a})_{r,1}$  Cl,--.

#### COLUMN 242:

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

#### COLUMN 243:

Line 30, "CH2CH2CH2CH3," should read -- CH2CH2CH2CH3,--;

Line 38, "CH2CH2CH2CH3," should read -- CH2CH2CH2CH3,--; and

Line 62, "benzyl" should read --benzyl,--.

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: 6,967,208 B2

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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 NR3SO<sub>2</sub>CF<sub>3</sub>," should read --alkyl, NR3SO<sub>2</sub>CF<sub>3</sub>,--.

#### COLUMN 246:

Lines 20-30, " should read -- 
$$CH_3NH_2$$
" should read --  $CH_2NH_2$ 

#### COLUMN 248:

#### COLUMN 249:

Lines 5-10, " 
$$CH_2NH_2$$
" should read --  $CH_2NH_2$  --;

## UNITED STATES PATENT AND TRADEMARK OFFICE

## **CERTIFICATE OF CORRECTION**

PATENT NO. : 6,967,208 B2

APPLICATION NO.: 10/245122 DATED: November 22, 2005

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:

Page 4 of 13

#### COLUMN 251:

#### **COLUMN 252**:

PATENT NO. : 6,967,208 B2 APPLICATION NO. : 10/245122

Page 5 of 13

DATED INVENTOR(S)

: November 22, 2005 : 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, " 
$$\stackrel{\mathsf{H}}{\underset{\mathsf{N}}{\bigvee}} \stackrel{\mathsf{NH}_2}{\underset{\mathsf{N}}{\bigvee}}$$
 " should read --  $\stackrel{\mathsf{H}}{\underset{\mathsf{N}}{\bigvee}} \stackrel{\mathsf{NH}_2}{\underset{\mathsf{N}}{\bigvee}}$  --.

#### COLUMN 253:

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

#### COLUMN 254:

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

#### COLUMN 255:

#### **COLUMN 256:**

## UNITED STATES PATENT AND TRADEMARK OFFICE

## **CERTIFICATE OF CORRECTION**

PATENT NO.

: 6,967,208 B2

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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 258:

#### COLUMN 259:

Line 67, "CH<sub>2</sub>c(O)R<sup>2b</sup>," should be deleted.

#### COLUMN 261:

#### 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

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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 263:

Line 38, " $S(O)_p$ -phenyl" should read -- $S(O)_2$ -phenyl--; and Line 43, "SO<sub>2</sub>NR<sup>2</sup>R<sup>2</sup>a." should read --SO<sub>2</sub>NR<sup>2</sup>R<sup>2a</sup>.--.

#### COLUMN 265:

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

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

APPLICATION NO.: 10/245122

DATED

INVENTOR(S)

: November 22, 2005 : 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-oxo-6-[4-(2-oxo-1(2H)pyridinyl)phenyl]-4,5,6,7-tetra hydro-1H-pyrazolo[3,4-c]pyridine-3carboxamide;" should be deleted;

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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-7Hpyrazolo[3,4-c]pyridin-7-one;" should be deleted; and

Lines 65-67, "1-(2,3-dihydro-1H-isoindol-5-vl)-6-[4-(2-oxo-2H-pyridin-1-yl)phenyl]-3-trifluoromethyl-1,4,5,6-tetrahydropyrazolo[3,4c]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]-4,5,6,7tetrahydro-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;

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

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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-4,5,6,7tetrahydro-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]-3trifluoromethyl-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, 5,6,7tetrahydro-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-2Hpyridin-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]-3trifluoromethyl-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.

PATENT NO.

: 6,967,208 B2

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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,

PATENT NO.

: 6,967,208 B2

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APPLICATION NO.: 10/245122

DATED INVENTOR(S) : November 22, 2005 : 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 CH<sub>2</sub>Cl<sub>2</sub>/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 CH<sub>2</sub>Cl<sub>2</sub>/EtOAc.
- 116. A compound according to claim 104 is prepared by a process comprising recrystallization from isopropyl alcohol or CH<sub>2</sub>Cl<sub>2</sub>/EtOAc.
- 117. A compound according to claim 104 is prepared by a process comprising recrystallization from isopropyl alcohol.

PATENT NO.

: 6,967,208 B2

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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:

118. A compound according to claim 104 is prepared by a process comprising recrystallization from CH<sub>2</sub>Cl<sub>2</sub>/EtOAc.--.

Signed and Sealed this

Second Day of December, 2008

JON W. DUDAS

Director of the United States Patent and Trademark Office