

#11 28
12/14/91

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
IN RE APPLICATION OF:
YOSHIHIRO FUJIKAWA ET AL
FILED: HEREWITH
FOR: QUINOLINE TYPE MEVALONOLACTONES

REQUEST FOR PRIORITY, 35 U.S.C. §120

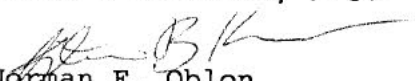
HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, DC 20231

SIR:

Full benefit of the filing date of U.S. Application Serial No. 07/233,752, filed AUGUST 19, 1988, is claimed pursuant to the provisions of 35 U.S.C. §120. Applicants further claim any right to priority from any earlier filed applications to which they may be entitled pursuant to the provisions of 35 U.S.C. §119.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.


Norman F. Oblon
Registration No.: 24,618

Steven B. Kelber
Registration No.: 30,073
Attorneys of Record

Fourth Floor
1755 South Jefferson Davis Highway
Arlington, Virginia 22202
703-521-5940

Docket: 49-146-0 CONT

3/8/91
230

126
3/5/91
030

Check Docket
C. K. Area

GP129



OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.
ATTORNEYS AT LAW
FOURTH FLOOR
1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202 U. S. A.

NORMAN F. OBLON
MARVIN J. SPIVAK
C. IRVIN McCLELLAND
GREGORY J. MAIER
ARTHUR I. NEUSTADT
ROBERT C. MILLER
RICHARD D. KELLY
JAMES D. HAMILTON
ECKHARD H. KUESTERS
ROBERT T. FOUS
DAVID J. KERA
CHARLES L. GHOLZ
VINCENT J. SUNDERDICK*
WILLIAM E. BEAUMONT
STEVEN B. KELBER*
STUART D. DWORK
ROBERT F. GNUSE
JEAN-PAUL LAVALLEYE, PH. D.
JEFFREY H. KAUFMAN
BRIAN D. ANDERSON*
ROBERTA S. BREN*

ANDREW A. NOVAK
ERIC
MARK H. TIDMAN*
FREDERICK D. VASTINE, PH. D.*
MURRAY TILLMAN*
TIMOTHY R. SCHWARTZ, PH. D.*
STEPHEN G. BAXTER, PH. D.*
DANIEL E. WYMAN*
ALVIN E. TANENHOLTZ*
ROBERT W. MAHL, PH. D.*
RICHARD L. CHINN, PH. D.*
CARL E. SCHLIER*
SURINDER SACHAR*
JAMES A. LISEHORA*
OF COUNSEL
MILTON STERMAN*
SAMUEL H. BLECH*
JOHN O. TRESANSKY*
JOHN H. WEBER
ALTON D. ROLLINS

TELEPHONE
(703) 521-4500
FACSIMILE
(703) 486-2347
TELEX
248855 OPAT UR

PATENT, TRADEMARK AND COPYRIGHT LAW
AND RELATED FEDERAL AND ITC LITIGATION

IRVING MARCUS
1919-1982
STANLEY P. FISHER
COUNSEL TO THE FIRM

*BAR MEMBERSHIP OTHER THAN VIRGINIA
*REGISTERED PATENT AGENT

121

DOCKET NO.: 49-146-0 CONT

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, DC 20231

IN RE APPLICATION OF:
YOSHIHIRO FUJIKAWA ET AL
SERIAL NUMBER: 07/631,092
FILED: DECEMBER 19, 1990
FOR: QUINOLINE TYPE MEVALONOLACTONES

SIR:

Attached hereto for filing are the following papers:

SECOND PRELIMINARY AMENDMENT AND UNEXCUTED RULE 132
DECLARATION

Our check in the amount of \$ -0- is enclosed covering any required fees. In the event of any variance between the amount enclosed and the Patent Office Charges, please charge or credit the difference to our Deposit Account No. 15-0030. A duplicate copy of this letter is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon
Registration No.: 24,618


Steven B. Kelber
Registration No.: 30,073

RECEIVED
FEB 21 1991
PATENT & TRADEMARK OFFICE

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.



ATTORNEYS AT LAW

FOURTH FLOOR

1785 JEFFERSON DAVIS HIGHWAY

ARLINGTON, VIRGINIA 22202 U. S. A.

NORMAN F. OBLON
MARVIN J. SPIVAK
C. IRVIN McCLELLAND
GREGORY J. MAIER
ARTHUR I. NEUSTADT
ROBERT C. MILLER
RICHARD D. KELLY
JAMES D. HAMILTON
ECKHARD H. KUESTERS
ROBERT T. POUS
DAVID J. KERA
CHARLES L. GHOLZ
VINCENT J. SUNDERDICK*
WILLIAM E. BEAUMONT
STEVEN B. KELBER*
STUART D. DWORC
ROBERT F. GNUSE
JEAN-PAUL LAVALLEVE, PH. D.
JEFFREY H. KAUFMAN
BRIAN D. ANDERSON*
ROBERTA S. BREN*

DAVID A. NOVAIS
LINDA M. DWYER*
ERIC R. KATE*
MARK H. TIDMAN*
FREDERICK D. VASTINE, PH. D.*
MURRAY TILLMAN*
TIMOTHY R. SCHWARTZ, PH. D.*
STEPHEN G. BAXTER, PH. D.*
DANIEL E. WYMAN*
ALVIN E. TANENHOLTZ*
ROBERT W. MAHL, PH. D.*
RICHARD L. CHINN, PH. D.*
CARL E. SCHLIER*
SURINDER SACHAR*
JAMES A. LISEHORA*
OF COUNSEL
MILTON STERMAN*
SAMUEL H. BLECH*
JOHN O. TRESANSKY*
JOHN H. WEBER
ALTON D. ROLLINS

TELEPHONE
(703) 521-4500
FACSIMILE
(703) 486-2347
TELEX
248855 OPAT UR

PATENT, TRADEMARK AND COPYRIGHT LAW
AND RELATED FEDERAL AND ITC LITIGATION

IRVING MARCUS
1919-1982
STANLEY P. FISHER
COUNSEL TO THE FIRM

*BAR MEMBERSHIP OTHER THAN VIRGINIA
*REGISTERED PATENT AGENT

DOCKET NO.: 49-146-0 CONT

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, DC 20231

IN RE APPLICATION OF:
YOSHIHIRO FUJIKAWA ET AL
SERIAL NUMBER: 07/631,092
FILED: DECEMBER 19, 1990
FOR: QUINOLINE TYPE MEVALONOLACTONES

SIR:

Attached hereto for filing are the following papers:

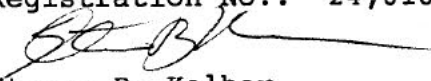
**SECOND PRELIMINARY AMENDMENT AND UNEXECUTED RULE 132
DECLARATION**

Our check in the amount of \$ -0- is enclosed covering any required fees. In the event of any variance between the amount enclosed and the Patent Office Charges, please charge or credit the difference to our Deposit Account No. 15-0030. A duplicate copy of this letter is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon
Registration No.: 24,618


Steven B. Kelber
Registration No.: 30,073

91 FEB 21 11:10:15
GROUP 120



#5/Pre C.
V.V.
19 Mar 1991

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	:	
YOSHIHIRO FUJIKAWA ET AL	:	GROUP ART UNIT: ¹²¹ 129
SERIAL NUMBER: 07/631,092	:	EXAMINER: <i>Richard</i>
FILED: DECEMBER 19, 1990	:	
FOR: QUINOLINE TYPE MEVALONOLACTONES		

RECORDED
91 FEB 21 1991
CLASS. DIV.

SECOND PRELIMINARY AMENDMENT

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, DC 20231

SIR:

Prior to prosecution on the merits, entry of the following amendments is respectfully requested.

IN THE CLAIMS:

Claim ¹~~41~~, line 6, please delete "-COOH, COONa, COOR" and
 insert therefore -- -CH(OH)-CH₂-CH(OH)-CH₂-COOH, -CH(OH)-CH₂-
^{C'} CH(OH)-CH₂-COONa, -CH(OH)-CH₂-CH(OH)-CH₂-COOR --.

REMARKS:

Applicants have amended independent Claim 41, to correct

inadvertent typographical errors in the original Preliminary Amendment. No new matter is introduced thereby, the original disclosure appearing, e.g., in Claim 2 of the application as filed.

Upon entry, the claims are believed in conformance with the requirements of Title 35, and in condition for examination on the merits. The same is respectfully requested, in light of the Declaration submitted herewith. Applicants are submitting at this time, an unexecuted Declaration, an executed Declaration will be submitted when available.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Norman F. Oblon
Registration No.: 24,618

Steven B. Kelber
Registration No.: 30,073
Attorneys of Record

Fourth Floor
1755 South Jefferson Davis Highway
Arlington, Virginia 22202
703-521-5940



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: :
YOSHIHIRO FUJIKAWA ET AL : GROUP ART UNIT: 129
SERIAL NUMBER: 07/631,092 : EXAMINER:
FILED: DECEMBER 19, 1990 :
FOR: QUINOLINE TYPE MEVALONOLACTONES

DECLARATION UNDER 37 CFR §1.132

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, DC 20231

SIR:

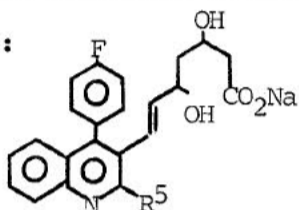
I, YOSHIHIRO FUJIKAWA, do hereby declare and state that:

1. I am a named co-inventor in the above-captioned patent application, an employee of Nissan Chemical Industries, Limited, and a citizen and resident of Japan.
2. I am familiar with the above-captioned patent application, and Claims 41 - 45 presented by Amendment therein.
3. To demonstrate the unobvious superiority of the subject matter claimed in Claims 41 - 45, comparative tests were

91FD21 12/19/90
12/19/90
12/19/90

conducted, demonstrating the importance and unobvious superiority conferred on these compounds by the selection of the cyclopropyl substituent. These are described as follows:

Data was obtained with regard to the following compound having the formula:



<u>Compound</u>	<u>R⁵</u>	<u>Compound No.</u>	<u>TEST METHOD</u>		
			<u>Test A Evaluation</u>	<u>Test B Evaluation</u>	<u>Test C Evaluation</u>
Compound * of this Invention	c-Pr	I-520	4.2 x 10 ⁻⁹	17.5 x 10 ⁻⁹	55% (0.05 mg/kg)
Reference** Compound	i-Pr	I-51	10 x 10 ⁻⁹	100 x 10 ⁻⁹	65% (0.2 mg/kg)
Reference*** Compound	CS-514	CS-514	9.0 x 10 ⁻⁹	350 x 10 ⁻⁹	55% 10.0 mg/km

- * Given at page 71 of the specification
 ** Given at page 41 of the specification
 *** Given at page 33 of the specification

Test A: Inhibition of cholesterol biosynthesis from acetate in vitro

This test was carried out as described on pages 28 - 29 of the specification. The above numerical values indicate IC₅₀ (molar

concentration).

Test B: Inhibition of cholesterol biosynthesis in culture cells

This test was carried out as described on pages 29 to 30 of the specification. The above numerical values indicate IC₅₀ (molar concentration).

Test C: Inhibition of cholesterol biosynthesis in vivo

This test was carried out as described on pages 30 to 31 of the specification. The above numerical values indicate inhibition percent and the numerical values in parenthesis indicate "administration amounts" (mg/kg).

In tests A and B, CS-514 is an optical isomer, and was administered in an amount of 1.25 mg. However, the other compounds are racemic compounds, and were administered in double amounts, i.e., 2.50 mg.

4. Based on the data reported above, it can be determined that the compounds of this invention exhibit unobvious superiority, and in particular, sharply enhanced inhibition of cholesterol

biosynthesis, in in vitro, culture cell, and in vivo testing, when compared with referenced compounds of the prior art, and compounds having an identical structure save for the selection of cyclopropyl, as opposed to isopropyl substituent, for R⁵. This enhanced activity could not be predicted on the basis of structure, or information available to those of ordinary skill in the art as of the effective filing date of this application.

All statements made herein of my own knowledge are true, and all statements made on information and belief are believed true. I am aware that willful false statements and the like are punishable by fine, imprisonment or both, 18 U.S.C. §1001, and that such willful false statements may jeopardize the validity of the above-captioned patent application and any patent issuing thereon.

FURTHER, I SAYETH NOT.

DATE: _____

YOSHIHIRO FUJIKAWA



#6 Gp 129
121

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.

ATTORNEYS AT LAW

FOURTH FLOOR

1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202 U. S. A.

NORMAN F. OBLON
MARVIN J. SPIVAK
C. IRVIN McCLELLAND
GREGORY J. MAIER
ARTHUR I. NEUSTADT
ROBERT C. MILLER
RICHARD D. KELLY
JAMES D. HAMILTON
ECKHARD H. KUESTERS
ROBERT T. POUS
DAVID J. KERA
CHARLES L. GHOLZ
VINCENT J. SUNDERDICK
WILLIAM E. BEAUMONT
STEVEN B. KELBER
STUART D. DWORC
ROBERT F. GNUSE
JEAN-PAUL LAVALLEYE, PH.D.
JEFFREY H. KAUFMAN
BRIAN D. ANDERSON
ROBERTA S. BREN
WILLIAM B. WALKER

DAVID A. NOVAIS
LINDA M. DWYER
ERIC R. KATZ
MARK H. TIDMAN
ALAN HOLLER
LAURA TERLIZZI
FREDERICK D. VASTINE, PH.D.
MURRAY TILLMAN
TIMOTHY R. SCHWARTZ, PH.D.
STEPHEN G. BAXTER, PH.D.
DANIEL E. WYMAN
ROBERT W. HAHL, PH.D.
RICHARD L. CHINN, PH.D.
CARL E. SCHLIER
SURINDER SACHAR
JAMES A. LISEHORA
ANDREW D. FORTNEY, PH.D.
MARC R. LABGOLD, PH.D.
OF COUNSEL
MILTON STERMAN
SAMUEL H. BLECH
JOHN O. TRESANSKY
JOHN H. WEBER
ALTON D. ROLLINS

TELEPHONE
(703) 521-4500
FACSIMILE
(703) 486-2347
TELEX
248855 OPAT UR

PATENT, TRADEMARK AND COPYRIGHT LAW
AND RELATED FEDERAL AND ITC LITIGATION

IRVING MARCUS
1919-1982
STANLEY P. FISHER
COUNSEL TO THE FIRM

WEST COAST OFFICE
2021 THE ALAMEDA, SUITE 110
SAN JOSE, CALIFORNIA 95126
TELEPHONE
(408) 345-3890
FACSIMILE
(408) 345-3898

*BAR MEMBERSHIP OTHER THAN VIRGINIA
*REGISTERED PATENT AGENT

DOCKET NO.: 49-146-0 CONT

12D HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, DC 20231

3/15/91 IN RE APPLICATION OF:
YOSHIHIRO FUJIKAWA ET AL
SERIAL NUMBER: 07/631,092
FILED: DECEMBER 19, 1990
12X FOR: QUINOLINE TYPE MEVALONOLACTONES

SIR:

630

Attached hereto for filing are the following papers:

Butler

EXECUTED RULE 132 DECLARATION

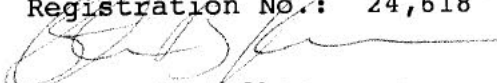
121

Our check in the amount of \$ -0- is enclosed covering any required fees. In the event of any variance between the amount enclosed and the Patent Office Charges, please charge or credit the difference to our Deposit Account No. 15-0030. A duplicate copy of this letter is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon
Registration No.: 24,618


Steven B. Kelber
Registration No.: 30,073

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.

ATTORNEYS AT LAW

FOURTH FLOOR

1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202 U.S.A.

NORMAN F. OBLON
MARVIN J. SPIVAK
C. IRVIN McCLELLAND
GREGORY J. MAIER
ARTHUR I. NEUSTADT
ROBERT C. MILLER
RICHARD D. KELLY
JAMES D. HAMILTON
ECKHARD H. KUESTERS
ROBERT T. POUS
DAVID J. KERA
CHARLES L. GHOLZ
VINCENT J. SUNDERDICK*
WILLIAM E. BEAUMONT
STEVEN B. KELBER*
STUART D. DWORR
ROBERT W. GRUSE
JEAN-PAUL LAVANLEYE, PH. D.
JEFFREY H. KAUFMAN
BRIAN D. ANDERSON
ROBERT A. BREN
WILLIAM B. WALKER*

DAVID A. NOVAIS
LINDA M. DWYER*
ERIC R. KATZ
MARK H. TIDMAN*
ALAN HOLLER
LAURA TERLIZZI*
FREDERICK D. VASTINE, PH. D.*
MURRAY TILLMAN*
TIMOTHY R. SCHWARTZ, PH. D.*
STEPHEN G. BAXTER, PH. D.*
DANIEL E. WYMAN*
ROBERT W. MAHL, PH. D.*
RICHARD L. CHINN, PH. D.*
CARL E. SCHLIER*
SURINDER SACHAR*
JAMES A. LISEHORA*
ANDREW D. FORTNEY, PH. D.*
MARC R. LABGOLD, PH. D.*
OF COUNSEL
MILTON STERMAN*
SAMUEL H. BLECH*
JOHN O. TRESANSKY*
JOHN H. WEBER
ALTON D. ROLLINS

TELEPHONE
(703) 521-4500
FACSIMILE
(703) 486-2347
TELEX
248855 OPAT UR

PATENT, TRADEMARK AND COPYRIGHT LAW
AND RELATED FEDERAL AND ITC LITIGATION

IRVING MARCUS
1919-1982

STANLEY P. FISHER
COUNSEL TO THE FIRM

WEST COAST OFFICE
2021 THE ALAMEDA, SUITE 110
SAN JOSE, CALIFORNIA 95128

TELEPHONE

(408) 345-3890

FACSIMILE

(408) 345-3898

*BAR MEMBERSHIP OTHER THAN VIRGINIA
*REGISTERED PATENT AGENT

DOCKET NO.: 49-146-0 CONT

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, DC 20231

IN RE APPLICATION OF:
YOSHIHIRO FUJIKAWA ET AL
SERIAL NUMBER: 07/631,092
FILED: DECEMBER 19, 1990
FOR: QUINOLINE TYPE MEVALONOLACTONES

SIR:

Attached hereto for filing are the following papers:

EXECUTED RULE 132 DECLARATION

Our check in the amount of \$ -0- is enclosed covering any required fees. In the event of any variance between the amount enclosed and the Patent Office Charges, please charge or credit the difference to our Deposit Account No. 15-0030. A duplicate copy of this letter is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon
Registration No.: 24,618


Steven B. Kelber
Registration No.: 30,073

#6

916 323 709



9-146-0 CONT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: :
YOSHIHIRO FUJIKAWA ET AL :
SERIAL NUMBER: 07/631,092 :
FILED: DECEMBER 19, 1990 :
FOR: QUINOLINE TYPE MEVALONOLACTONES

GROUP ART UNIT: 129

EXAMINER:

SUBMISSION OF EXECUTED DECLARATION

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, DC 20231

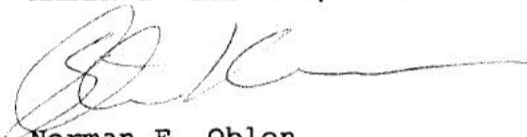
SIR:

Applicants submit herewith the executed Declaration of Kitahara in the above-captioned patent application. The Declaration is identical to that submitted with the Preliminary Amendment of February 20, 1991, save for the fact that the name of the Declarant has been changed from Fujikawa to Kitahara. The content of the Declaration, particularly the demonstration of unobvious impact of the substuent of R⁵ as cyclopropyl, to which

all pending claims are limited, is clearly made out by the Declaration. Entry and consideration is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Norman F. Oblon
Registration No.: 24,618

Steven B. Kelber
Registration No.: 30,073
Attorneys of Record

Fourth Floor
1755 South Jefferson Davis Highway
Arlington, Virginia 22202
703-521-5940

#6
4/25/91
S2W



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	:	
YOSHIHIRO FUJIKAWA ET AL	:	GROUP ART UNIT: 129
SERIAL NUMBER: 07/631,092 ✓	:	EXAMINER:
FILED: DECEMBER 19, 1990 ✓	:	
FOR: QUINOLINE TYPE MEVALONOLACTONES	:	

DECLARATION UNDER 37 CFR §1.132

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, DC 20231

SIR:

I, Masaki Kitahara, do hereby declare and state that:

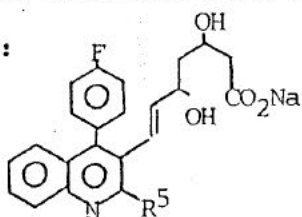
1. I am a named co-inventor in the above-captioned patent application, an employee of Nissan Chemical Industries, Limited, and a citizen and resident of Japan.

2. I am familiar with the above-captioned patent application, and Claims 41 - 45 presented by Amendment therein.

3. To demonstrate the unobvious superiority of the subject matter claimed in Claims 41 - 45, comparative tests were

conducted, demonstrating the importance and unobvious superiority conferred on these compounds by the selection of the cyclopropyl substituent. These are described as follows:

Data was obtained with regard to the following compound having the formula:



<u>Compound</u>	<u>R⁵</u>	<u>Compound No.</u>	<u>TEST METHOD</u>		
			<u>Test A Evaluation</u>	<u>Test B Evaluation</u>	<u>Test C Evaluation</u>
Compound * of this Invention	c-Pr	I-520	4.2 x 10 ⁻⁹	17.5 x 10 ⁻⁹	55% (0.05 mg/kg)
Reference** Compound	i-Pr	I-51	10 x 10 ⁻⁹	100 x 10 ⁻⁹	65% (0.2 mg/kg)
Reference*** Compound		CS-514	9.0 x 10 ⁻⁹	350 x 10 ⁻⁹	55% 10.0 mg/km

* Given at page 71 of the specification

** Given at page 41 of the specification

*** Given at page 33 of the specification

Test A: Inhibition of cholesterol biosynthesis from acetate in vitro

This test was carried out as described on pages 28 - 29 of the specification. The above numerical values indicate IC₅₀ (molar

concentration).

Test B: Inhibition of cholesterol biosynthesis in culture cells

This test was carried out as described on pages 29 to 30 of the specification. The above numerical values indicate IC₅₀ (molar concentration).

Test C: Inhibition of cholesterol biosynthesis in vivo

This test was carried out as described on pages 30 to 31 of the specification. The above numerical values indicate inhibition percent and the numerical values in parenthesis indicate "administration amounts" (mg/kg).

In tests A and B, CS-514 is an optical isomer, and was administered in an amount of 1.25 mg. However, the other compounds are racemic compounds, and were administered in double amounts, i.e., 2.50 mg.

4. Based on the data reported above, it can be determined that the compounds of this invention exhibit unobvious superiority, and in particular, sharply enhanced inhibition of cholesterol

biosynthesis, in in vitro, culture cell, and in vivo testing, when compared with referenced compounds of the prior art, and compounds having an identical structure save for the selection of cyclopropyl, as opposed to isopropyl substituent, for R⁵. This enhanced activity could not be predicted on the basis of structure, or information available to those of ordinary skill in the art as of the effective filing date of this application.

All statements made herein of my own knowledge are true, and all statements made on information and belief are believed true. I am aware that willful false statements and the like are punishable by fine, imprisonment or both, 18 U.S.C. §1001, and that such willful false statements may jeopardize the validity of the above-captioned patent application and any patent issuing thereon.

FURTHER, I SAYETH NOT.

DATE: April 9, 1991

Masaki Kitahara ✓
Masaki Kitahara



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address : COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

07/631,092 12/19/90 FUJIKAWA

49-146-0-CON

OBLON, SPIVAC, MC CLELLAND,
MAIER & NEUSTADT
FOURTH FLOOR
1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VA 22202

RICHTER, J

7

1201

12/18/91

This application has been examined Responsive to communication filed on _____ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. Claims 36-40 are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
2. Claims _____ have been cancelled.
3. Claims _____ are allowed.
4. Claims 36-40 are rejected.
5. Claims _____ are objected to.
6. Claims _____ are subject to restriction or election requirement.
7. This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. Formal drawings are required in response to this Office action.
9. The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are acceptable; not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been approved by the examiner; disapproved by the examiner (see explanation).
11. The proposed drawing correction, filed _____, has been approved; disapproved (see explanation).
12. Acknowledgement is made of the claim for priority under U.S.C. 119. The certified copy has been received not been received
 been filed in parent application, serial no. _____; filed on _____.
13. Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. Other

EXAMINER'S ACTION

Serial No. 07/631092

-2-

Art Unit 1201

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 36-40 are rejected under 35 U.S.C. § 103 as being unpatentable over applicants admission.

Applicants admit that optical isomers as well as compounds differing only in the selection of cyclopropyl are already known in the art. A declaration has been submitted in support of unobviousness. The claimed compounds would have been obvious to one of ordinary skill because isomers are prima facie obvious. The declaration will overcome the rejection when signed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johann Richter whose telephone number is (703) 308-4532.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1235.

RICHTER:mp
December 17, 1991

JOHANN RICHTER
EXAMINER
ART UNIT 121
J. Richter



OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.
ATTORNEYS AT LAW

FOURTH FLOOR
1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202 U.S.A.

PATENT, TRADEMARK AND COPYRIGHT LAW
AND RELATED FEDERAL AND ITC LITIGATION

NORMAN F. OBLON
MARVIN J. SPIVAK
C. IRVIN McCLELLAND
GREGORY J. MAIER
ARTHUR I. NEUSTADT
ROBERT C. MILLER
RICHARD D. KELLY
JAMES D. HAMILTON
ECKHARD H. KUESTERS
ROBERT T. POUS
DAVID J. KERA
CHARLES L. GHOLZ
VINCENT J. SUNDERDICK*
WILLIAM E. BEAUMONT
STEVEN B. KELBER*
STUART D. DWORC
ROBERT F. GNUSE
JEAN-PAUL LAVALLEYE, PH.D.
JEFFREY H. KAUFMAN
BRIAN D. ANDERSON*
ROBERTA S. BREN*
WILLIAM B. WALKER*
TIMOTHY R. SCHWARTZ, PH.D.
RICHARD H. STERN*
JOHN H. WEBER
DAVID A. NOVAIS
LINDA M. DWYER*

ALAN HOLLER
MARTIN M. ZOLTICK
CARL E. SCHLIER
DENNIS R. DALEY
STEVEN P. WEIHROUCH
BILLIE MUNRO*
P. JAY HINES*
FREDERICK D. VASTINE, PH.D.*
MURRAY TILLMAN*
STEPHEN G. BAXTER, PH.D.*
ROBERT W. HAHL, PH.D.*
RICHARD L. CHINN, PH.D.*
SURINDER SACHAR*
JAMES A. LISEHORA*
ANDREW D. FORTNEY, PH.D.*
MARC R. LABGOLD, PH.D.*
RICHARD A. NEIFELD, PH.D.*
RICHARD T. PETERSON, PH.D.*
J. DEREK MASON, PH.D.*
KENNETH G. WELLS*
KAREN I. KRUPEN, PH.D.*
OF COUNSEL
MILTON STERMAN*
SAMUEL H. BLECH*
JOHN O. TRESANSKY*
ALTON D. ROLLINS
JOHN H.O. CLARKE*

TELEPHONE
(703) 521-4500
FACSIMILE
(703) 486-2347
TELEX
248855 OPAT UR

WEST COAST OFFICE
2021 THE ALAMEDA, SUITE 110
SAN JOSE, CALIFORNIA 95126
TELEPHONE
(408) 345-3890
FACSIMILE
(408) 345-3898

*BAR MEMBERSHIP OTHER THAN VIRGINIA
*REGISTERED PATENT AGENT

DOCKET NO.: 49-146-0 CONT

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, DC 20231

IN RE APPLICATION OF:
YOSHIHIRO FUJIKAWA ET AL
SERIAL NUMBER: 07/631,092
FILED: DECEMBER 19, 1990
FOR: QUINOLINE TYPE MEVALONOLACTONES

SIR:

Attached hereto for filing are the following papers:

- RESPONSE; COPY OF EXECUTED RULE 132 DECLARATION
- COPY OF DATE-STAMPED FILING RECEIPT (4/22/91)
- PETITION FOR EXTENSION OF TIME WITH FEE

Our check in the amount of \$ 810.00 is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 CFR 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. 15-0030. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. 1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon

Registration No.: 24,618

Steven B. Kelber
Registration No.: 30,073
Attorneys of Record



OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.
 ATTORNEYS AT LAW
 FOURTH FLOOR
 1755 JEFFERSON DAVIS HIGHWAY
 ARLINGTON, VIRGINIA 22202 U.S.A.

PATENT, TRADEMARK AND COPYRIGHT LAW
 AND RELATED FEDERAL AND ITC LITIGATION

NORMAN F. OBLON
 MARTIN M. ZOLTICK
 CARL E. SCHLIER
 DENNIS R. DALEY
 STEVEN P. WEIHROUCH
 BILLIE MUNRO
 P. JAY HINES
 FREDERICK D. VASTINE, PH.D.*
 MURRAY TILLMAN*
 STEPHEN G. BAXTER, PH.D.*
 ROBERT W. HAKL, PH.D.*
 RICHARD L. CHINN, PH.D.*
 SURINDER SACHAR*
 JAMES A. LISEHORA*
 ANDREW D. FORTNEY, PH.D.*
 MARC R. LABGOOD, PH.D.*
 RICHARD A. NEIFELD, PH.D.*
 RICHARD T. PETERSON, PH.D.*
 J. DEREK MASON, PH.D.*
 KENNETH G. WELLS*
 KAREN I. KRUPEN, PH.D.*

ALAN HOLLER
 MARTIN M. ZOLTICK
 CARL E. SCHLIER
 DENNIS R. DALEY
 STEVEN P. WEIHROUCH
 BILLIE MUNRO
 P. JAY HINES
 FREDERICK D. VASTINE, PH.D.*
 MURRAY TILLMAN*
 STEPHEN G. BAXTER, PH.D.*
 ROBERT W. HAKL, PH.D.*
 RICHARD L. CHINN, PH.D.*
 SURINDER SACHAR*
 JAMES A. LISEHORA*
 ANDREW D. FORTNEY, PH.D.*
 MARC R. LABGOOD, PH.D.*
 RICHARD A. NEIFELD, PH.D.*
 RICHARD T. PETERSON, PH.D.*
 J. DEREK MASON, PH.D.*
 KENNETH G. WELLS*
 KAREN I. KRUPEN, PH.D.*

TELEPHONE
 (703) 521-4500
 FACSIMILE
 (703) 486-2347
 TELEX
 248855 OPAT UR

WEST COAST OFFICE
 2021 THE ALAMEDA, SUITE 110
 SAN JOSE, CALIFORNIA 95126
 TELEPHONE
 (408) 345-3890
 FACSIMILE
 (408) 345-3898

*BAR MEMBERSHIP OTHER THAN VIRGINIA
 *REGISTERED PATENT AGENT

DOCKET NO.: 49-146-0 CONT

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
 WASHINGTON, DC 20231

IN RE APPLICATION OF:
 YOSHIHIRO FUJIKAWA ET AL
 SERIAL NUMBER: 07/631,092
 FILED: DECEMBER 19, 1990
 FOR: QUINOLINE TYPE MEVALONOLACTONES

SIR:

Attached hereto for filing are the following papers:

- RESPONSE; COPY OF EXECUTED RULE 132 DECLARATION
- COPY OF DATE-STAMPED FILING RECEIPT (4/22/91)
- PETITION FOR EXTENSION OF TIME WITH FEE

Our check in the amount of \$ 810.00 is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 CFR 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. 15-0030. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. 1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,
 OBLON, SPIVAK, McCLELLAND,
 MAIER & NEUSTADT, P.C.

Norman F. Oblon
 Norman F. Oblon
 Registration No.: 24,618

Steven B. Kelber
 Registration No.: 30,073
 Attorneys of Record

810-117

129
#8
6/29/92



46-0 CONT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RE APPLICATION OF: :

YOSHIHIRO FUJIKAWA ET AL : GROUP ART UNIT: 129

SERIAL NUMBER: 07/631,092 : EXAMINER: RICHTER

FILED: DECEMBER 19, 1990 :

FOR: QUINOLINE TYPE MEVALONOLACTONES

PETITION FOR EXTENSION OF TIME UNDER 37 CFR §1.136

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS WASHINGTON, DC 20231

SIR:

It is hereby requested that a THREE-MONTH extension of time for responding to the Office Action of DECEMBER 18, 1991, be granted until JUNE 18, 1992.

The required fee of \$810.00 is enclosed herewith by check and further charges may be made against the Attorney of Record's Deposit Account No. 15-0030. A duplicate copy of this Petition is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.

Norman F. Oblon
Registration No.: 24,618

Steven B. Kelber
Registration No.: 30,073
Attorneys of Record

Fourth Floor
1755 South Jefferson Davis Highway
Arlington, Virginia 22202
703-521-5940

100 TW 06/22/92 07631092

1 117 810.00 CR



49-146-0 CONT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:

YOSHIHIRO FUJIKAWA ET AL	:	GROUP ART UNIT: 129
SERIAL NUMBER: 07/631,092	:	EXAMINER: RICHTER
FILED: DECEMBER 19, 1990	:	
FOR: QUINOLINE TYPE MEVALONOLACTONES		

PETITION FOR EXTENSION OF TIME UNDER 37 CFR §1.136

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, DC 20231

SIR:

It is hereby requested that a THREE-MONTH extension of time for responding to the Office Action of DECEMBER 18, 1991, be granted until JUNE 18, 1992.

The required fee of \$810.00 is enclosed herewith by check and further charges may be made against the Attorney of Record's Deposit Account No. 15-0030. A duplicate copy of this Petition is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon
Registration No.: 24,618

Steven B. Kelber
Registration No.: 30,073
Attorneys of Record

Fourth Floor
1755 South Jefferson Davis Highway
Arlington, Virginia 22202
703-521-5940



#9
Bono
6/29/92

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: :
YOSHIHIRO FUJIKAWA ET AL : GROUP ART UNIT: 129
SERIAL NUMBER: 07/631,092 : EXAMINER: RICHTER
FILED: DECEMBER 19, 1990 :
FOR: QUINOLINE TYPE MEVALONOLACTONES

RESPONSE

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, DC 20231

SIR:

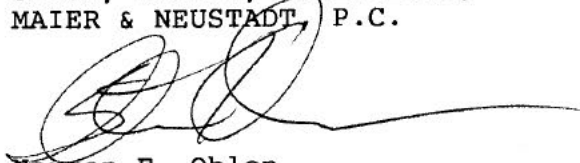
Responsive to the outstanding Office Action issued December 18, 1991, withdrawal of the rejection of Claims 36-40, all claims pending, as obvious over applicants' admission is respectfully requested, in light of the executed Declaration pursuant to Rule 132 already of record.

In the outstanding Office Action, the Examiner rejected all claims over applicants' admission, but was kind enough to indicate that the Declaration submitted in support of unobviousness would overcome the rejection, when the Declaration was signed. Prior to issuance of the Office Action, the executed Declaration was filed,

a copy of the Declaration being submitted herewith. This executed Declaration was filed April 22, 1991, as confirmed by the date-stamped filing receipt, also enclosed herewith. It appears that the executed Declaration was not made part of the file prior to the issuance of the Office Action some eight months later. In any event, withdrawal of the rejection for obviousness, and allowance of the claims presented, is respectfully requested.

Respectfully submitted,

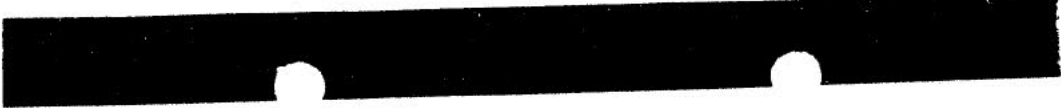
OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Norman F. Oblon
Registration No.: 24,618

Steven B. Kelber
Registration No.: 30,073
Attorneys of Record

Fourth Floor
1755 South Jefferson Davis Highway
Arlington, Virginia 22202
703-521-5940



Serial No. 7/631,092 O.S. & M. File No. 49-146-0 CONT By SBK/bb

In the Matter of the Application of YOSHIHIRO FUJIKAWA ET AL
For QUINOLINE TYPE MEVALONOLACTONES

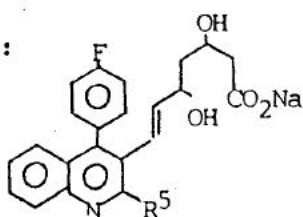
The following has been received in the U. S. Patent Office on the date stamped hereon:

- _____ pps. Specifications & _____ Claims
- Combined Declaration, Petition & Power of Attorney
- Rule 60 Application
- Rule 62 Application
- Notice of Priority
- Priority Document
- Check for \$ _____
- Deposit Account Order Form
- Drawings _____ Sheets
- Assignment
- Letter to Official Draftsman
- Letter Requesting Approval of Drawing Changes
- Letter
- Amendment
- Information Disclosure Statement
- Prior Art
- Restriction Response
- Rule 132 Declaration Executed
- Petition
- Notice of Appeal
- Brief
- Issue Fee Transmittal
- Submission of
Executed Declaration



conducted, demonstrating the importance and unobvious superiority conferred on these compounds by the selection of the cyclopropyl substituent. These are described as follows:

Data was obtained with regard to the following compound having the formula:



<u>Compound</u>	<u>R⁵</u>	<u>Compound No.</u>	<u>TEST METHOD</u>		
			<u>Test A Evaluation</u>	<u>Test B Evaluation</u>	<u>Test C Evaluation</u>
Compound * of this Invention	c-Pr	I-520	4.2 x 10 ⁻⁹	17.5 x 10 ⁻⁹	55% (0.05 mg/kg)
Reference** Compound	l-Pr	I-51	10 x 10 ⁻⁹	100 x 10 ⁻⁹	65% (0.2 mg/kg)
Reference*** Compound		CS-514	9.0 x 10 ⁻⁹	350 x 10 ⁻⁹	55% 10.0 mg/km

- * Given at page 71 of the specification
 ** Given at page 41 of the specification
 *** Given at page 33 of the specification

Test A: Inhibition of cholesterol biosynthesis from acetate in vitro

This test was carried out as described on pages 28 - 29 of the specification. The above numerical values indicate IC₅₀ (molar

concentration).

Test B: Inhibition of cholesterol biosynthesis in culture cells

This test was carried out as described on pages 29 to 30 of the specification. The above numerical values indicate IC_{50} (molar concentration).

Test C: Inhibition of cholesterol biosynthesis in vivo

This test was carried out as described on pages 30 to 31 of the specification. The above numerical values indicate inhibition percent and the numerical values in parenthesis indicate "administration amounts" (mg/kg).

In tests A and B, CS-514 is an optical isomer, and was administered in an amount of 1.25 mg. However, the other compounds are racemic compounds, and were administered in double amounts, i.e., 2.50 mg.

4. Based on the data reported above, it can be determined that the compounds of this invention exhibit unobvious superiority, and in particular, sharply enhanced inhibition of cholesterol

biosynthesis, in in vitro, culture cell, and in vivo testing, when compared with referenced compounds of the prior art, and compounds having an identical structure save for the selection of cyclopropyl, as opposed to isopropyl substituent, for R⁵. This enhanced activity could not be predicted on the basis of structure, or information available to those of ordinary skill in the art as of the effective filing date of this application.

All statements made herein of my own knowledge are true, and all statements made on information and belief are believed true. I am aware that willful false statements and the like are punishable by fine, imprisonment or both, 18 U.S.C. §1001, and that such willful false statements may jeopardize the validity of the above-captioned patent application and any patent issuing thereon.

FURTHER, I SAYETH NOT.

DATE: April 9, 1991

Masaki Kitahara
Masaki Kitahara



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

02/631,092

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.

EXAMINER	
J. D. TEP	
ART UNIT	PAPER NUMBER
	10

DATE MAILED:

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents.

All claims are allowable. However, due to a potential interference, *ex parte* prosecution is SUSPENDED FOR A PERIOD OF SIX MONTHS FROM THE DATE OF THIS LETTER.

Upon expiration of the period of suspension, applicant should make an inquiry as to the status of the application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Richter whose telephone number is (703) 308-4532.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1235.

JOHANN RICHTER
PRIMARY EXAMINER
GROUP 120
J. Richter

Serial No. 07/631,092

-2-

Art Unit 1201

Richter:lb
September 08, 1992

JOHANN RICHTER
PRIMARY EXAMINER
GROUP 120

Johann Richter



12x
Richter

Op 129

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.

ATTORNEYS AT LAW

FOURTH FLOOR

1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202 U.S.A.

TELEPHONE
(703) 413-3000

FACSIMILE
(703) 413-2220

TELEX
248855 OPAT UR

PATENT, TRADEMARK AND COPYRIGHT LAW
AND RELATED FEDERAL AND ITC LITIGATION

WEST COAST OFFICE
2021 THE ALAMEDA, SUITE 110

SAN JOSE, CALIFORNIA 95126

TELEPHONE

(408) 345-3890

FACSIMILE

(408) 345-3898

*BAR MEMBERSHIP OTHER THAN VIRGINIA

°REGISTERED PATENT AGENT

- NORMAN F. OBLON
- MARVIN J. SPIVAK
- C. IRVIN McCLELLAND
- GREGORY J. MAIER
- ARTHUR I. NEUSTADT
- ROBERT C. MILLER
- RICHARD D. KELLY
- JAMES D. HAMILTON
- ECKHARD H. KUESTERS
- ROBERT T. POUSS
- DAVID J. KERA
- CHARLES L. GHOLZ
- VINCENT J. SUNDERDICK*
- WILLIAM E. BEAUMONT
- STEVEN B. KELBER*
- STUART D. DWORC
- ROBERT F. GNUSE
- JEAN-PAUL LAVALLEYE, PH.D.
- JEFFREY H. KAUFMAN
- BRIAN D. ANDERSON*
- ROBERTA S. BREN
- WILLIAM B. WALKER*
- TIMOTHY R. SCHWARTZ, PH.D.
- RICHARD H. STERN*
- JOHN H. WEBER
- STEPHEN G. BAXTER, PH.D.
- DAVID A. NOVAIS
- MARTIN M. ZOLTICK
- CARLE E. SCHLIER
- DENNIS R. DALEY
- STEVEN P. WEIHROUCH
- P. JAY HINES
- JOSEPH T. LEONE
- BARRY P. MILLER*
- SURINDER SACHAR
- JAMES J. KULBASKI
- FREDERICK D. VASTINE, PH.D.°
- MURRAY TILLMAN°
- ROBERT W. HAHN, PH.D.°
- RICHARD L. CHINN, PH.D.°
- ANDREW D. FORTNEY, PH.D.°
- MARC R. LABGOLD, PH.D.°
- RICHARD A. NEIFELD, PH.D.°
- RICHARD T. PETERSON, PH.D.°
- J. DEREK MASON, PH.D.°
- KENNETH B. WELLS°
- ANDREW B. GRIFFIS°
- RICHARD L. TREANDR, PH.D.°
- MILTON STERMAN*
- SAMUEL H. BLECH*
- JOHN O. TRESANSKY*
- ALTON D. ROLLINS
- JOHN H.O. CLARKE*

DOCKET NO.: 49-146-0 CONT

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, DC 20231

IN RE APPLICATION OF:
YOSHIHIRO FUJIKAWA ET AL
SERIAL NUMBER: 07/631,092
FILED: DECEMBER 19, 1990
FOR: QUINOLINE TYPE MEVALONOLACTONES

SIR:

Attached hereto for filing are the following papers:

STATUS INQUIRY

Our check in the amount of \$ 0 is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 CFR 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. 15-0030. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. 1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon
Registration No.: 24,618

Steven B. Kelber
Registration No.: 30,073
Attorneys of Record

93 MAR 17 PM 2:03

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.

ATTORNEYS AT LAW



NORMAN F. OBLON
MARVIN J. SPIVAK
C. IRVIN McCLELLAND
GREGORY J. MAIER
ARTHUR I. NEUSTADT
ROBERT C. MILLER
RICHARD D. KELLY
JAMES D. HAMILTON
ECKHARD H. KUESTERS
ROBERT T. POUS
DAVID J. KERA
CHARLES L. GHOLZ
VINCENT J. SUNDERDICK
WILLIAM E. BEAUMONT
STEVEN B. KELBER
STUART D. DWORK
ROBERT F. GHOUSE
JEAN-PAUL LAVALLEYE, PH.D.
JEFFREY H. KAUFMAN
BRIAN D. ANDERSON
ROBERTA S. BREN
WILLIAM B. WALKER
TIMOTHY R. SCHWARTZ, PH.D.
RICHARD H. STERN
JOHN H. WEBER
STEPHEN G. BAXTER, PH.D.

DAVID A. NOVAIS
MARTIN M. ZOLTICK
CARL E. SCHLIER
DENNIS R. DALEY
STEVEN P. WEIHRUCH
P. JAY HINES
JOSEPH T. LEONE
BARRY P. MILLER
SURINDER SACHAR
JAMES J. KULBASKI
FREDERICK D. VASTINE, PH.D.
MURRAY TILLMAN
ROBERT W. MAHL, PH.D.
RICHARD L. CHINN, PH.D.
ANDREW D. FORTNEY, PH.D.
MARC R. LABGOLD, PH.D.
RICHARD A. NEIFELD, PH.D.
RICHARD T. PETERSON, PH.D.
J. DEREK MASON, PH.D.
KENNETH B. WELLS
ANDREW B. GRIFFIS
RICHARD L. TREANOR, PH.D.
MILTON STERMAN
SAMUEL H. BLECH
JOHN O. TRESANSKY
ALTON D. ROLLINS
JOHN H.O. CLARKE

FOURTH FLOOR
1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202 U.S.A.

TELEPHONE
703 413-3000
FACSIMILE
(703) 413-2220
TELEX
248855 OPAT UR

PATENT, TRADEMARK AND COPYRIGHT LAW
AND RELATED FEDERAL AND ITC LITIGATION

WEST COAST OFFICE
2021 THE ALAMEDA, SUITE 110
SAN JOSE, CALIFORNIA 95126
TELEPHONE
(408) 345-3890
FACSIMILE
(408) 345-3898

*BAR MEMBERSHIP OTHER THAN VIRGINIA
*REGISTERED PATENT AGENT

DOCKET NO.: 49-146-0 CONT

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, DC 20231

IN RE APPLICATION OF:
YOSHIHIRO FUJIKAWA ET AL
SERIAL NUMBER: 07/631,092
FILED: DECEMBER 19, 1990
FOR: QUINOLINE TYPE MEVALONOLACTONES

93 MAR 17 PM 2:03

SIR:

Attached hereto for filing are the following papers:

STATUS INQUIRY

Our check in the amount of \$ 0 is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 CFR 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. 15-0030. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. 1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon
Registration No.: 24,618

Steven B. Kelber
Registration No.: 30,073
Attorneys of Record

#11/5/4/93
CB



49-146-0 CONT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:	:	
YOSHIHIRO FUJIKAWA ET AL	:	GROUP ART UNIT: 129
SERIAL NUMBER: 07/631,092	:	EXAMINER: RICHTER
FILED: DECEMBER 19, 1990	:	
FOR: QUINOLINE TYPE MEVALONOLACTONES		

STATUS INQUIRY

HONORABLE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, DC 20231

SIR:

Further to the Notice of Suspension issued on September 9, 1992 (Paper No. 10), the six-month suspension period now having expired on March 9, 1993, applicants respectfully request written notification as to the current status of the above-captioned application.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon
Registration No.: 24,618

Steven B. Kelber
Registration No.: 30,073
Attorneys of Record

Fourth Floor
1755 South Jefferson Davis Highway
Arlington, Virginia 22202
703-413-3000

93 MAR 17 PM 2:03



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

#12/5/17/93
CB

May 17, 1993

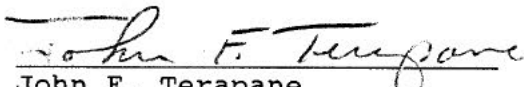
In re application of :
Yoshihiro Fujikawa, Et al :

Serial Number: 07/631,092 :
Filed: December 19, 1990 :
For: QUINOLINE TYPE MEVALONO- :
ACTONES :

DECISION ON
PETITION RE
SUSPENSION

Action in this application is further suspended for six months from the date of this letter due to a pending Interference.

Upon expiration of the period of suspension, applicant(s) should again make an inquiry as to the status of the application. Manual of Patent Examining Procedure, Section 709; 37 C.F.R. 1.103.


John F. Terapane
Director
Patent Examining Group 120
Organic Chemistry

OBLON, SPIVACK, MCCLELAND,
MAIER & NEUSTADT
4th Floor
1755 Jefferson Davis Hwy.,
Arlington, VA 22202



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
07/031,092	12/19/90	FUJIKAWA	49-146-0-004

12M2/0419
OBLOM, SPIVAC, MC CLELLAND,
MAIER & NEUSTADT
FOURTH FLOOR
1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VA 22202

EXAMINER	
ART UNIT	PAPER NUMBER
1201	13

DATE MAILED:

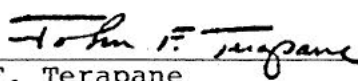
04/19/94

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents.

Action in this application is further suspended for six months from the date of this letter due to a possible interference.

Upon expiration of the period of suspension, applicants should again make an inquiry as to the status of the application. Manual of Patent Examining Procedure Section 709; 37 C.F.R. 1.103.


John F. Terapane
Director, Group 1200
Organic Chemistry

631092



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
077831,092	12/19/90	FUJIKAWA	49-146-0-00N

12M1/0313

OBLON, SPIVAC, MC CLELLAND,
MAIER & NEUSTADT
FOURTH FLOOR
1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VA 22202

EXAMINER: SPRINGFIELD	
ART UNIT	PAPER NUMBER 14

DATE MAILED:
03/13/95

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents

Action in this application is further suspended for six months from the date of this letter due to a possible interference.

Upon expiration of the period of suspension, applicants should again make an inquiry as to the status of the application. Manual of Patent Examining Procedure Section 709; 37 CFR 1.103.

Richard V. Fisher
Richard V. Fisher, Director
Patent Examining Group 1200
Organic Chemistry



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
07/631,092	12/19/90	FILTKANG	43-144-D-000

12M273215
 OSLOM, SPIVAC, MC CLELLAND,
 MAIER & NEUSTADT
 FOURTH FLOOR
 1755 JEFFERSON DAVIS HIGHWAY
 ARLINGTON, VA 22202

SPRING EXAMINER	
ART UNIT	PAPER NUMBER
1201	15

DATE MAILED:
12/15/95

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents

Action in this application is further suspended for six months from the date of this letter due to a possible interference.

Upon expiration of the period of suspension, applicants should again make an inquiry as to the status of the application. Manual of Patent Examining Procedure Section 709; 37 CFR 1.103.

APPROVED

Richard V. Fisher
 RICHARD V. FISHER

Richard V. Fisher, Director
 Patent Examining Group 1200
 Organic Chemistry



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
077631, 032	12/19/90	FUJIKAWA	49-146-0-CON

12M2/0918
 OBLON, SPIVAC, MC CLELLAND,
 MAIER & NEUSTADT
 FOURTH FLOOR
 1755 JEFFERSON DAVIS HIGHWAY
 ARLINGTON, VA 22202

EXAMINER	
SPRINGER, D	
ART UNIT	PAPER NUMBER
	16

DATE MAILED: 09/18/96

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents

1 - PATENT APPLICATION FILE COPY



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
---------------	-------------	-----------------------	---------------------

EXAMINER

ART UNIT	PAPER NUMBER
----------	--------------

10

DATE MAILED:

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents.

Action in this application is further suspended for six months from the date of this letter due to a possible interference.

Upon expiration of the period of suspension, applicants should again make an inquiry as to the status of the application. Manual of Patent Examining Procedure Section 709; 37 CFR 1.103.

Richard V. Fisher, Director
Patent Examining Group 1200
Organic Chemistry



0049-0146-0 CONT

#17
M. Harmon
12/8/97

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
APPLICATION OF:

Yoshihiro FUJIKAWA, et al. : GROUP: 1201
SERIAL NUMBER: 07/631,092 : EXAMINER: Springer
FILED: December 19, 1990 :
FOR: QUINOLINE TYPE MEVALONOLACTONES

STATUS REQUEST

Honorable Commissioner of Patents & Trademarks
Washington, D.C. 20231

SIR:

The undersigned respectfully requests the status of the
above-captioned application.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Norman F. Oblon
Attorney of Record
Registration No. 24,618

Robert F. Gnuse
Registration Number 27,295

1755 Jefferson Davis Highway
Suite 400
Arlington, Virginia 22202
(703) 413-3000



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
 Address: COMMISSIONER OF PATENTS AND TRADEMARKS
 Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
07/631,092	12/19/90	Fujikawa et al.	49-146-O-CON

EXAMINER
 STOCKTON, L.

ART UNIT: 1613
 PAPER NUMBER: 18

DATE MAILED:

INTERVIEW SUMMARY

All participants (applicant, applicant's representative, PTO personnel):

- (1) Mr. Steven Kelber (3) Mr. Tsuchiya
 (2) Mr. Masuda (4) Mr. Johann Richter
 Date of Interview Sept. 24, 1998 (5) Laura L. Stockton

Type: Telephonic Personal (copy is given to applicant applicant's representative).

Exhibit shown or demonstration conducted: Yes No If yes, brief description: _____

Agreement was reached. was not reached.

Claim(s) discussed: ALL

Identification of prior art discussed: _____

Description of the general nature of what was agreed to if an agreement was reached, or any other comments: The claims are now in condition for allowance

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

1. It is not necessary for applicant to provide a separate record of the substance of the interview.

Unless the paragraph above has been checked to indicate to the contrary, A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a response to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW.

2. Since the Examiner's interview summary above (including any attachments) reflects a complete response to each of the objections, rejections and requirements that may be present in the last Office action, and since the claims are now allowable, this completed form is considered to fulfill the response requirements of the last Office action. Applicant is not relieved from providing a separate record of the interview unless box 1 above is also checked.

Examiner Note: You must sign this form unless it is an attachment to another form.

FORM PTOL-413 (REV.1-96)

Laura L. Stockton

Interview Summary	Application No. 07/631,092	Applicant(s) Yoshihiro Fujikawa et al.
	Examiner Laura L. Stockton	Group Art Unit 1613



All participants (applicant, applicant's representative, PTO personnel):

- (1) Laura L. Stockton (3) _____
 (2) Mr. Steven B. Kelber {Registry Number 30,073} (4) _____

Date of Interview Sep 28, 1998

Type: Telephonic Personal (copy is given to applicant applicant's representative).

Exhibit shown or demonstration conducted: Yes No. If yes, brief description:

Agreement was reached. was not reached.

Claim(s) discussed: 10

Identification of prior art discussed:

Description of the general nature of what was agreed to if an agreement was reached, or any other comments:

The Examiner called Applicants representative for permission to cancel claim 10 since it would appear from Applicants' remarks in Amendment B {Paper No. 3} filed December 19, 1990 that claim 10 was considered canceled. The Examiner also discussed the undue length of the abstract and verified that the priority documents were submitted in the parent application.

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendments which would render the claims allowable is available, a summary thereof must be attached.)

1. It is not necessary for applicant to provide a separate record of the substance of the interview.

Unless the paragraph above has been checked to indicate to the contrary, A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a response to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW.

2. Since the Examiner's interview summary above (including any attachments) reflects a complete response to each of the objections, rejections and requirements that may be present in the last Office action, and since the claims are now allowable, this completed form is considered to fulfill the response requirements of the last Office action. Applicant is not relieved from providing a separate record of the interview unless box 1 above is also checked.

**LAURA L. STOCKTON
 PATENT EXAMINER
 ART UNIT 1613**

Examiner Note: You must sign and stamp this form unless it is an attachment to a signed Office action.



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
--------------------	-------------	-----------------------	---------------------

077631,092	12/19/90	FUJIKAWA	Y 49-146-0-CON
------------	----------	----------	----------------

HM42/0930
OBLON, SPIVAC, MC CLELLAND,
MAIER & NEUSTADT
FOURTH FLOOR
1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON VA 22202

EXAMINER

STOCKTON, L

ART UNIT	PAPER NUMBER
----------	--------------

1613 20D

DATE MAILED: 09/30/98

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

NOTICE OF ALLOWABILITY

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

- This communication is responsive to _____
- The allowed claim(s) are 36-40 now renumbered claims 1-5, respectively
- The drawings filed on _____ are acceptable.

- Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - All Some* None of the CERTIFIED copies of the priority documents have been
 - received.
 - received in Application No. (Series Code/Serial Number) 07/233,752
 - received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

- Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.
- Applicant MUST submit NEW FORMAL DRAWINGS
 - because the originally filed drawings were declared by applicant to be informal.
 - including changes required by the Notice of Draftperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. _____
 - including changes required by the proposed drawing correction filed on _____, which has been approved by the examiner.
 - including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftperson.

- Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

- Notice of References Cited, PTO-892
- Information Disclosure Statement(s), PTO-1449, Paper No(s) _____
- Notice of Draftperson's Patent Drawing Review, PTO-948
- Notice of Informal Patent Application, PTO-152
- Interview Summary, PTO-413
- Examiner's Amendment/Comment
- Examiner's Comment Regarding Requirement for Deposit of Biological Material
- Examiner's Statement of Reasons for Allowance

Laura L. Stockton
 Laura L. Stockton
 Patent Examiner
 Art Unit 1613

Art Unit: 1613

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Steven B. Kelber on September 28, 1998.

2. The application has been amended as follows:
Cancel **claim 10**.

Abstract:

See attached.

Art Unit: 1613

3. The following is an examiner's statement of reasons for allowance. This invention relates to mevalonolactone derivatives having a quinoline ring. The closest prior art of record {U.S. Pat. 5,753,675} generically teach the instant claimed compounds. However, the executed Declaration submitted June 18, 1992 {Paper No. 9} was persuasive in showing that the instant claimed compounds have unexpected results {also see Paper No.7}. Therefore, the instant claimed compounds were found unobvious over the art of record.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura L. Stockton whose telephone number is (703) 308-1875.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1235.

Application/Control Number: 07/631,092

Page 4

Art Unit: 1613

A facsimile center has been established. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier numbers for accessing the facsimile machine are (703) 308-4556 or 305-3592.



Laura L. Stockton

Patent Examiner

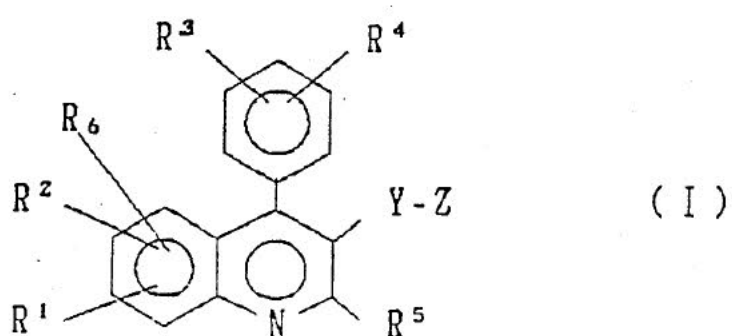
Art Unit 1613, Group 1610

Technology Center 1

September 28, 1998

ABSTRACT

Described herein are mevalonolactone derivatives having a quinoline ring of formula (I)

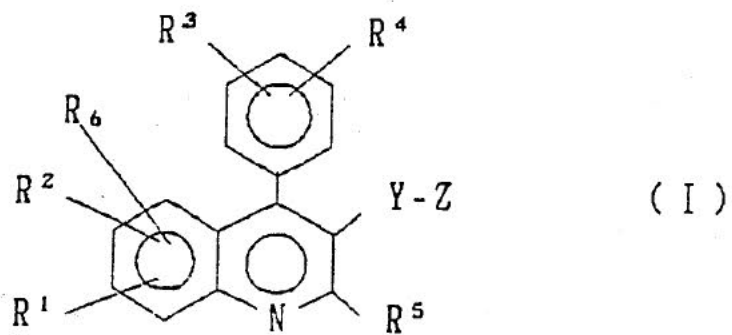


wherein the R¹, R², R³, R⁴, R⁵, Y and Z variables are described therein.

631092

ABSTRACT

Described herein are mevalonolactone derivatives having a quinoline ring of formula (I)



wherein the R¹, R², R³, R⁴, R⁵, Y and Z variables are described therein.

Notice of References Cited

Application No. 07/631,092	Applicant(s) Yoshihiro Fujikawa et al.	
Examiner Laura L. Stockton	Group Art Unit 1613	Page 1 of 1

U.S. PATENT DOCUMENTS

	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
A	5,753,675	05-1998	Wattanasin	514	311
B					
C					
D					
E					
F					
G					
H					
I					
J					
K					
L					
M					

FOREIGN PATENT DOCUMENTS

	DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
N						
O						
P						
Q						
R						
S						
T						

NON-PATENT DOCUMENTS

	DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
U		
V		
W		
X		



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

HM4278930

ORLON SPIVAC, MC CLELLAND,
MAIER & NEUSTADT
FOURTH FLOOR
1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON VA 22202

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
077631,092	12/19/90	005	STOCKTON, L	1613 09/30/90
First Named Applicant	FUTAKAWA, YUSHIHIRO			

TITLE OF INVENTION QUINOLINE TYPE NEVALONOLACTONES

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
1	49-146-0-CON	514-311,000	391 UTILITY	NO	\$1320.00	12/30/90

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.

THE ISSUE FEE 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.

HOW TO RESPOND TO THIS NOTICE:

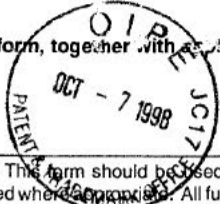
- I. Review the SMALL ENTITY status shown above.
 - If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:
 - A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
 - B. If the status is the same, pay the FEE DUE shown above.
 - If the SMALL ENTITY is shown as NO:
 - A. Pay FEE DUE shown above, or
 - B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.
- II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.
- III. All communications regarding this application must give application number and batch number. Please direct all communications prior to issuance to Box 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.

PATENT AND TRADEMARK OFFICE COPY

PART B—ISSUE FEE TRANSMITTAL

Complete and mail this form, together with the fees, to: **Box ISSUE FEE
Assistant Commissioner for Patents
Washington, D.C. 20231**



2952
10/13/98

2952 142-1320

MAILING INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE. Blocks 1 through 4 should be completed when appropriate. All further correspondence including the Issue Fee Receipt, the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

Note: The certificate of mailing below can only be used for domestic mailings of the Issue Fee Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing.

Certificate of Mailing

I hereby certify that this Issue Fee Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Box Issue Fee address above on the date indicated below.

CURRENT CORRESPONDENCE ADDRESS (Note: Legibly mark-up with any corrections or use Block 1)

H064270930
OBLON, SPIVAK, MC CLELLAND,
MAIER & NEUSTADT
FOURTH FLOOR
1755 JEFFERSON DAVIS HIGHWAY
ARLINGTON VA 22202

(Depositor's name)

(Signature)

(Date)

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
07/631,092	12/19/90	005	STOCKTON, L 1613	09/30/98
First Named Applicant: FUJIKAWA, YOSHIHIRO				

TITLE OF INVENTION: QUINOLINE TYPE MEVALONOLACTONES

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
49-146-0-CON	514-311.000	091	UTILITY	NO	\$1320.00	12/30/98

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). Use of PTO form(s) and Customer Number are recommended, but not required.
- Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47) attached.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1. OBLON, SPIVAK,
2. McCLELLAND, MAIER
3. & NEUSTADT, P.C.

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)
PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the PTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.
- (A) NAME OF ASSIGNEE
Nissan Chemical Industries Ltd.
- (B) RESIDENCE: (CITY & STATE OR COUNTRY)
Tokyo, JAPAN
- Please check the appropriate assignee category indicated below (will not be printed on the patent)
- individual corporation or other private group entity government

- 4a. The following fees are enclosed (make check payable to Commissioner of Patents and Trademarks):
- Issue Fee
 Advance Order - # of Copies -0-
- 4b. The following fees or deficiency in these fees should be charged to:
DEPOSIT ACCOUNT NUMBER 15-0030
(ENCLOSE AN EXTRA COPY OF THIS FORM)
- Issue Fee
 Advance Order - # of Copies -0-

The COMMISSIONER OF PATENTS AND TRADEMARKS IS requested to apply the Issue Fee to the application identified above.

(Authorized Signature) [Signature] (Date) 10/15/98

NOTE: The Issue Fee will not be accepted from anyone other than the applicant; a registered attorney or agent or the assignee of the patent. Inquiries should be directed to the records of the Patent and Trademark Office.

10/15/1998 DCOATES 00000069 07631092
01 FC:142 1320.00 OP

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending on the needs of the individual case. Any comments on the amount of time required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND FEES AND THIS FORM TO: Box Issue Fee, Assistant Commissioner for Patents, Washington D.C. 20231

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMIT THIS FORM WITH FEE

REMARKS:

Applicants have cancelled Claim 10 of the above-captioned patent application, the subject matter of which is being pursued in a divisional application, filed simultaneously herewith. Applicants have discovered that the subject matter of Claim 10, and related subject matter, exhibits unobvious and distinguishing properties, with respect to the genus circumscribed by the remaining claims of the above-captioned application, as well as the claims of the patent with which an Interference is to be declared. Accordingly, that claim will be pursued in a separate application.

Applicants look forward to the Declaration of Interference in the above-captioned application.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Norman F. Oblon
Registration No.: 24,618

Steven B. Kelber
Registration No.: 30,073
Attorneys of Record

Fourth Floor
1755 South Jefferson Davis Highway
Arlington, Virginia 22202
703-521-5940

PTO UTILITY GRANT

Paper Number 21

The Commissioner of Patents
and Trademarks

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.

If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.

If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to a statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extension.

Bruce Lehman
Commissioner of Patents and Trademarks

Ollie M. Person
Attest

The
United
States
of
America



Form PTO-1584 (Rev. 2/97)

PATENT APPLICATION FEE DETERMINATION RECORD
For Fees Effective Nov. 5, 1990

Application or Docket Number

631092

CLAIMS AS FILED - PART I			SMALL ENTITY		OR		OTHER THAN SMALL ENTITY	
FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	RATE	FEE			RATE	FEE
BASIC FEE				\$ 315.00	OR			\$ 630.00
TOTAL CLAIMS	2 minus 20 = *		x \$10 =		OR		x \$20 =	
INDEPENDENT CLAIMS	1 minus 3 = *		x 30 =		OR		x 60 =	
MULTIPLE DEPENDENT CLAIM PRESENT			+ 100 =		OR		+ 200 =	
			TOTAL		OR	TOTAL	630	

* If the difference in column 1 is less than zero, enter "0" in column 2

CLAIMS AS AMENDED - PART II					SMALL ENTITY		OR		OTHER THAN SMALL ENTITY		
AMENDMENT A	(Column 1)	(Column 2)	(Column 3)	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE	
	Total	* 40	Minus	** 20	=	20	x \$10 =		OR	x \$20 =	400
	Independent	* 1	Minus	*** 3	=	-	x 30 =		OR	x 60 =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM						+ 100 =		OR	+ 200 =		
					TOTAL			OR	TOTAL	400	

AMENDMENT B	(Column 1)	(Column 2)	(Column 3)	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE	
	Total	*	Minus	**	=		x \$10 =		OR	x \$20 =	
	Independent	*	Minus	***	=		x 30 =		OR	x 60 =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM						+ 100 =		OR	+ 200 =		
					TOTAL			OR	TOTAL		

AMENDMENT C	(Column 1)	(Column 2)	(Column 3)	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE	
	Total	*	Minus	**	=		x \$10 =		OR	x \$20 =	
	Independent	*	Minus	***	=		x 30 =		OR	x 60 =	
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM						+ 100 =		OR	+ 200 =		
					TOTAL			OR	TOTAL		

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

PATENT NUMBER		ORIGINAL CLASSIFICATION	
		CLASS	SUBCLASS
		514	311
APPLICATION SERIAL NUMBER		CROSS REFERENCE(S)	
07/631,092			
APPLICANT'S NAME (PLEASE PRINT)		CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)
Yoshihiro Fujikawa et al.		546	173
IF REISSUE, ORIGINAL PATENT NUMBER			
INTERNATIONAL CLASSIFICATION			
A 61 K	31 / 47		
C 07 D	215 / 12		
		GROUP ART UNIT	ASSISTANT EXAMINER (PLEASE STAMP OR PRINT FULL NAME)
		1613	Laura L. Stockton
			PRIMARY EXAMINER (PLEASE STAMP OR PRINT FULL NAME)

PTO 270
(REV. 5-91)

ISSUE CLASSIFICATION SLIP

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE



SEARCHED			
Class	Sub.	Date	Exmr.
546	167 173	12/13/91	RICHTER
514	311	"	"
	Update	6/29/92	"
	Revised update	9/26/92	JS

SEARCH NOTES		
	Date	Exmr.
Chem Abstracts 1907-91	12/13/91	RICHTER
Quinolines	↓	↓
CAS ONLINE STRUCTURAL SEARCH	↓	↓
Update	6/29/92	"

JS

INTERFERENCE SEARCHED			
Class	Sub.	Date	Exmr.
546	167 173	6/29/92	RICHTER
514	311	"	"

PALM III APPLICATION FILE DATA CODING SHEET

U.S. DEPARTMENT OF COMMERCE-PATENT & TM OFFICE

PREPARED BY

Wason

FORMAT NO. 2	Serial No.	TYPE APPL	FILING DATE			SPECIAL HANDLING	GROUP ART UNIT	CLASS	SHEETS OF DRAWINGS	ASGT?	TOTAL CLAIMS	INDEPENDENT CLAIMS	SMALL ENTITY?	FILING FEE RECEIVED
07	07	631092	1	2	9	2	129	546	1	N	2	1	163	

FORMAT NO. 3	ATTORNEY DOCKET NUMBER (12 spaces)	Atty.'s Reg. Nos.	FORMAT NO. 4 Applicant's Name & Address	FORMAT NO. 5 Title of Invention	FORMAT NO. Address
	49-146-0-CON	<input type="checkbox"/> APPL. PAPERS <input type="checkbox"/> CODING SHEET	<input checked="" type="checkbox"/> APPL. PAPERS <input type="checkbox"/> CODING SHEET	<input type="checkbox"/> APPL. PAPERS <input type="checkbox"/> CODING SHEET	<input type="checkbox"/> APPL. PAI

FORMAT NO. 8	RECORD	CONTINUITY CODE			PARENT APPLICATION SERIAL NUMBER	PARENT FILING DATE			STATUS CODE	PA			
		8	0			Month	Day	Year					
	RECORD	8	0	1	0	7	2	3	3	7	5	2	
	RECORD	8	0	2	0								
	RECORD	8	0	3	0								
	RECORD	8	0	4	0								
	RECORD	8	0	5	0								
	RECORD	8	0	6	0								
	RECORD	8	0	7	0								
	RECORD	8	0	8	0								
	RECORD	8	0	9	0								
	RECORD	8	1	0	0								

FORMAT NO. 9	RECORD	COUNTRY CODE			PCT/FOREIGN APPLICATION SERIAL NUMBER	FILING DATE		
		9	0			Month	Day	Year
	RECORD	9	0	1				
	RECORD	9	0	2				
	RECORD	9	0	3				
	RECORD	9	0	4				
	RECORD	9	0	5				
	RECORD	9	0	6				
	RECORD	9	0	7				
	RECORD	9	0	8				
	RECORD	9	0	9				
	RECORD	9	1	0				

MORE ON SUPPLEMENTAL CODING SHEET

FOREIGN PRIORITY CLAIMED?
 YES
 NO

APPLICATION PAPERS

MORE ON SUPPLEMENTAL CODING SHEET

Staple Issue Slip Here

	INIT.	DATE
POSITION	S	12-91
CLASSIFIER	2H	12-91
EXAMINER	B.W.	1-2-91
REVIEWER		
APPROVER		
SERIAL NO.		
FILE NO.		

INDEX OF CLAIMS

Claim	Date
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	
35	
36	
37	
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	
50	

SYMBOLS
 Searched
 Indexed
 Serialized
 Filed
 Mailed
 Other

Claim	Date
51	
52	
53	
54	
55	
56	
57	
58	
59	
60	
61	
62	
63	
64	
65	
66	
67	
68	
69	
70	
71	
72	
73	
74	
75	
76	
77	
78	
79	
80	
81	
82	
83	
84	
85	
86	
87	
88	
89	
90	
91	
92	
93	
94	
95	
96	
97	
98	
99	
100	

31092

Briefed 120

100

APPROVED FOR LICENSE

INITIALS 91 JAN 30 PM 4-12

GROUP 120



Entered or Counted

CONTENTS

Received or Mailed

Entered or Counted	CONTENTS	Received or Mailed
	1. Application _____ papers.	
	2. <i>Pre Ammt A</i>	<i>12-19-90</i>
	3. <i>Pre Ammt B</i>	<i>12-19-90</i>
	4. <i>Priority Paper</i>	<i>12-19-90</i>
	5. <i>Pre Ammt C</i>	<i>20 Feb 91</i>
	6. <i>Declaration</i>	<i>04/22/91</i>
	7. <i>3 mos.</i>	<i>12-18-91 3/16</i>
	8. <i>Reg Time 9th 3 mos</i>	<i>6/18/92</i>
	9. <i>Reg person + Declaration</i>	<i>6/18/92</i>
	10. <i>Suspended (6)</i>	<i>9-9-92 8/92</i>
	11. <i>Letter</i>	<i>03-11-93</i>
<i>5/17/93</i>	12. <i>Let. of Suspension (6 mos)</i>	<i>5/17/93</i>
<i>4/18/94</i>	13. <i>Letter</i>	<i>4-19-94</i>
<i>3-10-95</i>	14. <i>Letter of Susp (6 mos)</i>	<i>3-13-95</i>
<i>12/15/95</i>	15. <i>Letter of Susp (6 mos)</i>	<i>12-15-95</i>
<i>9/17/96</i>	16. <i>Letter</i>	<i>9/18/96</i>
	17. <i>Status Letter</i>	<i>1/28/97</i>
	18. <i>Interview Summary Record</i>	<i>9-24-98</i>
	19. <i>Examiner Interview Summary Record</i>	<i>9-28-98</i>
	20. <i>Examiner's Amendment D</i>	<i>9-30-98 10/91</i>
	21. PTO GRANT FEB 15 1998	
	22.	
	23.	
	24.	
	25.	
	26.	
	27.	
	28.	
	29.	
	30.	
	31.	
	32.	