



No. 09-106060-00004-0000

Fecha: 2011-02-15 15:37:37 Dep. 2020 DIR.NUEVASCR
Tra. 11 PATENTEIYII Eve: 378 FASENACIONALI
Act. 400 OPOSIOBSERVTER Folios: 43

FORMULARIO ÚNICO DE OPOSICIÓN

①

OPOSICION A:

- | | |
|--|--|
| ☒ Patente de Invención. | ☐ Marca Colectiva. |
| ☐ Patente de Modelo de Utilidad. | ☐ Marca de Certificación. |
| ☐ Diseño Industrial. | ☐ Lema Comercial. |
| ☐ Esquema de Trazado para Circuitos Integrados. | |
| ☐ Marcas de Productos o Servicios. | |

②

SOLICITUD
PUBLICADA

Número del expediente: 09.106.060

Solicitante: DAIICHI SANKYO COMPANY LIMITED

LUZ CLEMENCIA SUAREZ DE PAEZ

Apoderado:

Título de la nueva creación o denominación del signo: UNA COMPOSICION FARMACEUTICA
QUE CONTIENE (A) N1-(5-CLOROPIRIDIN-2-IL)-N2-((1S,2R,4S)-4-(DIMETILAMINO)CARBONIL)-2-[[5-METIL-4,5,6,7-
TETRAHIDROTHIAZOL [5,4-C]TRIAZIN-2-IL)-CARBONIL]-AMINO)-CICLOHEXIL)-ETANODIAMIDA

Gaceta: 622

③

OPOSICION PRESENTADA POR:

SOLICITANTE	Nombre: LABORATORIOS SYNTHESIS S.A.S.	IDENTIFICACION	
	Dirección: Carrera 44 N° 20 C 73	C.C. ☐	NIT ☒
	Nacionalidad o Domicilio: COLOMBIA	C.E. ☐	Otro ☐
	Lugar de Constitución: BOGOTA	Cual	
	Teléfono: 3692222 Fax: 3693542	Número	860.000.760-1
	E-mail:		
REPRESENTANTE O APODERADO	Nombre: ELINA ISAURA MORENO BOHORQUEZ	IDENTIFICACION	
	Dirección: CARRERA 104 N° 119-95 OF 104	C.C. ☒	NIT ☐
	Teléfono: 2131213 Fax: 6121979	C.E. ☐	Otro ☐
	E-mail: negocios@optimum-co.com	Cual	
		Número	51.975.664 TP 83823

④

FUNDAMENTOS DE LA OPOSICION

Art. 14, 16, 18, 20 y 30 de la Decisión 486 de la CAN

Causal: No cumple con los requisitos de patentabilidad.

Signo opositor:

Justificación:

La presente solicitud no cumple con los requisitos de patentabilidad dado que lo
revelado, ya se encontraba en el estado de la técnica o es posible derivarlo de la
misma tal y como se demostrará en el capítulo "Fundamento de Hechos".

⑤ Comprobante de pago No. _____

Fecha _____

⑥ ANEXOS

- ☒ Comprobante de pago de la tasa.
- ☒ Poderes, si fuere el caso.
- ☒ Pruebas de los fundamentos de la oposición.
- ☐ Documentos que acrediten el legítimo interés, si fuere el caso.
- ☒ Documento que acredita la existencia y representación legal de las partes, cuando sean personas jurídicas.

⑦

NOMBRE: ELIANA ISaura MORENO BOHÓRQUEZ

FIRMA: _____

C.C. 51.975.664

TP. 83823



Derecho de la Competencia, Propiedad
Industrial y Comercio Exterior

Señora Jefe,

DIVISIÓN DE NUEVAS CREACIONES

Superintendencia de Industria y Comercio

E. S. D.

Referencia : Expediente N° 09 106.060

Asunto : Oposición a la solicitud de patente de Invención titulada
*“UNA COMPOSICIÓN FARMACÉUTICA QUE
 CONTIENE (A) N1-(5-CLOROPIRIDIN-2-IL)-N2-((1S,2R,4S)-
 4- [DIMETIL AMINO) CARBONIL] -2-(((5-METIL-4,5,6,7-
 TETRAHIDRO TIAZOL [5,4-C] PIRIDIN-2-IL) CARBONIL]
 AMINO) CICLOHEXIL) ETANODIAMIDA”*

Solicitante : DAIICHI SANKYO COMPANY LIMITED

Opositora : LABORATORIOS SYNTHESIS S.A.S.

Publicada en la Gaceta de la Propiedad Industrial

N° 622 del 19 de Noviembre de 2010

Yo, *ELIANA ISAURA MORENO BOHORQUEZ*, abogada en ejercicio, identificada como aparece al pie de su firma, con tarjeta profesional No. 83823 del Consejo Superior de la Judicatura, en mi condición de apoderada de la sociedad LABORATORIOS SYNTHESIS S.A.S. conformada bajo las leyes de la República de Colombia y domiciliada en la ciudad de Bogotá, Colombia, atentamente manifiesto que estando dentro del término de ley y por orden expresa de mi representada, presento oposición a la concesión del registro de la Patente de Invención titulada *“UNA COMPOSICIÓN FARMACÉUTICA QUE CONTIENE (A) N1-(5-CLOROPIRIDIN-2-IL)-N2-((1S,2R,4S)-4- [DIMETIL AMINO) CARBONIL] -2-(((5-METIL-*

4,5,6,7-TETRAHIDRO TIAZOL [5,4-C] PIRIDIN-2-IL) CARBONIL] AMINO} CICLOHEXIL) ETANODIAMIDA”, cuyo titular es **DAIICHI SANKYO COMPANY LIMITED**, y pido a Usted declarar fundada esta oposición y en consecuencia negar el registro de la patente solicitada.

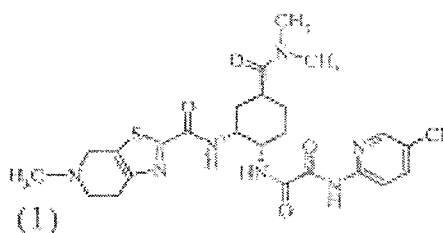
1. INTERÉS PARA ACTUAR

Conforme a lo dispuesto en el artículo 42 de la Decisión 486 de 2000 de la CAN, estando dentro del término estipulado por la ley, manifiesto el legítimo interés de nuestra representada para oponerse al registro de la patente de la referencia, atendiendo a que la solicitud pretendida no cumple con los requisitos dispuestos en la ley como se analizará más adelante y de ser concedida afectaría directamente la comercialización de algunos productos de mi representada, que contienen, en particular **un ácido de p-toluenosulfónico**. Por lo tanto, solicito respetuosamente a ese Despacho se sirva tener en cuenta la presente oposición dentro del trámite administrativo que se surte en esta Superintendencia.

2. FUNDAMENTOS DE HECHOS

2.1. La solicitud objeto de la presente fue presentada el 28 de septiembre de 2009, reivindicando prioridad bajo la solicitud JP20070087327 del 2007-03-29; y fue publicada en Colombia, en la Gaceta de la Propiedad Industrial N° 622 del 19 de **noviembre de 2010**, cuya publicación internacional corresponde a la WO2008129846 del 2008-10-30.

2.2. La solicitud colombiana 09 106.060 objeto de la presente oposición, se refiere a una composición farmacéutica que contiene (A) N1-(5-cloropiridin-2-il)-N2-((1S,2R,4S)-4-[(dimetilamino) carbonil]-2-[(5-metil-4,5,6,7-tetrahidrotiazol[5,4-c]piridin-2-il)carbonil]amino)ciclohexil)etanodiamida, representada por la fórmula (1):



una sal de ésta aceptable farmacológicamente, o un hidrato de cualquiera de éstas, y (B) una o más especies seleccionadas del grupo que consta de un alcohol sacaroso (polialcohol) y un aditivo que se expande con el agua.

2.3. Ahora bien, con base en el artículo 14 de la Decisión 486 de la CAN consagra lo siguiente: “Los países miembros otorgarán patentes para las invenciones, sean de producto o procedimiento, en todos los campos de la tecnología, siempre que sean nuevas, tengan nivel inventivo y sean susceptibles de aplicación industrial”. Así las cosas, las invenciones objeto de patente deben ser nuevas y tener nivel inventivo. Bien, pues antes de la fecha de prioridad de esta solicitud se encuentran los siguientes documentos que afecta la patentabilidad de la presente solicitud:

- D1: US20050119486 publicada el 2 de Junio de 2005.

2.4. Ahora bien, el documento D1, particularmente en la descripción revela una composición farmacéutica de hydrochloride of N1-((5-chloropyridin-2-yl)-N2-((1S,2R,4S)-4-[(dimethylamino)carbonyl]-2-[(5-methyl-4,5,6,7-tetrahydrothiazolo[5,4-c]pyridin-2-yl)carbonyl]amino)cyclohexyl)ethanodiamide.

-c)pyridine-2-yl) carbonyl]amino }cyclohexyl)ethanediamide en el ejemplo número 192 de la página 89 y también indica que una composición farmacéutica que contiene dicho compuesto se produce como una preparación sólida, tal como una forma de dosificación de una tableta, cápsula y gránulos y un acelerador de disolución en la descripción de D1 en la página 41 en los párrafos 372 a 374. Además, el documento D1 indica que un compuesto (1) puede ser una sal de ácido p-toluensulfónico y se forma como un hidrato según sea necesario con base en los definidos en la página 23, párrafo 140. Así las cosas, como lo evidencia dicho documento D1, revela una composición farmacéutica (1) similar producida como una preparación sólida, tal como una forma de dosificación de una tableta y que el compuesto (1) puede ser una sal de ácido p-toluensulfónico y se forma como un hidrato, por lo que la presente solicitud no es novedosa pues lo revelado ya se encontraba en el estado de la técnica.

2.5. Por lo tanto, este documento objeto de oposición a la luz del documento D1 carece evidentemente de NOVEDAD.

2.6. En consecuencia y de acuerdo a lo descrito anteriormente, se deriva que la solicitud colombiana 09 106.060 no puede pretender un monopolio por patente toda vez que lo que pretende no cumple con uno de los tres requisitos necesarios para su protección.

2.7. Que por consiguiente, respecto a la solicitud pretendida se tiene que:

2.7.1. **CARECE DE NOVEDAD:** Según la decisión 486 de la Comunidad Andina de Naciones, Artículo 16.- *“Una invención se considerará nueva cuando no está comprendida en el estado de la técnica. El estado de la técnica comprenderá todo lo que haya sido accesible al público por una descripción escrita u oral, utilización, comercialización o cualquier otro medio antes de la fecha de presentación de la solicitud*

de patente o, en su caso, de la prioridad reconocida.”. A la fecha de prioridad, 29 de marzo de 2007 ya era conocido, pues como se demostró, era parte del arte anterior con base en el documento D1, revela una composición farmacéutica (1) similar producida como una preparación sólida, tal como una forma de dosificación de una tableta y que el compuesto (1) puede ser una sal de ácido p-toluensulfónico y se forma como un hidrato,, sobre el cual busca protección en el capítulo reivindicatorio.

2.8. Dado lo anterior, es posible deducir que la solicitud y lo reivindicado no es objeto de patentabilidad pues es contrario a lo que dicta la Decisión 486 de la Comunidad Andina de Naciones, Artículo 14.- *“Los Países Miembros otorgarán patentes para las invenciones, sean de producto o de procedimiento, en todos los campos de la tecnología, siempre que sean nuevas, tengan nivel inventivo y sean susceptibles de aplicación industrial.”*. La solicitud pretendida no cumple con uno de los tres requisitos de patentabilidad.

2.9. Por todo lo anterior, atentamente solicito a usted que se sirva declarar fundada *“UNA COMPOSICIÓN FARMACÉUTICA QUE CONTIENE (A) N1-(5-CLOROPIRIDIN-2-IL)-N2-((1S,2R,4S)-4- [DIMETIL AMINO) CARBONIL] -2-[[[(5-METIL-4,5,6,7-TETRAHIDRO TIAZOL [5,4-C] PIRIDIN-2-IL) CARBONIL] AMINO) CICLOHEXIL) ETANODIAMIDA”*, cuyo titular es **DAIICHI SANKYO COMPANY LIMITED**, solicitud Colombiana que apareció publicada en la Gaceta de la Propiedad Industrial N° 622 del 19 de Noviembre de 2010.

3. PRUEBAS

De conformidad con lo dispuesto por las normas vigentes, solicito a usted tener como prueba en este asunto los siguientes:

- D1: US20050119486 publicada el 2 de Junio de 2005.

4. FUNDAMENTO DE DERECHO

Fundamento esta observación en las normas legales siguientes:

- 4.1. Numeral 1 del artículo 586 del Código de Comercio.
- 4.2. Artículo 42 de la Decisión 486 de la Comisión del Acuerdo de Cartagena.
- 4.3. En las demás normas concordantes.

5. ANEXOS

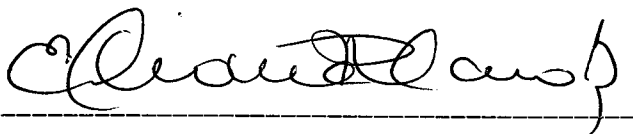
Para los efectos correspondientes anexo al presente escrito los siguientes documentos:

1. Poder para actuar en el presente.
2. Documento que acredita al representante legal de **LABORATORIOS SYNTHESIS S.A.S.**
3. Recibo de caja del respectivo pago de tasa.
4. Copias de los documentos:
 - D1: US20050119486 publicada el 2 de Junio de 2005.

6. NOTIFICACIONES

Para efectos de notificaciones que por disposición del artículo 50 del Decreto 01 de 1984 debe hacer su Despacho, informo que mi representada y la suscrita recibiremos notificaciones en la Secretaría de su Despacho o en mis oficinas situadas en la Carrera 13 N° 119-95, Of. 104 de esta ciudad de Bogotá.

Señor Superintendente,



ELIANA ISAURA MORENO BOHORQUEZ

C.C. 51'975.664 de Bogotá

T.P.A. 83823 del C.S. de la J.

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO

NIT : 800.176.089-2

-/-

10



RECIBO DE CAJA

No. 11 - 0013906

Bogotá D.C., Febrero 15 de 2011 - 15:27:44

RECIBIDO DE : LABORATORIOS SYNTHESIS S.A.S

NI 860.000.760

*** Soporte del Pago ***

TIPO PAGO	BANCO	CUENTA	No. PAGO	FECHA PAGO	VR. PAGO
CONSIGNACION	BANCO DE BOGOTA	062754387	420217840	15/02/2011	1.216.000.00

*** Conceptos Pagados ***

CANT.	RENTISTICO	CONCEPTO	Vr.UNDITARIO	Vr.CONCEPTO		
1	50005-01-04	PRESENTACION DE OBSERVACIONES A SOLICITUDES	12	MARCAS Y LEMAS COMERCIALES	304.000.00	304.000.00
					<u>\$304.000.00</u>	
					=====	

SON: **TRESCIENTOS CUATRO MIL PESOS MONEDA CORRIENTE**

Responsable: _____

Recibo de Caja Aplicado al Expediente No. _____

SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO



No. 09-106060- -00004-0000

Fecha: 2011-02-15 15:37:37 Dep. 2020 DIR.NUEVASCR
Tra. 11 PATENTEIYII Eve: 378 FASENACIONALI
Act. 400 OPOSIOBSERVTER Folios: 43

Sede Centro: Carrera 13 No. 27 - 00 Pisos 3,4,5 y 10 Bogotá, D.C.- Colombia

Web: www.sic.gov.co e-mai: info@sic.gov.co Conmutador: (571) 5870000 Fax: (571) 5870284 Linea: 018000-910165 Call Center: (571) 6513240

, Febrero 15 de 2011 - 15:27:45

PODER ESPECIAL

Yo, **LUIS PALACIOS ARAGÓN**, mayor de edad y vecino de la ciudad de Bogotá (Colombia), identificado como aparece al pie de mi firma, quien en el presente documento actúa en calidad de Gerente de la sociedad **LABORATORIOS SYNTHESIS S.A.S.** sociedad legalmente constituida y domiciliada en la ciudad de Bogotá (Colombia), por el presente documento otorgo a la doctora **ELIANA ISAURA MORENO BOHÓRQUEZ**, abogada en ejercicio, identificada como aparece al pie de su firma, con tarjeta profesional No. 83823 del C.S. de la J., poder especial, amplio y suficiente, para formular oposiciones u observaciones a la solicitud de patente No. **09 106.060**, titulada "**UNA COMPOSICIÓN FARMACÉUTICA QUE CONTIENE (A) N1-(5-CLOROPIRIDIN-2-IL)-N2-((1S,2R,4S)-4- [DIMETIL AMINO) CARBONIL] -2-[(5-METIL-4,5,6,7-TETRAHIDRO TIAZOL [5,4-C] PIRIDIN-2-IL) CARBONIL] AMINO} CICLOHEXIL) ETANODIAMIDA**", cuyo titular es **DAIICHI SANKYO COMPANY LIMITED**, publicada en la gaceta No. 622 del 19 de noviembre de 2010.

Nuestro apoderado queda facultado, de manera expresa, para realizar todo tipo de actos necesarios para llevar a cabo el trámite de la oposición, incluyendo, sin limitación, preparar y presentar solicitudes, hacer declaraciones, pagar tasas, contribuciones e impuestos, recabar los títulos o certificados. Asimismo quedan autorizados para impugnar administrativa todo lo que fuere resuelto en el expediente a que se hace expresa referencia en el presente poder, con todas las facultades generales y específicas que fuera requerido para ella.

De la misma manera, además de las facultades que le confiere la naturaleza del presente mandato, se encuentran facultados para recibir, desistir, transigir, sustituir, y reasumir el presente poder, incoar acciones, interponer recursos y demás facultades conferidas por la ley.

Dado y Firmado en Bogotá (Colombia) a los ____ días del mes de ____ de 2011.

LABORATORIOS SYNTHESIS S.A.S.

Cédula de Extranjería: No. 319788.

NIT: 860.000.760-1

Gerente

Acepto:

ELIANA ISAURA MORENO BOHÓRQUEZ

C.C. 51'975.664 de Bogotá

T.P.A. 83823 del C.S. de la J



200

REPUBLICA DE COLOMBIA



DILIGENCIA DE RECONOCIMIENTO

Compareció ante el Notario 18 del Circulo de Bogotá

quien exhibió la C

Expedida en

y declaró que la firma y huella que

aparecen en el presente documento

son suyas y que el contenido del mismo

es cierto.

BOGOTA, D.C.

15 FEB 2011

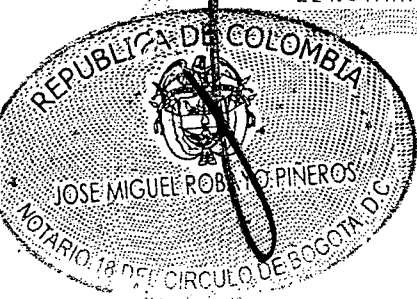
FIRMA

EL NOTARIO



HUELLA DEL INDICE DERECHO

NOTARIA DECIOCHO DEL CIRCULO DE BOGOTA D.C. LA HUELLA SE AUTENTICA POR SOLICITUD DEL INTERESADO





01



* 1 0 0 5 2 0 2 3 6 *

CAMARA DE COMERCIO DE BOGOTA

SEDE SALITRE

21 DE ENERO DE 2011

HORA 18:56:55

R030297709

HOJA : 1 DE 6

CERTIFICADO DE EXISTENCIA Y REPRESENTACION LEGAL O INSCRIPCION DE DOCUMENTOS

LA CAMARA DE COMERCIO DE BOGOTA, CON FUNDAMENTO EN LAS MATRICULAS E INSCRIPCIONES DEL REGISTRO MERCANTIL

CERTIFICA:

NOMBRE : LABORATORIOS SYNTHESIS S A S

N.I.T. : 860000760-1

DOMICILIO : BOGOTA D.C.

CERTIFICA:

MATRICULA NO: 00008059 DEL 23 DE MARZO DE 1972

CERTIFICA:

DIRECCION DE NOTIFICACION JUDICIAL : CRA 44 NO 20C 73

MUNICIPIO : BOGOTA D.C.

EMAIL DE NOTIFICACION JUDICIAL :

synthe@synthesis.com.co

DIRECCION COMERCIAL : CRA 44 NO 20C 73

MUNICIPIO : BOGOTA D.C.

EMAIL COMERCIAL :

synthe@synthesis.com.co

CERTIFICA:

CONSTITUCION: ESCRITURA PUBLICA NO.2078, NOTARIA 8 BOGOTA, DEL 27 DE JULIO DE 1.950, INSCRITA EL 10 DE AGOSTO DE 1.950, BAJO EL NO. 21.766 DEL LIBRO RESPECTIVO ACLARADA POR ESCRITURA NO. 3608 DEL 8 DE OCTUBRE DE 1.956 NOTARIA 8 DE BOGOTA INSCRITA EN ESTA - CAMARA DE COMERCIO EL 19 DE OCTUBRE DE 1.956 BAJO EL NO. 35.547 DEL LIBRO RESPECTIVO, SE CONSTITUYO LA SOCIEDAD DENOMINADA: "LABORATORIOS BALBAG".

CERTIFICA:

QUE POR ESCRITURA PUBLICA NUMERO 3997 OTORGADA EN LA NOTARIA 8 DE BOGOTA EL 24 DE NOVIEMBRE DE 1.952, INSCRITA EN ESTA CAMARA DE COMERCIO EL 1 DE DICIEMBRE DE 1.952, BAJO EL NUMERO 26.158 DEL LIBRO RESPECTIVO, LA SOCIEDAD CAMBIO SU NOMBRE DE: "LABORATORIOS --- BALBAG" POR EL DE "LABORATORIO SYNTHESIS" E INTRODUJO OTRAS REFORMAS.

CERTIFICA : _

QUE POR ESCRITURA PUBLICA NUMERO 6491 OTORGADA EN LA NOTARIA 1. - DE BOGOTA EL 24 DE DICIEMBRE DE 1.981, INSCRITA EN ESTA CAMARA DE COMERCIO EL 12 DE MARZO DE 1.982, BAJO EL NUMERO 113.297 DEL LIBRO IX, LA SOCIEDAD CAMBIO SU NOMBRE DE "LABORATORIOS SYNTHESIS - BALAVOINE Y CIA. S.C.A" POR EL DE "LABORATORIOS SYNTHESIS LTDA. Y CIA. S.C.A" E INTRODUJO OTRAS REFORMAS.

CERTIFICA:

QUE POR ESCRITURA PUBLICA NUMERO 8580 OTORGADA EN LA NOTARIA 3 DE BOGOTA EL 4 DE DICIEMBRE DE 1.973, INSCRITA EN ESTA CAMARA DE COMERCIO EL 7 DE ENERO DE 1.974, BAJO EL NUMERO 14.478 DEL LIBRO IX, LA SOCIEDAD SE TRASFORMO DE LIMITADA EN COMANDITA POR ACCIONES BAJO EL NOMBRE DE LABORATORIOS SYNTHESIS BALAVOINE Y CIA. S.C.A.

CERTIFICA:

QUE POR ACTA NO. 117 DE LA ASAMBLEA DE ACCIONISTAS, DEL 30 DE ABRIL DE 2010, INSCRITA EL 10 DE JUNIO DE 2010 BAJO EL NÚMERO 1390261 DEL LIBRO IX, LA SOCIEDAD DE LA REFERENCIA SE TRANSFORMO DE SOCIEDAD EN COMANDITA POR ACCIONES A SOCIEDAD POR ACCIONES SIMPLIFICADA BAJO EL NOMBRE DE: LABORATORIOS SYNTHESIS S.A.S.

CERTIFICA:

QUE POR E.P. NO.5.435 DEL 17 DE SEPTIEMBRE DE 1.996, NOTARIA PRIMERA DE SANTAFE DE BOGOTA, INSCRITA EL 30 DE SEPTIEMBRE DE 1.996, BAJO EL NO.556.909 DEL LIBRO IX, ADICIONADA POR LOS REGISTROS 557 146 DEL 1 DE OCTUBRE DE 1.996, Y 557.301 DEL 2 DE OCTUBRE DE 1996 DEL LIBRO IX, LA SOCIEDAD DE LA REFERENCIA COMUNICO QUE SE FUSIONO, ABSORBIENDO A LA SOCIEDAD "SYNTHESIS VETERINARIA LTDA Y CIA S C A"

CERTIFICA:

QUE POR E.P. NO.1024 DEL 28 DE FEBRERO DE 1997, DE LA NOTARIA 1. DE SANTAFE DE BOGOTA, INSCRITA EL 31 DE MARZO DE 1997, BAJO EL NUMERO 579245 DEL LIBRO IX, CELEBRO ACUERDO DE FUSIÓN CON LA SOCIEDAD PRODUCTOS DIETÉTICAS DIETESYN S.A, DONDE LA SOCIEDAD DE LA REFERENCIA FUE LA ABSORBENTE.

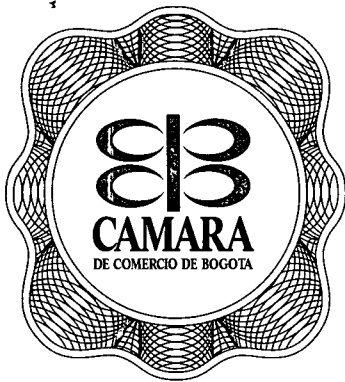
CERTIFICA:

QUE POR ACTA NO. 120 DE LA ASAMBLEA DE ACCIONISTAS DEL 29 DE JULIO DE 2010, INSCRITA EL 19 DE NOVIEMBRE DE 2010 BAJO EL NUMERO 01429837 DEL LIBRO IX, LA SOCIEDAD DE LA REFERENCIA (ABSORBENTE) ABSORBE MEDIANTE FUSIÓN A LAS SOCIEDADES INMUNOSYN SAS Y GYNOPHARM SAS LAS CUALES SE DISUELVEN SIN LIQUIDARSE.

CERTIFICA:

REFORMAS:

ESCRITURAS NO.	FECHA	NOTARIA	INSCRIPCION
4471	18-XII-1.956	8 BTA.	22-XII-1.956 NO. 36.077
3322	31-XII-1.958	8 BTA.	12-I-1.959 NO. 42.034
2322	22-IX-1.961	8 BTA.	29-IX-1.961 NO. 51.161
290	2-II-1.967	6 BTA.	24-II-1.967 NO. 71.304



01



* 1 0 0 5 2 0 2 3 7 *

CAMARA DE COMERCIO DE BOGOTA

SEDE SALITRE

21 DE ENERO DE 2011

HORA 18:56:55

R030297709

HOJA : 2 DE 6

8545	16-XII-1.967	6 BTA.	26-I-1.968 NO. 75.041
4679	20-XII-1.967	8 BTA.	26-I-1.968 NO. 75.042
3010	14-V-1.968	6 BTA.	30-V-1.968 NO. 76.244
2931	4-V-1.970	6 BTA.	18-V-1.970 NO. 84.983
5656	13-VII-1.970	6 BTA.	13-VIII-1.970 NO. 86.126
3487	15-VII-1.971	3 BTA.	29-VII-1.971 NO. 90.980
4638	10-VII-1.984	11 BTA.	27-VIII-1.984 NO.157.001
1443	14-III-1.985	11 BTA.	26- III-1.985 NO.167.627
724	11- II-1.985	1 BTA.	21- II-1.985 NO.165.940
4836	11-VIII-1986	1 BTA.	23- IX -1.986 NO.197.784
5659	15- IX -1986	1 BTA.	23- IX -1.986 NO.197.784
6326	16- X -1987	1 BTA.	23- X -1.987 NO.221.604
5164	21-VIII-1990	1 BTA.	3- IX -1.990 NO.303.579
9244	23-XII- 1991	1 STAFE.BTA.	8-I -1.992 NO.351.255
8145	15- X - 1992	1 STAFE.BTA.	16- X-1.992 NO.382.488
1374	26- III-1993	1 STAFE.BTA.	19- III-1993 NO.399972
3120	01-VI-1.995	1A.STAFE BTA	23-VI- 1.995 NO.498.060
5435	17-IX-1.996	1A.STAFE BTA	30-IX- 1.996 NO.556.909
5435	17-IX-1.996	1A.STAFE BTA	01- X- 1.996 NO.557.146
5435	17-IX-1.996	1A.STAFE BTA	02- X- 1.996 NO.557.301
5942	7-X -1.996	1A.STAFE BTA	11- X- 1.996 NO.558.222
6305	24-X--1.996	1A.STAFE BTA	07-XI--1.996 NO.561.207
6929	25-XI-1.996	1A.STAFE BTA	12-XII-1.996 NO.565.961
787	19-II-1.997	1A.STAFE BTA	25-II -1.997 NO.575.141
1024	28-II-1.997	1A.STAFE BTA	31-III-1.997 NO.579.245

CERTIFICA:

REFORMAS:

E.P. NO.	FECHA	NOTARIA	CIUDAD	FECHA	NO. INSC.
0007110	1997/10/28	0001	BOGOTA D.C.	1997/11/06	00609204
0001896	1998/03/16	0001	BOGOTA D.C.	1998/04/01	00628368
0002924	1998/04/21	0001	BOGOTA D.C.	1998/05/18	00634309
0002377	2000/06/14	0001	BOGOTA D.C.	2000/06/20	00733626
0000SIN	2004/06/22	0000	BOGOTA D.C.	2004/06/28	00940785
117	2010/04/30	0000	BOGOTA D.C.	2010/06/10	01390261
120	2010/08/18	0000	BOGOTA D.C.	2010/08/26	01409241

120	2010/08/30	0000	BOGOTA D.C.	2010/09/13	01413659
120	2010/07/29	0000	BOGOTA D.C.	2010/11/19	01429837

CERTIFICA:

VIGENCIA: QUE LA SOCIEDAD NO SE HALLA DISUELTA. DURACION HASTA EL
27 DE JULIO DE 2040

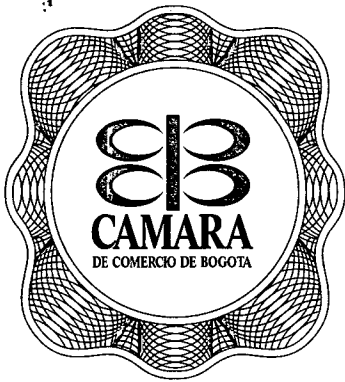
CERTIFICA:

OBJETO SOCIAL: EL OBJETO DE LA SOCIEDAD ES EL EJERCICIO DE TODAS LAS ACTIVIDADES COMERCIALES PARA: 1) LA IMPORTACIÓN, EXPORTACIÓN, FABRICACIÓN, COMERCIALIZACIÓN, DISTRIBUCIÓN Y VENTA DE PRODUCTOS FARMACÉUTICOS, HIGIÉNICOS, VETERINARIOS E IMPLEMENTOS MÉDICOS. 2) CUALQUIER OTRA ACTIVIDAD LÍCITA DE COMERCIO RELACIONADA CON SU OBJETO SOCIAL PRINCIPAL Y TODO LO QUE SE RELACIONA CON LA IMPORTACIÓN DE LOS BIENES Y EQUIPOS NECESARIOS PARA EL DESARROLLO DE SU OBJETO SOCIAL. 3) TENER LA REPRESENTACIÓN EN COLOMBIA DE EMPRESAS O SOCIEDADES ESTABLECIDAS FUERA DEL TERRITORIO COLOMBIANO, CUYO OBJETO SEA SIMILAR O COMPLEMENTARIO. EN DESARROLLO DE SU OBJETO SOCIAL PRINCIPAL, LA SOCIEDAD PODRÁ ADELANTAR Y CELEBRAR LOS SIGUIENTES ACTOS Y CONTRATOS: A) EXPORTAR E IMPORTAR, AGENCIAR, DISTRIBUIR, COMERCIALIZAR, COMPRAR O VENDER A COMISIÓN O CONSIGNACIÓN O DE CUALQUIER OTRA FORMA O MODALIDAD, TODA CLASE DE EQUIPOS, APARATOS, BIENES AL POR MAYOR O AL DETAL, Y SERVICIOS RELACIONADOS CON SU ACTIVIDAD. B) GRAVAR EN CUALQUIER FORMA LOS BIENES DE SU PROPIEDAD MUEBLES O INMUEBLES, DAR EN PRENDA LOS PRIMEROS O HIPOTECAR LOS SEGUNDOS PARA GARANTIZAR OBLIGACIONES DE LA SOCIEDAD. C) CONSTITUIR APODERADOS QUE LE REPRESENTEN, ASOCIARSE CON OTRAS COMPAÑÍAS DE LA MISMA O PARECIDA NATURALEZA Y EN GENERAL REALIZAR TODA CLASE DE OPERACIONES COMERCIALES O CIVILES Y EJECUTAR O CELEBRAR TODA CLASE DE CONTRATOS O ACTOS DEL MISMO ORDEN, YA SEAN INDUSTRIALES, COMERCIALES O FINANCIEROS ENCAMINADOS A ALCANZAR LOS FINES QUE SE PROPONEN. D) ADQUIRIR, ENAJENAR, ADMINISTRAR, RECIBIR O DAR EN ARRENDATARIO O A CUALQUIER TÍTULO, TODA CLASE DE BIENES MUEBLES E INMUEBLES. E) INTERVENIR ANTE TERCEROS O ANTE LOS ACCIONISTAS MISMOS COMO ACREEDORA O COMO DEUDORA EN TODA CLASE DE OPERACIONES DE CRÉDITO, DANDO O RECIBIENDO LAS GARANTÍAS DEL CASO, CUANDO HAYA LUGAR A ELLAS; F) EFECTUAR CUALQUIER CLASE DE OPERACIONES DE CRÉDITO ACTIVO O PASIVO, TALES COMO CONSTITUIR DEPÓSITOS, EFECTUAR PRESTAMOS. OTORGAR O RECIBIR DOCUMENTOS NEGOCIABLES, GIRAR, ACEPTAR, ENDOSAR, ASEGURAR Y NEGOCIAR EN GENERAL TÍTULOS VALORES RECIBIRLOS EN PAGO; G) CELEBRAR Y EJECUTAR EN GENERAL TODOS LOS ACTOS Y CONTRATOS PREPARATORIOS, COMPLEMENTARIOS O ACCESORIOS DE TODOS LOS ANTERIORES, LOS QUE SE RELACIONEN CON LA EXISTENCIA Y FUNCIONAMIENTO DE LA SOCIEDAD, Y LOS QUE SEAN CONDUCENTES AL BUEN LOGRO DE LOS FINES SOCIALES.

CERTIFICA:

CAPITAL:

** CAPITAL AUTORIZADO **



01



* 1 0 0 5 2 0 2 3 8 *

CAMARA DE COMERCIO DE BOGOTA

SEDE SALITRE

21 DE ENERO DE 2011

HORA 18:56:55

R030297709

HOJA : 3 DE 6

VALOR : \$20,000,000,000.00
NO. DE ACCIONES : 20,000,000.00
VALOR NOMINAL : \$1,000.00

** CAPITAL SUSCRITO **

VALOR : \$17,207,141,000.00
NO. DE ACCIONES : 17,207,141.00
VALOR NOMINAL : \$1,000.00

** CAPITAL PAGADO **

VALOR : \$17,207,141,000.00
NO. DE ACCIONES : 17,207,141.00
VALOR NOMINAL : \$1,000.00

CERTIFICA:

REPRESENTACION LEGAL: GERENCIA LA CUAL SERÁ ASUMIDA POR UN GERENTE Y UN SUBGERENTE QUIENES TENDRÁN REPRESENTACIÓN LEGAL DE LA SOCIEDAD.

CERTIFICA:

** NOMBRAMIENTOS **

QUE POR ACTA NO. 127 DE ASAMBLEA DE ACCIONISTAS DEL 12 DE NOVIEMBRE DE 2010, INSCRITA EL 23 DE NOVIEMBRE DE 2010 BAJO EL NUMERO 01430759 DEL LIBRO IX, FUE (RON) NOMBRADO (S):

NOMBRE	IDENTIFICACION
GERENTE	

PALACIOS LUIS ALBERTO

C.E. 000000000319788

QUE POR ACTA NO. 117 DE ASAMBLEA DE ACCIONISTAS DEL 30 DE ABRIL DE 2010, INSCRITA EL 10 DE JUNIO DE 2010 BAJO EL NUMERO 01390261 DEL LIBRO IX, FUE (RON) NOMBRADO (S):

NOMBRE	IDENTIFICACION
SUBGERENTE	

MUÑOZ MARTINEZ ORLANDO

C.C. 000000008317044

CERTIFICA:

FACULTADES DEL REPRESENTANTE LEGAL: EL GERENTE DE LA SOCIEDAD TIENE A SU CARGO LA ADMINISTRACIÓN INMEDIATA DE LA SOCIEDAD, ASÍ COMO LA REPRESENTACIÓN LEGAL DE LA MISMA Y EN TAL VIRTUD LE ESTÁN ASIGNADAS LAS SIGUIENTES FUNCIONES Y ATRIBUCIONES: A) LLEVAR LA REPRESENTACIÓN DE LA

ENTIDAD, TANTO JUDICIAL COMO EXTRAJUDICIALMENTE. B) EJECUTAR LOS ACUERDOS Y DECISIONES DE LA ASAMBLEA GENERAL DE ACCIONISTAS. C) CONSTITUIR, PARA CASOS ESPECIALES, APODERADOS JUDICIALES O EXTRAJUDICIALES. D) CELEBRAR LOS ACTOS, OPERACIONES Y CONTRATOS CONDUCTORES AL BUEN LOGRO DEL OBJETO DE LA SOCIEDAD. E) CUIDAR DE LA RECAUDACIÓN E INVERSIÓN DE LOS FONDOS DE LA SOCIEDAD. F) PRESENTAR A LA REUNIÓN ORDINARIA ANUAL DE LA ASAMBLEA GENERAL DE ACCIONISTAS, EL INVENTARIO Y LOS ESTADOS FINANCIEROS DE PROPÓSITO GENERAL DE FIN DE EJERCICIO, JUNTO CON UN INFORME ESCRITO RELACIONADO CON LA SITUACIÓN Y LA MARCHA DE LA ENTIDAD. G) CREAR LOS EMPLEADOS NECESARIOS PARA LA DEBIDA MARCHA DE LA SOCIEDAD, SEÑALAR SUS FUNCIONES Y ASIGNACIONES Y HACER LOS NOMBRAMIENTOS CORRESPONDIENTES. H) CONVOCAR A LA ASAMBLEA GENERAL CUANDO PROCEDA HACERLO CONFORME A LA LEY O A ESTOS ESTATUTOS. I) PRESENTAR A LA ASAMBLEA GENERAL DE ACCIONISTAS, CUANDO ASÍ LO SOLICITE, ESTADOS FINANCIEROS MENSUALES DE PRUEBA E INFORMES. J) EJERCER LAS FUNCIONES QUE LE DELEGUE LA ASAMBLEA GENERAL DE ACCIONISTAS. K) CUMPLIR Y HACER QUE SE CUMPLAN EN OPORTUNIDAD Y DEBIDAMENTE TODAS LAS EXIGENCIAS DE LAS LEYES EN RELACIÓN CON EL FUNCIONAMIENTO Y LAS ACTIVIDADES DE LA INSTITUCIÓN. L) LAS DEMÁS QUE LE CORRESPONDAN CONFORME A LA LEY Y A ESTOS ESTATUTOS. EL GERENTE DE LA SOCIEDAD DEBERÁ CONTAR CON AUTORIZACIÓN PREVIA DE LA ASAMBLEA GENERAL DE ACCIONISTAS, CUANDO PRETENDA SUSCRIBIR EN NOMBRE DE LA SOCIEDAD (I) ACTOS O CONTRATOS PARA ADQUIRIR, ENAJENAR, RECIBIR O DAR EN ARRENDAMIENTO O A CUALQUIER OTRO TÍTULO, TODA CLASE DE BIENES INMUEBLES DE LA SOCIEDAD O BIENES MUEBLES DIFERENTES A LOS PRODUCTOS COMERCIALIZADOS ORDINARIAMENTE POR LA SOCIEDAD, ASÍ COMO (II) ACTOS O CONTRATOS, INDEPENDIENTE DE SU OBJETO, QUE SUPERE EN CUANTÍA EL EQUIVALENTE A 300 SMLMV (TRESCIENTOS SALARIOS MÍNIMOS MENSUALES LEGALES VIGENTES).

CERTIFICA:

QUE POR ESCRITURA PUBLICA NO. 654 DE LA NOTARIA 01 DE BOGOTÁ D.C., DEL 20 DE FEBRERO DE 2009, INSCRITA EL 02 DE MARZO DE 2009 BAJO EL NO. 15209 DEL LIBRO V, COMPARECIO ORLANDO MUÑOZ MARTINEZ IDENTIFICADO CON CEDULA DE CIUDADANIA NO. 8.317.044 EN SU CALIDAD DE DELEGADO GENERAL SUPLENTE DEL SOCIO GESTOR LABORATORIOS SYNTHESIS LTDA., POR MEDIO DE LA PRESENTE ESCRITURA PUBLICA, CONFIERE PODER GENERAL AL SEÑOR ANDRES FERNANDO MOLLAJOLI CENTURION, IDENTIFICADO CON CÉDULA DE EXTRANJERÍA NO. 351.283 QUE EN NOMBRE DE LA SOCIEDAD QUE REPRESENTO, ACTUÉ CON LAS MÁS AMPLIAS FACULTADES EN LA REPÚBLICA DE COLOMBIA, EN LOS SIGUIENTES ASUNTOS 1. PARTICIPAR EN CALIDAD DE SOCIO, ACCIONISTA O EMPRESARIO EN PERSONAS JURÍDICAS COLOMBIANAS, CONSTITUIDAS O POR CONSTITUIRSE, EN EL PORCENTAJE QUE LA APODERADA AQUÍ NOMBRADA ESTIME CONVENIENTE A NUESTROS INTERESES, CON FACULTAD PARA ENTREGAR LAS SUMAS CORRESPONDIENTES AL PAGO DEL MISMO; 2. DILIGENCIAR Y SUSCRIBIR LOS DOCUMENTOS NECESARIOS PARA EL REGISTRO DE INVERSIONES EXTRANJERAS ANTE



01



* 1 0 0 5 2 0 2 3 9 *

CAMARA DE COMERCIO DE BOGOTA

SEDE SALITRE

21 DE ENERO DE 2011

HORA 18:56:55

R030297709

HOJA : 4 DE 6

LAS AUTORIDADES COLOMBIANAS; 3. REPRESENTAR A LABORATORIOS SYNTHESIS LTDA & CIA S.C.A., EN LAS REUNIONES ASAMBLEA GENERAL O JUNTAS EN LAS CUALES TENGA INTERÉS; 4. EFECTUAR CUALQUIER CLASE DE OPERACIONES DE CRÉDITO ACTIVO O PASIVO, TALES COMO CONSTITUIR DEPÓSITOS, EFECTUAR PRÉSTAMOS DANDO O RECIBIENDO LAS GARANTÍAS DEL CASO, CUANDO HAYA LUGAR A ELLAS, OTORGAR O RECIBIR DOCUMENTOS NEGOCIABLES, GIRAR, ACEPTAR, ENDOSAR, ASEGURAR, Y NEGOCIAR EN GENERAL TÍTULOS VALORES Y RECIBIRLOS EN PAGO; 5. CELEBRAR ASÍ MISMO OPERACIONES RELACIONADAS CON LA PROTECCIÓN DE SUS BIENES, NEGOCIOS Y PERSONAS A SU SERVICIO; 6. CELEBRAR CONTRATOS DE CUENTAS EN PARTICIPACIÓN, SEA COMO PARTÍCIPE ACTIVA O COMO PARTÍCIPE INACTIVA; 7. TRANSIGIR, DESISTIR Y APELAR DECISIONES DE ÁRBITROS O DE AMIGABLES COMPONEDORES EN LAS CUESTIONES EN QUE TENGA INTERÉS FRENTE A TERCEROS, A LOS ASOCIADOS MISMOS O A SUS ADMINISTRADORES; 8. ADQUIRIR MARCAS, PATENTES, PROCEDIMIENTOS DE FABRICACIÓN, EXPLOTADAS EN CUALQUIER FORMA, YA SEA UTILIZÁNDOLOS DIRECTAMENTE O PERMITIENDO SU EXPLOTACIÓN POR OTRAS PERSONAS NATURALES O JURÍDICAS CONTRA EL PAGO DE REGALÍAS O PARTICIPACIONES. 9. CELEBRAR Y EJECUTAR EN GENERAL TODOS LOS ACTOS PREPARATORIOS, COMPLEMENTARIOS O ACCESORIOS DE TODOS LOS ANTERIORES, LOS QUE SE RELACIONEN CON LA EXISTENCIA Y FUNCIONAMIENTO DE LA SOCIEDAD, Y LOS QUE SEA CONDUCENTES AL BUEN LOGRO DE LOS FINES SOCIALES; 10. RECIBIR NOTIFICACIONES DE CUALESQUIERA TIPO DE ACTOS EMANADOS DE LAS AUTORIDADES ADMINISTRATIVAS O JUDICIALES. 11. NOTIFICARSE VÁLIDAMENTE DE AQUELLOS ACTOS DEL ORDEN ADMINISTRATIVO O JUDICIAL QUE SE FORMULEN CONTRA LA SOCIEDAD, ASÍ CÓMO ABSOLVER INTERROGATORIOS CON CAPACIDAD PARA CONFESAR; 12. ADMINISTRAR LOS BIENES MUEBLES O INMUEBLES DE PROPIEDAD DE LA SOCIEDAD LABORATORIOS SYNTHESIS LTDA & CIA S.C.A. 12. ADMINISTRAR LOS BIENES MUEBLES O INMUEBLES DE PROPIEDAD DE LA SOCIEDAD LABORATORIOS SÍNTESIS LTDA. & CIA S.C.A., RECAUDAR O RECIBIR POR SUS FRUTOS Y CELEBRAR TODA CLASE DE CONTRATOS RELACIONADOS CON LA ADMINISTRACIÓN. 13. ENAJENAR, ADQUIRIR, PERMUTAR, GRAVAR, ARRENDAR BIENES MUEBLES, PRESENTES O FUTUROS DE LA SOCIEDAD LABORATORIOS SYNTIIESIS LTDA & CIA S.C.A, SIN LÍMITE DE CUANTIA. 14. ENAJENAR, PERMUTAR, ADQUIRIR, GRAVAR, ARRENDAR BIENES MUEBLES E INMUEBLES PRESENTES O FUTUROS DE LA SOCIEDAD LABORATORIOS SYNTHESIS LTDA & CIA S.C.A., CUANDO LA CUANTÍA DE CADA OPERACIÓN INDIVIDUALMENTE CONSIDERADA NO EXCEDA DE SEISCIENTAS VECES EL

65

SALARIO MÍNIMO LEGAL MENSUAL MAS ALTO EN LA FECHA DE CELEBRACIÓN Y TENGA RELACIÓN DIRECTA CON EL DESARROLLO SOCIAL, ASÍ COMO LAS QUE EXCEDAN DE ESTA SUMA CON LA EXPRESA AUTORIZACIÓN DE LA SOCIEDAD GESTORA. 15. TOMAR DINERO EN MUTUO, CON FACULTAD PARA ESTIPULAR TODO TIPO DE INTERESES, PLAZOS Y DEMÁS CONDICIONES Y CELEBRAR CONTRATOS DE CUENTA CORRIENTE; 16. GIRAR, ORDENAR GIRAR, ENDOSAR, PROTESTAR, OTORGAR, ACEPTAR ORDENAR AVALÚOS Y HACER TODA CLASE DE NEGOCIOS RELACIONADOS CON TÍTULOS VALORES CUANDO LA CUANTÍA DE CADA OPERACIÓN INDIVIDUALMENTE CONSIDERADA NO EXCEDA DE SEISCIENTAS VECES EL SALARIO MÍNIMO LEGAL MENSUAL MÁS ALTO EN LA FECHA DE SU CELEBRACIÓN, SÍ COMO LAS QUE EXCEDAN DE ESTA SUMA CON LA EXPRESA AUTORIZACIÓN DEL REPRESENTANTE LEGAL DE LA SOCIEDAD GESTORA. 17. PRESENTAR DECLARACIÓN DE RENTA, PATRIMONIO, IMPUESTOS A LAS VENTAS EN ADMINISTRACIÓN DE IMPUESTOS NACIONES Y MUNICIPALES E INTERPONER LOS RECURSOS Y DECLARACIONES PERTINENTES CONTRA ACTOS DE DICHA ADMINISTRACIÓN CON FACULTAD PARA DEFENDER LOS INTERESES DE LA SOCIEDAD EN ÉSTA MATERIA. 18. DESIGNAR APODERADO ESPECIAL PARA CADA PROCESO JUDICIAL O ADMINISTRATIVO. 19. PRÉSENTAR RECURSOS POR VÍA ADMINISTRATIVA O JUDICIAL, RENUNCIAR A TÉRMINOS, DESISTIR, CONCILIAR, TRANSIGIR Y MODIFICAR 20. ELEVAR PETICIONES Y SOLICITAR INFORMACIÓN A LAS AUTORIDADES ADMINISTRATIVAS Y JURISDICCIONALES 21. PRESENTAR DEMANDAS ANTE LAS AUTORIDADES ADMINISTRATIVAS Y JUDICIALES 22. SUSTITUIR EL PRESENTE PODER Y REVOCAR TAL SUSTITUCIÓN DENTRO DE LA REPÚBLICA DE COLOMBIA

CERTIFICA:

QUE POR ESCRITURA PUBLICA NO. 3511 DE LA NOTARIA 18 DE BOGOTA D.C., DEL 8 DE SEPTIEMBRE DE 2010, INSCRITA EL 1 DE OCTUBRE DE 2010 BAJO EL NO. 00018604 DEL LIBRO V, COMPARECIO JOSE ANTONIO JAIME ESCOBAR IDENTIFICADO CON CEDULA DE CIUDADANÍA NO. 19.262.407 DE BOGOTA, EN SU CALIDAD DE GERENTE DE LABORATORIOS SYNTHESIS LTDA., POR MEDIO DE LA PRESENTE ESCRITURA PUBLICA, CONFIERE PODER GENERAL AL A OLGA VICTORIA PRIETO ZAMORA, IDENTIFICADA CON CEDULA DE CIUDADANÍA NO. 52.780.308 DE BOGOTA PARA QUE EN NOMBRE DE LA SOCIEDAD LABORATORIOS SYNTHESIS S.A.S., PROMUEVA Y DEFIENDA LOS INTERESES DE LA SOCIEDAD JUDICIAL Y EXTRAJUDICIALMENTE, EN TODA ESPECIE DE GESTIONES Y ACTUACIONES ANTE LAS AUTORIDADES ADMINISTRATIVAS O JURISDICCIONALES Y EN ESPECIAL PARA: A. DILIGENCIAR Y SUSCRIBIR LOS DOCUMENTOS NECESARIOS PARA EL REGISTRO DE INVERSIONES EXTRANJERAS ANTE LAS AUTORIDADES COLOMBIANAS. B. TRANSIGIR, DESISTIR Y APELAR A DECISIONES DE ÁRBITROS O DE AMIGABLES COMPONEDORES EN LAS CUESTIONES EN QUE TENGA INTERÉS FRENTE A TERCEROS, A LOS ASOCIADOS MISMOS O A SUS ADMINISTRADORES. C. ADELANTAR CUALQUIER TIPO DE TRÁMITE ANTE EL INSTITUTO DE VIGILANCIA DE MEDICAMENTOS Y ALIMENTOS INVIMA O A LA ENTIDAD QUE HAGA SUS VECES. D. RECIBIR NOTIFICACIÓN DE TODAS LAS PROVIDENCIAS QUE SE EXPIDAN DENTRO DE LOS DIFERENTES TRÁMITES E INTERPONER LOS RECURSOS PROPIOS DE LA VÍA GUBERNATIVA. E. REPRESENTAR



01



* 1 0 0 5 2 0 2 4 0 *

CAMARA DE COMERCIO DE BOGOTA

SEDE SALITRE

21 DE ENERO DE 2011

HORA 18:56:55

R030297709

HOJA : 5 DE 6

Y VIGILAR ANTE LOS FUNCIONARIOS, OFICINAS Y DEPENDENCIAS DEL INSTITUTO DE VIGILANCIA DE MEDICAMENTOS Y ALIMENTOS INVIMA O A LA ENTIDAD QUE HAGA SUS VECES, TODAS LAS SOLICITUDES QUE CONTENGAN TRÁMITES A NOMBRE DE LABORATORIOS SYNTHESIS S.A.S. F. SOLICITAR, OBTENER, REVISAR Y MODIFICAR REGISTROS SANITARIOS. G. OBTENER ANTE LAS OFICINAS Y AUTORIDADES NACIONALES QUE CORRESPONDAN Y EN ESPECIAL DE LA DIVISIÓN DE PROPIEDAD INDUSTRIAL DE LA SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO, REGISTROS DE MARCAS, RENOVACIÓN DE REGISTROS MARCARIOS, ANOTACIÓN DE TRASPASOS Y CAMBIO DE NOMBRE, PRESENTACIÓN Y TRÁMITE DE OPOSICIONES, PRESENTACIÓN Y TRÁMITE DE RECURSOS POR LA VÍA GUBERNATIVA Y DEMÁS DILIGENCIAS RELACIONADAS, A CUYO EFECTO LA FACULTA PARA DAR ANTE DICHAS AUTORIDADES, PARA ELEVAR SOLICITUDES, FORMULAR DESCRIPCIONES, APELACIONES Y RECLAMOS, SOLICITAR TESTIMONIO, RECIBIR, DESISTIR, SUSTITUIR, CANCELAR, TRANSIGIR, RENUNCIAR, ACEPTAR NOTIFICACIONES Y NOMBRAR APODERADOS JUDICIALES Y EXTRAJUDICIALES. H. ADQUIRIR MARCAS, PATENTES, PROCEDIMIENTOS DE FABRICACIÓN, EXPLOTADAS EN CUALQUIER FORMA, YA SEA UTILIZÁNDOLOS DIRECTAMENTE O PERMITIENDO SU EXPLOTACIÓN POR OTRAS PERSONAS NATURALES O JURÍDICAS CONTRA EL PAGO DE REGALÍAS O PARTICIPACIONES. I. CELEBRAR Y EJECUTAR EN GENERAL TODOS LOS ACTOS Y CONTRATOS PREPARATORIOS, COMPLEMENTARIOS O ACCESORIOS DE TODOS LOS ANTERIORES, LOS QUE SE RELACIONEN CON LA EXISTENCIA Y FUNCIONAMIENTO DE LA SOCIEDAD, Y LOS QUE SEAN CONDUCTENTES AL BUEN LOGRO DE LOS FINES SOCIALES. J. RECIBIR NOTIFICACIONES DE CUALESQUIERA TIPO DE ACTOS EMANADOS DE LAS AUTORIDADES ADMINISTRATIVAS O JUDICIALES. K. PRESENTAR RECURSOS POR LA VÍA ADMINISTRATIVA O JUDICIAL, RENUNCIAR A TÉRMINOS, DESISTIR, CONCILIAR, TRANSIGIR Y MODIFICAR. I. ELEVAR PETICIONES Y SOLICITAR INFORMACIÓN A LAS AUTORIDADES ADMINISTRATIVAS Y JURISDICCIONALES. M. PRESENTAR DEMANDAS ANTE LAS AUTORIDADES ADMINISTRATIVAS Y JUDICIALES. N. SUSTITUIR EL PRESENTE PODER Y REVOCAR TAL SUSTITUCIÓN DENTRO DE LA REPÚBLICA DE COLOMBIA.

CERTIFICA:

** REVISOR FISCAL **

QUE POR DOCUMENTO PRIVADO DE REVISOR FISCAL DEL 28 DE JUNIO DE 2010, INSCRITA EL 8 DE JULIO DE 2010 BAJO EL NUMERO 01397034 DEL LIBRO IX, FUE (RON) NOMBRADO (S):

NOMBRE
REVISOR FISCAL PRINCIPAL

AGUILLON ROJAS SANDRA MILENA

IDENTIFICACION

C.C. 000000047436442

REVISOR FISCAL SUPLENTE

PRADA SANCHEZ NUBIA MARCELA

C.C. 000001032358923

QUE POR ACTA NO. 119 DE ASAMBLEA DE ACCIONISTAS DEL 22 DE JUNIO DE 2010, INSCRITA EL 8 DE JULIO DE 2010 BAJO EL NUMERO 01397026 DEL LIBRO IX, FUE (RON) NOMBRADO (S):

NOMBRE
REVISOR FISCAL PERSONA JURIDICA

DELOITTE & TOUCHE LTDA

IDENTIFICACION

N.I.T. 000008600058134

CERTIFICA:

PERMISO DE FUNCIONAMIENTO:QUE POR RESOLUCION NO.05952 DEL 11 DE - JUNIO DE 1.985, INSCRITA EN ESTA CAMARA DE COMERCIO EL 8 DE JULIO DE 1.985 BAJO EL NO. 172.879 DEL LIBRO IX, LA SUPERINTENDENCIA - DE SOCIEDADES CONCEDIO PERMISO DEFINITIVO DE FUNCIONAMIENTO A LA SOCIEDAD.

CERTIFICA:

QUE POR RESOLUCION NO.09006 DEL 19 DE DICIEMBRE DE 1.986 SUPERIN- TENDENCIA DE SOCIEDADES INSCRITA EL 16 DE ENERO DE 1.987 BAJO EL NO.204.133 DEL LIBRO IX, SE AUTORIZO A LA SOCIEDAD PARA COLOCAR SETENTA Y CUATRO MIL (\$74.000) ACCIONES DE LAS QUE TIENE EN RE- SERVA, A SU VALOR NOMINAL DE CIENTO PESOS (\$100.00) M/CTE., CADA UNA.

CERTIFICA:

QUE LA SOCIEDAD TIENE MATRICULADOS LOS SIGUIENTES ESTABLECIMIENTOS:

NOMBRE : CARDIOPHARM

MATRICULA NO : 00537358 DE 3 DE MARZO DE 1993

RENOVACION DE LA MATRICULA : EL 29 DE MARZO DE 2010

ULTIMO AÑO RENOVADO : 2010

NOMBRE : GENERICS

MATRICULA NO : 00664623 DE 18 DE SEPTIEMBRE DE 1995

RENOVACION DE LA MATRICULA : EL 29 DE MARZO DE 2010

ULTIMO AÑO RENOVADO : 2010

NOMBRE : MASCOTT

MATRICULA NO : 00664622 DE 18 DE SEPTIEMBRE DE 1995

RENOVACION DE LA MATRICULA : EL 29 DE MARZO DE 2010

ULTIMO AÑO RENOVADO : 2010

NOMBRE : ONCOPHARM

MATRICULA NO : 00625764 DE 13 DE DICIEMBRE DE 1994



01



* 1 0 0 5 2 0 2 4 1 *

CAMARA DE COMERCIO DE BOGOTA

SEDE SALITRE

21 DE ENERO DE 2011

HORA 18:56:55

R030297709

HOJA : 6 DE 6

RENOVACION DE LA MATRICULA : EL 29 DE MARZO DE 2010

ULTIMO AÑO RENOVADO : 2010

NOMBRE : GASTROPHARM

MATRICULA NO : 00621442 DE 2 DE NOVIEMBRE DE 1994

RENOVACION DE LA MATRICULA : EL 29 DE MARZO DE 2010

ULTIMO AÑO RENOVADO : 2010

NOMBRE : GYNECOPHARM

MATRICULA NO : 00621245 DE 1 DE NOVIEMBRE DE 1994

RENOVACION DE LA MATRICULA : EL 29 DE MARZO DE 2010

ULTIMO AÑO RENOVADO : 2010

NOMBRE : ENTEROPHARM

MATRICULA NO : 00621244 DE 1 DE NOVIEMBRE DE 1994

RENOVACION DE LA MATRICULA : EL 29 DE MARZO DE 2010

ULTIMO AÑO RENOVADO : 2010

NOMBRE : EQUIPHARMA

MATRICULA NO : 00556630 DE 21 DE JULIO DE 1993

RENOVACION DE LA MATRICULA : EL 29 DE MARZO DE 2010

ULTIMO AÑO RENOVADO : 2010

CERTIFICA:

DE CONFORMIDAD CON LO ESTABLECIDO POR LA LEY 962 DE 2005, LOS ACTOS DE REGISTRO AQUI CERTIFICADOS QUEDAN EN FIRME CINCO (5) DIAS HABILES DESPUES DE LA FECHA DE INSCRIPCION, SIEMPRE QUE NO SEAN OBJETO DE RECURSOS EN LA VIA GUBERNATIVA.

* * * EL PRESENTE CERTIFICADO NO CONSTITUYE PERMISO DE
* * * FUNCIONAMIENTO EN NINGUN CASO

* * *
* * *

SEÑOR EMPRESARIO, SI SU EMPRESA TIENE ACTIVOS INFERIORES A 30.000 SMLMV Y UNA PLANTA DE PERSONAL DE MENOS DE 200 TRABAJADORES, USTED TIENE DERECHO A RECIBIR UN DESCUENTO EN EL PAGO DE LOS PARAFISCALES DE 75% EN

EL PRIMER AÑO DE CONSTITUCION DE SU EMPRESA, DE 50% EN EL SEGUNDO AÑO Y DE 25% EN EL TERCER AÑO. LEY 590 DE 2000 Y DECRETO 525 DE 2009.

RECUERDE INGRESAR A www.supersociedades.gov.co PARA VERIFICAR SI SU EMPRESA ESTA OBLIGADA A REMITIR ESTADOS FINANCIEROS. EVITE SANCIONES.

EL SECRETARIO DE LA CAMARA DE COMERCIO,

VALOR : \$ 3,700

DE CONFORMIDAD CON EL DECRETO 2150 DE 1995 Y LA AUTORIZACION IMPARTIDA POR LA SUPERINTENDENCIA DE INDUSTRIA Y COMERCIO, MEDIANTE EL OFICIO DEL 18 DE NOVIEMBRE DE 1996, LA FIRMA MECANICA QUE APARECE A CONTINUACION TIENE PLENA VALIDEZ PARA TODOS LOS EFECTOS LEGALES



J. P. Pausen



Anexo 1



US 20050119486A1

(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2005/0119486 A1**

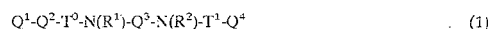
Ohta et al.

(43) **Pub. Date:****Jun. 2, 2005**(54) **DIAMINE DERIVATIVES****Publication Classification**

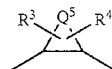
(76) Inventors: **Toshiharu Ohta**, Tokyo (JP); **Satoshi Komoriya**, Tokyo (JP); **Toshiharu Yoshino**, Tokyo (JP); **Kouichi Uoto**, Tokyo (JP); **Yumi Nakamoto**, Tokyo (JP); **Hiroyuki Naito**, Tokyo (JP); **Akiyoshi Mochizuki**, Tokyo (JP); **Tsutomu Nagata**, Tokyo (JP); **Hideyuki Kanno**, Tokyo (JP); **Noriyasu Haginoya**, Tokyo (JP); **Kenji Yoshikawa**, Tokyo (JP); **Masatoshi Nagamochi**, Tokyo (JP); **Syozo Kobayashi**, Tokyo (JP); **Makoto Ono**, Tokyo (JP)

(51) **Int. Cl.⁷** **C07D 405/00**(52) **U.S. Cl.** **546/256**(57) **ABSTRACT**

A compound represented by the general formula (1):



wherein R^1 and R^2 are hydrogen atoms or the like; Q^1 is a saturated or unsaturated, 5- or 6-membered cyclic hydrocarbon group which may be substituted, or the like; Q^2 is a single bond or the like; Q^3 is a group



in which Q^5 is an alkylene group having 1 to 8 carbon atoms, or the like; and T^0 and T^1 are carbonyl groups or the like; a salt thereof, a solvate thereof, or an N-oxide thereof.

The compound is useful as an agent for preventing and/or treating cerebral infarction, cerebral embolism, myocardial infarction, angina pectoris, pulmonary infarction, pulmonary embolism, Buerger's disease, deep venous thrombosis, disseminated intravascular coagulation syndrome, thrombus formation after valve or joint replacement, thrombus formation and reocclusion after angioplasty, systemic inflammatory response syndrome (SIRS), multiple organ dysfunction syndrome (MODS), thrombus formation during extracorporeal circulation, or blood clotting upon blood drawing.

Correspondence Address:

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314 (US)

(21) **Appl. No.:** **10/481,262**(22) **PCT Filed:** **Mar. 20, 2002**(86) **PCT No.:** **PCT/JP02/02683**(30) **Foreign Application Priority Data**

Jun. 20, 2001	(JP)	2001-187105
Aug. 9, 2001	(JP)	2001-243046
Oct. 9, 2001	(JP)	2001-311808
Dec. 28, 2001	(JP)	2001-398708

DIAMINE DERIVATIVES

TECHNICAL FIELD

[0001] The present invention relates to novel compounds which inhibit activated blood coagulation factor X (hereinafter abbreviated as "FXa") to exhibit a potent anticoagulant effect and can be orally administered, and anticoagulants or agents for preventing and/or treating thrombosis or embolism, which comprise such a novel compound as an active ingredient.

BACKGROUND ART

[0002] In unstable angina, cerebral infarction, cerebral embolism, myocardial infarction, pulmonary infarction, pulmonary embolism, Buerger's disease, deep venous thrombosis, disseminated intravascular coagulation syndrome, thrombus formation after valve replacement, reocclusion after angioplasty and thrombus formation during extracorporeal circulation, hypercoagulable state is a pivotal factor. Therefore, there is a demand for development of excellent anticoagulants which have good dose responsiveness, long duration, low risk of hemorrhage and little side effects and fast onset of sufficient effects even by oral administration (Thrombosis Research, Vol. 68, pp. 507-512, 1992).

[0003] Based on the research of anticoagulants worked through various mechanism of action, it is suggested that FXa inhibitors are promising anticoagulants. A blood coagulation system comprises a series of reactions that a great amount of thrombin is produced through an amplification process by multi-stage enzyme reactions to form insoluble fibrin. In an endogenous system, activated factor IX activates into factor X on a phospholipid membrane in the presence of activated factor VIII and calcium ions after multi-stage reactions subsequent to activation of a contact factor. In an exogenous system, activated factor VII activates factor X in the presence of a tissue factor. More specifically, the activation of the factor X into FXa in the coagulation system is a crucial reaction in the formation of thrombin. The activated factor X (FXa) limitedly decomposes prothrombin to produce thrombin in the both systems. Since the produced thrombin activates coagulation factors in the upper stream, the formation of thrombin is more amplified. As described above, since the coagulation system in the upper stream of FXa is divided into the endogenous system and the exogenous system, production of FXa cannot be sufficiently inhibited by inhibiting enzymes in the coagulation system in the upper stream of FXa, leading to production of thrombin. Since the coagulation system comprises self-amplification reactions, inhibition of the coagulation system can be more efficiently achieved by inhibiting FXa in the upper stream of thrombin than the inhibition of thrombin (Thrombosis Research, Vol. 15, pp. 617-629, 1979).

[0004] An another excellent point of FXa inhibitors is a great difference between an effective dose in a thrombosis model and a dose prolonging bleeding time in an experimental hemorrhagic model. From this experimental result, FXa inhibitors are considered to be anticoagulants having low risk of hemorrhage.

[0005] Various compounds have been reported as FXa inhibitors. It is known that antithrombin III and antithrombin III dependent pentasaccharides can generally not inhibit prothrombinase complexes which play a practical role in the

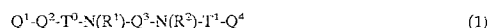
thrombus formation in a living body (Thrombosis Research, Vol. 68, pp. 507-512, 1992; Journal of Clinical Investigation, Vol. 71, pp. 1383-1389, 1983; Mebio, Vol. 14, the August number, pp. 92-97). In addition, they do not exhibit effectiveness by oral administration. Tick anticoagulant peptide (TAP) (Science, Vol. 248, pp. 593-596, 1990) and antistasin (AST) (Journal of Biological Chemistry, Vol. 263, pp. 10162-10167, 1988) isolated from mites or leeches, which are bloodsuckers, also inhibit Fxa and exhibit anti-thrombotic effects against venous thrombosis and arterial thrombosis. However, these compounds are high-molecular weight peptides and unavailable in oral administration. As described above, development of antithrombin III independent low-molecular weight FXa inhibitors which directly inhibit coagulation factors has been conducted.

[0006] It is therefore an object of the present invention to provide a novel compound which has a potent FXa-inhibiting effect and exhibits an anti-thrombotic effect quickly, sufficiently and persistently by oral administration.

DISCLOSURE OF THE INVENTION

[0007] The present inventors have investigated synthesis and pharmacological effects of novel FXa inhibitors. As a result, diamine derivatives, salts thereof, and solvates and N-oxides thereof, which exhibit potent FXa-inhibiting effect and anticoagulant effect, have been found. It has also been found that these compounds promptly, persistently and potently inhibit FXa and exhibit potent anticoagulant effect and anti-thrombotic effect by oral administration, and are hence useful as prophylactics and remedies for various diseases based on thromboembolism, thus leading to completion of the present invention.

[0008] This invention provides a compound represented by the general formula (1):



[0009] wherein

[0010] R^1 and R^2 , independently of each other, represent a hydrogen atom, hydroxyl group, alkyl group or alkoxy group;

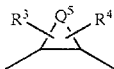
[0011] Q^1 represents a saturated or unsaturated, 5- or 6-membered cyclic hydrocarbon group which may be substituted, a saturated or unsaturated, 5- to 7-membered heterocyclic group which may be substituted, a saturated or unsaturated, bicyclic or tricyclic fused hydrocarbon group which may be substituted, or a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted;

[0012] Q^2 represents a single bond, a saturated or unsaturated, 5- or 6-membered divalent cyclic hydrocarbon group which may be substituted, a saturated or unsaturated, 5- to 7-membered divalent heterocyclic group which may be substituted, a saturated or unsaturated, divalent bicyclic or tricyclic fused hydrocarbon group which may be substituted, or a saturated or unsaturated, divalent bicyclic or tricyclic fused heterocyclic group which may be substituted;

having 2 to 8 carbon atoms, the substituent on the group Q^5 is preferably an N-alkylcarbamoyl or N,N-dialkylcarbamoyl group.

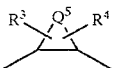
[0131] A feature of the compounds of the present invention represented by the general formula (1), the salts thereof, the solvates thereof, or the N-oxides thereof resides in a combination of the group T^1 and the group Q^3 . The combination is roughly divided into the following 2 cases (I) and (II):

[0132] (I) A case where T^1 is a carbonyl, sulfonyl or thiocarbonyl group, and Q^3 is the following group:



[0133] wherein Q^5 means a group $-(CH_2)_m-CH_2-A-CH_2-(CH_2)_n-$, in which m and n are independently of each other 0 or an integer of 1-3, and A means an oxygen atom, nitrogen atom, sulfur atom, $-SO-$, $-SO_2-$, $-NH-$, $-O-NH-$, $-NH-NH-$, $-S-NH-$, $-SO-NH-$ or $-SO_2-NH-$; and

[0134] (II) a case where T^1 is a group $-C(=O)-C(=O)-N(R')$, group $-C(=S)-C(=O)-N(R')$, group $-C(=O)-C(=S)-N(R')$ or group $-C(=S)-C(=S)-N(R')$, in which R' means a hydrogen atom, hydroxyl group, alkyl group or alkoxy group, group $-C(=O)-A^1-N(R')$, in which A^1 means an alkylene group having 1 to 5 carbon atoms, which may be substituted, and R'' means a hydrogen atom, hydroxyl group, alkyl group or alkoxy group, group $-C(=O)-NH-$, group $-C(=S)-NH-$, group $-C(=O)-NH-NH-$, group $-C(=O)-A^2-C(=O)-$, in which A^2 means a single bond or alkylene group having 1 to 5 carbon atoms, group $-C(=O)-A^3-C(=O)-NH-$, in which A^3 means an alkylene group having 1 to 5 carbon atoms or thiocarbonyl group, and Q^3 is the following group:



[0135] wherein Q^5 means an alkylene group having 1 to 8 carbon atoms, an alkenylene group having 2 to 8 carbon atoms or a group $-(CH_2)_m-CH_2-A-CH_2-(CH_2)_n-$, in which m and n are independently of each other 0 or an integer of 1-3, and A means an oxygen atom, nitrogen atom, sulfur atom, $-SO-$, $-SO_2-$, $-NH-$, $-O-NH-$, $-NH-NH-$, $-S-NH-$, $-SO-NH-$ or $-SO_2-NH-$.

[0136] In the cases (I) and (II), the following (i) and (ii) are mentioned as preferred examples, respectively.

[0137] (i) An example where the group R^1 and the group R^2 are, independently of each other, a hydrogen atom or alkyl group, the group Q^1 is a saturated or unsaturated, bicyclic or tricyclic fused hydrocarbon group which may be substituted, or a saturated

or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted, the group Q^2 is a single bond, the group Q^5 in the group Q^3 is a group $-(CH_2)_m-CH_2-A-CH_2-(CH_2)_n-$, in which m and n are independently of each other 0 or 1, and A has the same meaning as defined above, the group Q^3 is selected from 9 groups (a) to (h) and (1) of the above-described 12 groups, the group T^0 is a carbonyl group or thiocarbonyl group, and the group T^1 is a carbonyl group or sulfonyl group; and

[0138] (ii) An example where in the generally formula (1), the groups R^1 and R^2 are, independently of each other, a hydrogen atom or alkyl group, the group Q^1 is a saturated or unsaturated, bicyclic or tricyclic fused hydrocarbon group which may be substituted, or a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted, the group Q^2 is a single bond, the group Q^5 in the group Q^3 is an alkylene group having 3 to 6 carbon atoms or a group $-(CH_2)_m-CH_2-A-CH_2-(CH_2)_n-$, in which m and n are independently of each other 0 or 1, and A has the same meaning as defined above, the group Q^4 is selected from 3 groups (i), (j) and (k) of the above-described 12 groups, the group T^0 is a carbonyl group or thiocarbonyl group, and the group T^1 is a group $-C(=O)-C(=O)-N(R')$, group $-C(=S)-C(=O)-N(R')$, group $-C(=O)-C(=S)-N(R')$ or group $-C(=S)-C(=S)-N(R')$.

[0139] Stereoisomers or optical isomers derived from an asymmetric carbon atom may be present in the compounds of the present invention represented by the general formula (1). However, these stereoisomers, optical isomers and mixtures thereof are all included in the present invention.

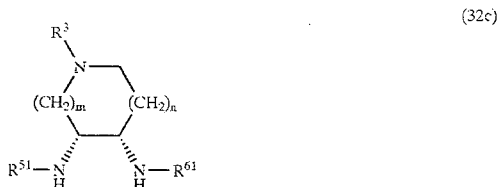
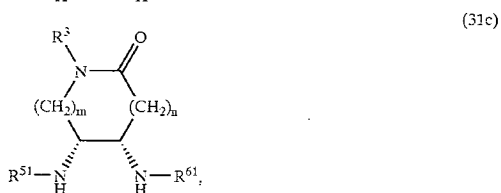
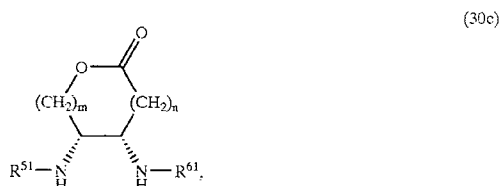
[0140] No particular limitation is imposed on salts of the compounds of the present invention represented by the general formula (1) so far as they are pharmaceutically acceptable salts. However, specific examples thereof include mineral acid salts such as hydrochlorides, hydrobromides, hydriodides, phosphates, nitrates and sulfates; benzoates; organic sulfonates such as methanesulfonates, 2-hydroxyethanesulfonates and p-toluenesulfonates; and organic carboxylates such as acetates, propanoates, oxalates, malonates, succinates, glutarates, adipates, tartrates, maleates, malates and mandelates. In the case where the compounds represented by the general formula (1) have an acidic group, they may be salts of alkali metal ions or alkaline earth metal ions. No particular limitation is imposed on the solvates thereof so far as they are pharmaceutically acceptable solvates. As specific examples thereof, however, may be mentioned hydrates and solvates with ethanol. When a nitrogen atom is present in the general formula (1), such a compound may be converted to an N-oxide thereof.

[0141] As the compounds according to the present invention, are preferred the compounds described in the following Examples and salts thereof as well as the following compounds and salts thereof.

[0142] 1) 3-Chloro-N-((1S,2R,4S)-4-[(dimethylamino)carbonyl]-2-[[5-methyl-4,5,6,7-tetrahydrothiazolo[5,4-c]pyridin-2-yl]carbonyl]amino)cyclohexyl)[1,6]naphthyridine-7-carboxamide;

[0143] 2) 7-Chloro-N-((1S,2R,4S)-4-[(dimethylamino)carbonyl]-2-[[5-methyl-4,5,6,7-tetrahydrothiazolo

[0366] wherein R^3 , m and n have the same meanings as defined above, and R^{51} and R^{61} represent protecting groups for amino group, and enantiomers (30c), (31c) and (32c) thereof:



[0367] wherein R^3 , m and n have the same meanings as defined above, and R^{51} and R^{61} represent protecting groups for amino group, are important as intermediates for preparing compounds (1) according to the present invention.

[0368] The cyclic diamine derivatives according to the present invention exhibit strong inhibitory effects on activated blood coagulation factor X and are thus useful for medicines for mammal including human, anticoagulants factor X, agents for preventing and/or treating thrombosis or embolism, agents for preventing and/or treating thrombotic diseases, and agents for preventing and/or treating cerebral infarction, cerebral embolism, myocardial infarction, angina pectoris, pulmonary infarction, pulmonary embolism, Buerger's disease, deep venous thrombosis, disseminated intravascular coagulation syndrome, thrombus formation after valve or joint replacement, thrombus formation and reocclusion after angioplasty, systemic inflammatory reaction syndrome (SIRS), multiple organ disease syndrome (MODS), thrombus formation during extracorporeal circulation, or blood clotting upon blood gathering.

[0369] When a compound according to the present invention is used as a medicine for human body, the dose is within a range of 1 mg to 1 g, preferably 10 to 300 mg, per day for an adult. The dose for animal varies according to the object (treatment or prevention) of the administration, the kind and size of an animal to be treated, the kind of a contagium, and the condition of a disease attacked. However, it is generally within a range of 0.1 to 200 mg, preferably 0.5 to 100 mg, per kg of weight a day. Meanwhile, the administration may be once per day, or may be divided into 2 to 4 times per day. The dose per day may exceed the above range if necessary.

[0370] Medicinal compositions comprising the compound according to the present invention can be prepared by

selecting a suitable preparation form according to an administration method in accordance with a preparation method for the preparation form used. As examples of the preparation forms of the medicinal compositions comprising the compound according to the present invention as a main component, may be mentioned tablets, tablets, powder, granules, capsules, solutions, syrups, elixirs, oil or aqueous suspensions or the like for oral preparations.

[0371] In the case of an injection, a stabilizer, a preservative and a dissolution aid may be used in a preparation. A solution which may contain these auxiliaries in some cases may also be provided as a solid form for preparing upon use by containing the solution into a container and then drying the solution by lyophilization or the like. A dose or doses of the injection may also be contained into a container.

[0372] As example of preparation forms for external application, may be mentions solutions, suspensions, emulsions, ointments, gel, creams, lotions, sprays, plasters or the like.

[0373] A solid preparation may contain pharmaceutically acceptable additives in addition to the compound according to the present invention. For example, fillers, extenders, binders, disintegrators, dissolution accelerators, wetting agents, etc. may be suitably selected and mixed, giving a preparation.

[0374] As example of preparation forms of a liquid preparation, may be mentioned solutions, suspensions, emulsions and the like. They may contain a suspending agent, emulsifier and/or the like in some cases.

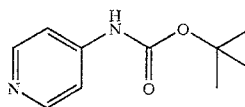
EXAMPLES

[0375] However, the present invention is not limited to these examples.

Referential Example 1

tert-Butyl pyridin-4-ylcarbamate

[0376]



[0377] 4-Aminopyridine (10 g) was dissolved in tetrahydrofuran (500 ml), di-tert-butyl dicarbonate (25.5 g) was added to the solution, and the mixture was stirred at room temperature for 10 minutes. The resultant reaction mixture was concentrated under reduced pressure, and deposited solids were washed with hexane to obtain the title compound (16.9 g).

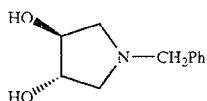
[0378] $^1\text{H-NMR}$ (CDCl_3) δ : 1.53(9H,s), 6.86(1H,br,s), 7.30(2H,dd,J=1.5, 4.9 Hz), 8.44(2H,dd,J=1.5, 4.9 Hz).

[0379] MS (FAB) m/z: 195(M+H) $^+$.

Referential Example 189

(3S,4S)-1-Benzyl-3,4-pyrrolidinediol

[1082]



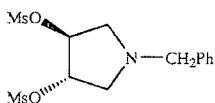
[1083] The compound (11 g) obtained in Referential Example 188 was dissolved in tetrahydrofuran (110 ml), and lithium aluminum hydride (5.69 g) was added portionwise to the solution under ice cooling. The mixture was heated to room temperature for 1 hour and heated under reflux and for additional a night. After allowing the reaction mixture to cool, water (5.7 ml), a 15% aqueous solution (5.7 ml) of sodium hydroxide and water (17.1 ml) were added under ice cooling in that order, and the mixture was heated to room temperature and stirred for 1 hour. After deposits were filtered through Celite, and the mother liquor was concentrated under reduced pressure, the resultant residue was recrystallized from ethyl acetate to obtain title compound (6.35 g).

[1084] $^1\text{H-NMR}$ (CDCl_3) δ : 2.40-2.44(2H,m), 2.88-2.92(2H,m), 3.58(each 1H,AB type d,J=7.8 Hz), 4.04(2H,t, J=4.2 Hz), 7.25-7.34(5H,m).

Referential Example 190

(3S,4S)-1-Benzyl-4-[(methylsulfonyl)oxy]pyrrolidinyl methanesulfonate

[1085]



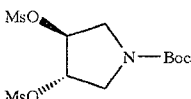
[1086] The title compound was obtained from the compound obtained in Referential Example 189 in a similar manner to Referential Example 169.

[1087] $^1\text{H-NMR}$ (CDCl_3) δ : 2.76(2H,dd,J=11, 4.6 Hz), 3.08(6H,s), 3.64(2H,d,J=2.5 Hz), 3.68-3.75(2H,m), 5.12-5.15(2H,m), 7.27-7.35(5H,m).

Referential Example 191

tert-Butyl(3S,4S)-3,4-bis[(methylsulfonyl)oxy]-1-pyrrolidinecarboxylate

[1088]



[1089] The compound (1.57 g) obtained in Referential Example 190 was dissolved in 1,2-dichloroethane (16 ml), 1-chloroethyl chloroformate (0.73 ml) was added at room temperature, and the resultant mixture was heated under reflux for 4 hours. After the solvent was distilled off under

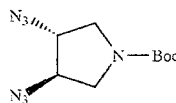
reduced pressure, methanol (16 ml) was added to the resultant residue, and the resultant mixture was heated under reflux for 1 hour, allowed to cool and concentrated. Crystals obtained by recrystallization from ethyl acetate were collected by filtration to obtain (3S,4S)-3,4-bis-[(methylsulfonyl)oxy]pyrrolidine hydrochloride (1.30 g) as colorless crystals. Di-tert-butyl dicarbonate (1.15 ml) was added to a solution of the hydrochloride thus obtained and triethylamine (1.40 ml) in methylene chloride (26 ml), and the mixture was stirred overnight at room temperature. After the reaction mixture was concentrated, the residue was diluted with ethyl acetate, washed with water and saturated aqueous solution of sodium chloride and dried over anhydrous sodium sulfate. The solvent was distilled off under reduced pressure. The resultant residue was purified by column chromatography on silica gel (ethyl acetate:hexane=1:9-1:1) to obtain the title compound (1.40 g).

[1090] $^1\text{H-NMR}$ (CDCl_3) δ : 1.47(9H,s), 3.12(6H,s), 3.70-3.73(2H,m), 3.79(1H,d,J=4.5 Hz), 3.82(1H,d,J=4.5 Hz), 5.19(2H,br).

Referential Example 192

tert-Butyl(3R,4R)-3,4-diazo-1-pyrrolidinecarboxylate

[1091]



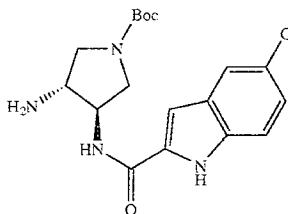
[1092] The title compound was obtained from the compound obtained in Referential Example 191 in a similar manner to Referential Example 170.

[1093] $^1\text{H-NMR}$ (CDCl_3) δ : 1.47(9H,s), 3.37-3.46(2H,m), 3.64-3.71(2H,m), 3.96(2H,t,J=3.2 Hz).

Referential Example 193

tert-Butyl(3R,4R)-3-amino-4-[[[(5-chloroindol-2-yl)carbonyl]amino]pyrrolidine-1-carboxylate

[1094]



[1095] The title compound was obtained from the compound obtained in Referential Example 192 in a similar manner to Referential Examples 171 and 172.

[1096] $^1\text{H-NMR}$ (DMSO-d_6) δ : 1.39(9H,s), 2.95-3.00(1H,m), 3.09-3.13(1H,m), 3.52(1H,dd,J=10, 6.5 Hz), 3.68(1H,

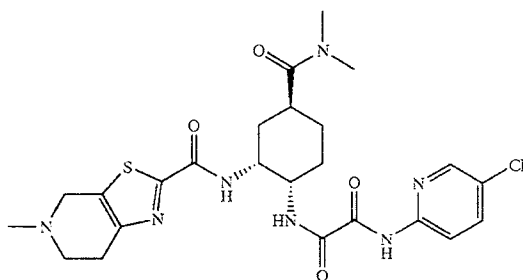
[3281] $^1\text{H-NMR}$ (CDCl_3) δ : 1.60-1.98(3H,m), 2.00-2.16(3H,m), 2.52(3H,s), 2.78-2.90(3H,m), 2.92-2.98(2H,m), 2.95(3H,s), 3.06(3H,s), 3.69(1H,d,J=15.4 Hz), 3.75(1H,d,J=15.4 Hz), 4.07-4.15(1H,m), 4.66-4.72(1H,m), 7.40(1H,d,J=8.8, 0.6 Hz), 7.68(1H,dd,J=8.8, 2.4 Hz), 8.03(1H,d,J=7.8 Hz), 8.16(1H,dd,J=8.8, 0.6 Hz), 8.30(1H,dd,J=2.4, 0.6 Hz), 9.72(1H,s).

[3282] MS (ESI) m/z : 548(M+H) $^+$.

Example 311

N^1 -(5-Chloropyridin-2-yl)- N^2 -((1S,2R,4S)-4-[(dimethylamino)carbonyl]-2-[[[5-methyl-4,5,6,7-tetrahydrothiazolo [5,4-c]pyridin-2-yl)carbonyl]amino]cyclohexyl)ethanediamide p-toluenesulfonate Monohydrate

[3283]



[3284] The compound (6.2 g) obtained in Example 310 is dissolved in methylene chloride (120 ml), a 1 mol/L ethanol solution (11.28 ml) of p-toluenesulfonic acid was added to the solution, and the solvent was distilled off. Ethanol (95 ml) containing 15% water was added to the residue, and the mixture was stirred at 60° C. to dissolve it. The solution was then cooled to room temperature and stirred for a day. Crystals deposited were collected by filtration, washed with ethanol and dried at room temperature for 2 hours under reduced pressure to obtain the title compound (7.4 g).

[3285] $^1\text{H-NMR}$ ($\text{DMSO}-d_6$) δ : 1.45-1.54(1H,m), 1.66-1.78(3H,m), 2.03-2.10(2H,m), 2.28(3H,s), 2.79(3H,s), 2.91-3.02(1H,m), 2.93(3H,s), 2.99(3H,s), 3.13-3.24(2H,m), 3.46-3.82(2H,m), 3.98-4.04(1H,m), 4.43-4.80(3H,m), 7.11(2H,d,J=7.8 Hz), 7.46(2H,d,J=8.2 Hz), 8.01(2H,d,J=1.8 Hz), 8.46(1H,t,J=1.8 Hz), 8.75(1H,d,J=6.9 Hz), 9.10-9.28(1H,br), 10.18(1H,br), 10.29(1H,s).

[3286] MS (ESI) m/z : 548(M+H) $^+$.

[3287] Elemental analysis: $\text{C}_{25}\text{H}_{30}\text{ClN}_7\text{O}_4\text{S}\cdot\text{C}_7\text{H}_8\text{O}_3\text{S}\cdot\text{H}_2\text{O}$. Calculated: C,50.43, H,5.46, N,13.28, Cl,4.80, S,8.69. Found: C,50.25, H,5.36, N,13.32, Cl,4.93, S,8.79.

[3288] mp (decomposed): 245–248° C.

Test Example 1

[3289] Determination of Human FXa-Inhibiting Effect (IC_{50} Value)

[3290] 5% DMSO solutions (10 μl) of each test compound, the concentrations of which were suitably set step-

wise, Tris buffer (100 mM Tris, 200 mM potassium chloride, 0.2% BSA, pH 7.4) (40 μl) and 0.0625 U/ml human FXa (Enzyme Research Laboratories, Inc., dissolved and diluted with Tris buffer) (10 μl) were respectively put in wells of a 96-well microplate, and a 750 μM aqueous solution (40 μl) of S-2222 (Chromogenix Co.) was added. Absorbance at 405 nm was measured for 10 minutes at room temperature to determine an increase in absorbance ($\Delta\text{OD}/\text{min}$). As a control, Tris buffer was used in place of the test compound.

[3291] The percent inhibition (%) calculated using the following equation at the final concentration of the test compound and the final concentration of the test compound were plotted on the axis of ordinate and the axis of abscissa of logarithmic normal probability paper, respectively, to determine the 50% inhibition concentration (IC_{50} value).

$$\text{Percent inhibition (\%)} = [1 - (\Delta\text{OD}/\text{min of test compound}) / (\Delta\text{OD}/\text{min of control})] \times 100$$

[3292] (Result)

[3293] In Table 1, it is demonstrated that the compounds according to the present invention have a potent FXa-inhibiting effect.

TABLE 1

Compound	Human FXa-inhibiting effect (IC_{50} ; nM)
Ex. 3	86
Ex. 7	83
Ex. 11	92
Ex. 54	4.2
Ex. 62	3.5
Ex. 63	2.5
Ex. 74	1.4
Ex. 101	26
Ex. 130	4.5
Ex. 138	4.4
Ex. 143	5.8
Ex. 164	4.8
Ex. 191	1.2
Ex. 192	2.0
Ex. 194	5.0
Ex. 204	1.5
Ex. 246	3.1
Ex. 247	1.9
Ex. 248	5.4

Test Example 2

[3294] Determination of Anti-FXa Activity in Rat Plasma After Oral Administration:

[3295] (A) Administration and Blood Collection:

[3296] A drug solution (1 mg/ml) obtained by dissolving or suspending a test compound (10 mg) in 0.5% methyl cellulose (MC) was orally administered to rats (10 ml/kg). After 0.5, 1, 2 and 4 hours from the drug administration, the blood (0.5 ml) was collected through the jugular vein using a syringe which is containing a 3.13% (w/v) aqueous solution (50 μl) of trisodium citrate dihydrate (amount of blood collected: 0.45 ml). For rats of a control group, the same blood collection was conducted after a 0.5% MC solution was administered. Each blood sample was centrifuged at 1500 $\times$ g for 10 minutes at 4° C. to separate plasma, and the plasma was preserved at -40° C. until it was used in the following determination of anti-FXa activity in plasma.

[3297] (B) Determination of FXa-Inhibiting Activity in Plasma:

[3298] In the determination of anti-FXa activity in plasma, S-2222 was used as a substrate. Tris buffer (100 mM Tris, 200 mM potassium chloride, 0.2% BSA, pH 7.4) (5456 μ l), human FXa (2.5 U/ml, 44 μ l) and water (0.550 μ l) were mixed. The resultant human FXa solution was used in the following test.

[3299] Rat plasma (5 μ l) obtained in accordance with the procedure (A) described above was put in wells of a 96-well microplate, and the above-described human FXa solution (55 μ l) and a 750 μ M aqueous solution (40 μ l) of S-2222 were sequentially added. Immediately after that, absorbance at 405 nm was measured at room temperature by means of a spectrophotometer SPECTRAMax 340 or 190 (Molecular Devices Co., U.S.A.), thereby determining a rate of reaction (Δ OD/min).

[3300] The anti-FXa activity, i.e., percent inhibition (%) was calculated in accordance with the following equation:

$$\text{Percent inhibition (\%)} = \frac{[1 - (\Delta\text{OD}/\text{min of sample}) / (\text{average value of } \Delta\text{OD}/\text{min of the control group})] \times 100}{1}$$

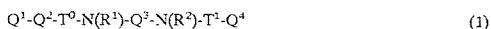
[3301] (Result)

[3302] The compounds described in Examples 63, 191, 192, 194 and 204 exhibited a potent FXa-inhibiting activity of 62 to 96% at an oral dose of 10 mg/kg.

INDUSTRIAL APPLICABILITY

[3303] The cyclicdiamine derivatives according to the present invention exhibit a potent inhibitory effect on activated blood coagulation factor X and are useful as medicines, activated blood coagulation factor X inhibitors, anticoagulants, agents for preventing and/or treating thrombosis or embolism, agents for preventing and/or treating thrombotic disease and agents for preventing and/or treating cerebral infarction, cerebral embolism, myocardial infarction, angina pectoris, pulmonary infarction, pulmonary embolism, Buerger's disease, deep venous thrombosis, disseminated intravascular coagulation syndrome, thrombus formation after valve or joint replacement, thrombus formation and reocclusion after angioplasty, systemic inflammatory response syndrome (SIRS), multiple organ dysfunction syndrome (MODS), thrombus formation during extracorporeal circulation, or blood clotting upon blood drawing.

1. A compound represented by the general formula (1):



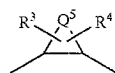
wherein

R^1 and R^2 , independently of each other, represent a hydrogen atom, hydroxyl group, alkyl group or alkoxy group;

Q^1 represents a saturated or unsaturated, 5- or 6-membered cyclic hydrocarbon group which may be substituted, a saturated or unsaturated, 5- to 7-membered heterocyclic group which may be substituted, a saturated or unsaturated, bicyclic or tricyclic fused hydrocarbon group which may be substituted, or a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted;

Q^2 represents a single bond, a saturated or unsaturated, 5- or 6-membered divalent cyclic hydrocarbon group which may be substituted, a saturated or unsaturated, 5- to 7-membered divalent heterocyclic group which may be substituted, a saturated or unsaturated, divalent bicyclic or tricyclic fused hydrocarbon group which may be substituted, or a saturated or unsaturated, divalent bicyclic or tricyclic fused heterocyclic group which may be substituted;

Q^3 represents the following group:



in which Q^5 means an alkylene group having 1 to 8 carbon atoms, an alkenylene group having 2 to 8 carbon atoms, or a group $-(CH_2)_m-CH_2-A-CH_2-(CH_2)_n-$, in which m and n are independently of each other 0 or an integer of 1-3, and A means an oxygen atom, nitrogen atom, sulfur atom, $-SO-$, $-SO_2-$, $-NH-$, $-O-NH-$, $-NH-NH-$, $-S-NH-$, $-SO-NH-$ or $-SO_2-NH-$, and R^3 and R^4 are substituents on carbon atom(s), nitrogen atom(s) or a sulfur atom(s) of a ring comprising Q^5 and are independently of each other a hydrogen atom, hydroxyl group, alkyl group, alkenyl group, alkynyl group, halogen atom, halogenoalkyl group, cyano group, cyanoalkyl group, amino group, aminoalkyl group, N-alkylaminoalkyl group, N,N-dialkylaminoalkyl group, acyl group, acylalkyl group, acylamino group which may be substituted, alkoxyimino group, hydroxyimino group, acylaminoalkyl group, alkoxy group, alkoxyalkyl group, hydroxyalkyl group, carboxyl group, carboxyalkyl group, alkoxy carbonyl group, alkoxy carbonylalkyl group, alkoxy carbonylalkylamino group, carboxyalkylamino group, alkoxy carbonylalkylamino group, carbamoyl group, N-alkylcarbamoyl group which may have a substituent on the alkyl group, N,N-dialkylcarbamoyl group which may have a substituent on the alkyl group(s), N-alkylcarbamoyl group, N-alkenylcarbamoylalkyl group, N-alkenyl-N-alkylcarbamoyl group, N-alkenyl-N-alkylcarbamoylalkyl group, N-alkoxy carbamoyl group, N-alkyl-N-alkoxy carbamoyl group, N-alkoxy carbamoylalkyl group, N-alkyl-N-alkoxy carbamoylalkyl group, carbazoyl group which may be substituted by 1 to 3 alkyl groups, alkylsulfonyl group, alkylsulfonylalkyl group, 3- to 6-membered heterocyclic carbonyl group which may be substituted, carbamoylalkyl group, N-alkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), N,N-dialkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), carbamoyloxyalkyl group, N-alkylcarbamoyloxyalkyl group, N,N-dialkylcarbamoyloxyalkyl group, 3- to 6-membered heterocyclic carbonylalkyl group which may be substituted, 3- to 6-membered heterocyclic carbonyloxyalkyl group which may be substituted, aryl group, aralkyl group, heteroaryl group, heteroarylalkyl group, alkylsulfonylamino group, arylsulfonylamino group, alkylsulfonylaminoalkyl group, arylsulfonylaminoalkyl group,

alkylsulfonylaminocarbonyl group, arylsulfonylaminocarbonyl group, alkylsulfonylaminocarbonylalkyl group, arylsulfonylaminocarbonylalkyl group, oxo group, carbamoyloxy group, aralkyloxy group, carboxyalkyloxy group, acyloxy group, acyloxyalkyl group, arylsulfonyl group, alkoxyalkylsulfonyl group, carboxyalkylsulfonyl group, alkoxyalkylsulfonyl group, alkoxyalkyloxycarbonyl group, hydroxyacyl group, alkoxyacyl group, halogenoacyl group, carboxyacyl group, aminoacyl group, acyloxyacyl group, acyloxyalkylsulfonyl group, hydroxyalkylsulfonyl group, alkoxyalkylsulfonyl group, 3- to 6-membered heterocyclic sulfonyl group which may be substituted, N-alkylaminoacyl group, N,N-dialkylaminoacyl group, N,N-dialkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), N,N-dialkylcarbamoylalkylsulfonyl group which may have a substituent on the alkyl group(s) or alkylsulfonylalkyl group, or R³ and R⁴, together with each other, denote an alkylene group having 1 to 5 carbon atoms, alkenylene group having 2 to 5 carbon atoms, alkylenedioxy group having 1 to 5 carbon atoms or carbonyldioxy group;

Q⁴ represents an aryl group which may be substituted, an arylalkenyl group which may be substituted, an arylalkynyl group which may be substituted, a heteroaryl group which may be substituted, a heteroarylalkenyl group which may be substituted, a saturated or unsaturated, bicyclic or tricyclic fused hydrocarbon group which may be substituted, or a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted;

T⁰ represents a carbonyl or thiocarbonyl group; and

T¹ represents a carbonyl group, sulfonyl group, group $\text{—C(=O)—C(=O)—N(R')—}$, group $\text{—C(=S)—C(=O)—N(R')—}$, group $\text{—C(=O)—C(=S)—N(R')—}$, group $\text{—C(=S)—C(=S)—N(R')—}$, in which R' means a hydrogen atom, hydroxyl group, alkyl group or alkoxy group, group $\text{—C(=O)—A}^1\text{—N(R'')—}$, in which A¹ means an alkylene group having 1 to 5 carbon atoms, which may be substituted, and R'' means a hydrogen atom, hydroxyl group, alkyl group or alkoxy group, group —C(=O)—NH— , group —C(=S)—NH— , group —C(=O)—NH—NH— , group $\text{—C(=O)—A}^2\text{—C(=)—}$, in which A² means a single bond or alkylene group having 1 to 5 carbon atoms, group $\text{—C(=O)—A}^3\text{—C(=O)—NH—}$, in which A³ means an alkylene group having 1 to 5 carbon atoms, group $\text{—C(=O)—C(=NOR^a)—N(R^b)—}$, group $\text{—C(=S)—C(=NOR^a)—N(R^b)—}$, in which R^a means a hydrogen atom, alkyl group or alkanoyl group, and R^b means a hydrogen atom, hydroxyl group, alkyl group or alkoxy group, group —C(=O)—N=N— , group —C(=S)—N=N— , or thiocarbonyl group;

a salt thereof, a solvate thereof, or an N-oxide thereof.

2. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to claim 1, wherein the group Q⁴ in the formula (1) is a group selected from the group consisting of a phenyl group which may be substituted, a naphthyl group which may be substituted, an anthryl group which may be substituted, a phenanthryl group which may be substituted, a styryl group which may be substituted, a phenylethynyl group which may be substituted, a pyridyl

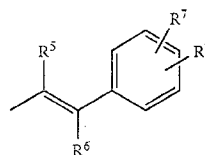
group which may be substituted, a pyridazinyl group which may be substituted, a pyradinyl group which may be substituted, a furyl group which may be substituted, a thienyl group which may be substituted, a pyrrolyl group which may be substituted, a thiazolyl group which may be substituted, an oxazolyl group which may be substituted, a pyrimidinyl group which may be substituted, a tetrazolyl group which may be substituted, a thienylethenyl group which may be substituted, a pyridylethenyl group which may be substituted, an indenyl group which may be substituted, an indanyl group which may be substituted, a tetrahydronaphthyl group which may be substituted, a benzofuryl group which may be substituted, an isobenzofuryl group which may be substituted, a benzothienyl group which may be substituted, an indolyl group which may be substituted, an indolinyl group which may be substituted, an isoindolyl group which may be substituted, an isoindolinyl group which may be substituted, an indazolyl group which may be substituted, a quinolyl group which may be substituted, a dihydroquinolyl group which may be substituted, a 4-oxodihydroquinolyl group (dihydroquinolin-4-on) which may be substituted, a tetrahydroquinolyl group which may be substituted, an isoquinolyl group which may be substituted, a tetrahydroisoquinolyl group which may be substituted, a chromenyl group which may be substituted, a chromanyl group which may be substituted, an isochromanyl group which may be substituted, a 4H-4-oxobenzopyranyl group which may be substituted, a 3,4-dihydro-4H-4-oxobenzopyranyl group which may be substituted, a 4H-quinoliziny group which may be substituted, a quinazolinyl group which may be substituted, a dihydroquinazolinyl group which may be substituted, a tetrahydroquinazolinyl group which may be substituted, a quinoxalinyl group which may be substituted, a tetrahydroquinoxalinyl group which may be substituted, a cinnolinyl group which may be substituted, a tetrahydrocinnolinyl group which may be substituted, an indoliziny group which may be substituted, a tetrahydroindoliziny group which may be substituted, a benzothiazolyl group which may be substituted, a tetrahydrobenzothiazolyl group which may be substituted, a benzoxazolyl group which may be substituted, a benzoisothiazolyl group which may be substituted, a benzoisoxazolyl group which may be substituted, a benzimidazolyl group which may be substituted, a naphthyridinyl group which may be substituted, a tetrahydronaphthyridinyl group which may be substituted, a thienopyridyl group which may be substituted, a tetrahydrothienopyridyl group which may be substituted, a thiazolopyridyl group which may be substituted, a thiazolopyridazinyl group which may be substituted, a tetrahydrothiazolopyridazinyl group which may be substituted, a pyrrolopyridyl group which may be substituted, a dihydropyrrolopyridyl group which may be substituted, a tetrahydropyrrolopyridyl group which may be substituted, a pyrrolopyrimidinyl group which may be substituted, a dihydropyrrolopyrimidinyl group which may be substituted, a pyridoquinazolinyl group which may be substituted, a pyridopyrimidinyl group which may be substituted, a tetrahydropyridopyrimidinyl group which may be substituted, a pyranothiazolyl group which may be substituted, a dihydropyranothiazolyl group which may be substituted, a furopyridyl group which may be substituted, a tetrahydrofuropyridyl group which may be substituted, an oxazolopyridyl group which may be substi-

tuted, a tetrahydrooxazolopyridyl group which may be substituted, an oxazolopyridazinyl group which may be substituted, a tetrahydrooxazolopyridazinyl group which may be substituted, a pyrrolothiazolyl group which may be substituted, a dihydropyrrolothiazolyl group which may be substituted, a pyrrolooxazolyl group which may be substituted, a dihydropyrrolooxazolyl group which may be substituted, a thienopyrrolyl group which may be substituted, a thiazolopyrimidinyl group which may be substituted, a 4-oxo-tetrahydrocinnolinyl group which may be substituted, a 1,2,4-benzothiadiazinyl group which may be substituted, a 1,1-dioxy-2H-1,2,4-benzothiadiazinyl group which may be substituted, a 1,2,4-benzoxadiazinyl group which may be substituted, a cyclopentapyranyl group which may be substituted, a thienofuranlyl group which may be substituted, a furopyranlyl group which may be substituted, a pyridoxazinyl group which may be substituted, a pyrazoloxazolyl group which may be substituted, an imidazothiazolyl group which may be substituted, an imidazopyridyl group which may be substituted, a tetrahydroimidazopyridyl group which may be substituted, a pyrazinopyridazinyl group which may be substituted, a benzoisoquinolyl group which may be substituted, a furocinnolyl group which may be substituted, a pyrazolothiazolopyridazinyl group which may be substituted, a tetrahydropyrazolothiazolopyridazinyl group which may be substituted, a hexahydrothiazolopyridazinopyridazinyl group which may be substituted, an imidazotriazinyl group which may be substituted, an oxazolopyridyl group which may be substituted, a benzoxepinyl group which may be substituted, a benzoazepinyl group which may be substituted, a tetrahydrobenzoazepinyl group which may be substituted, a benzodiazepinyl group which may be substituted, a benzotriazepinyl group which may be substituted, a thienozepinyl group which may be substituted, a tetrahydrothienozepinyl group which may be substituted, a thienodiazepinyl group which may be substituted, a thienotriazepinyl group which may be substituted, a thiazoloazepinyl group which may be substituted, a tetrahydrothiazoloazepinyl group which may be substituted, a 4,5,6,7-tetrahydro-5,6-tetramethylenethiazolopyridazinyl group which may be substituted, and a 5,6-trimethylene-4,5,6,7-tetrahydrothiazolopyridazinyl group which may be substituted.

3. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to claim 1 or 2, wherein the substituent(s) on the group Q^4 are 1 to 3 substituents selected from a hydroxyl group, halogen atoms, halogenoalkyl groups, an amino group, a cyano group, aminoalkyl groups, a nitro group, hydroxyalkyl groups, alkoxyalkyl groups, a carboxyl group, carboxyalkyl groups, alkoxycarbonylalkyl groups, acyl groups, an amidino group, a hydroxyamidino group, linear, branched or cyclic alkyl groups having 1 to 6 carbon atoms, linear, branched or cyclic alkoxy groups having 1 to 6 carbon atoms, amidino groups substituted by a linear, branched or cyclic alkoxycarbonyl group having 2 to 7 carbon atoms, linear, branched or cyclic alkenyl groups having 2 to 6 carbon atoms, linear or branched alkynyl groups having 2 to 6 carbon atoms, linear, branched or cyclic alkoxycarbonyl groups having 2 to 6 carbon atoms, a carbamoyl group, mono- or dialkylcarbamoyl groups substituted by a linear, branched or cyclic alkyl groups having 1 to 6 carbon atoms on the nitrogen atom, mono- or di-alkylamino groups substituted by a linear, branched or

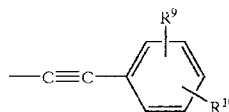
cyclic alkyl groups having 1 to 6 carbon atoms, and 5- or 6-membered nitrogen-containing heterocyclic groups.

4. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to claim 1, wherein the group Q^4 represents any of the following groups:



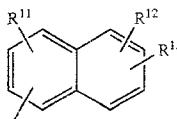
(a)

wherein R^5 and R^6 , independently of each other, represent a hydrogen atom, cyano group, halogen atom, alkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, alkoxycarbonyl group, alkoxycarbonylalkyl group, or phenyl group which may be substituted by a cyano group, hydroxyl group, halogen atom, alkyl group or alkoxy group, and R^7 and R^8 , independently of each other, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group;



(b)

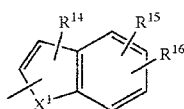
wherein R^9 and R^{10} , independently of each other, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group;



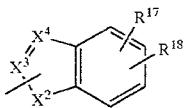
(c)

wherein R^{11} , R^{12} and R^{13} , independently of one another, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl

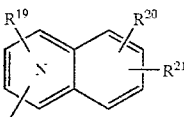
group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group;



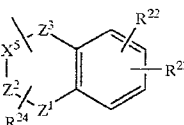
wherein X¹ represents CH₂, CH, NH, NOH, N, O or S, and R¹⁴, R¹⁵ and R¹⁶, independently of one another, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group;



wherein X² represents NH, N, O or S, X³ represents N, C or CH, X⁴ represents N, C or CH, and R¹⁷ and R¹⁸, independently of each other, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group, excluding the cases where X³ and X⁴ are combinations of C and CH, and are both C or CH;

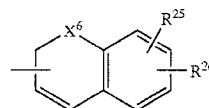


wherein N indicates that 1 or 2 carbon atoms of the ring substituted by R¹⁹ have been substituted by a nitrogen atom, and R¹⁹, R²⁰ and R²¹, independently of one another, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group;

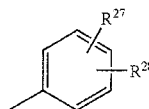


wherein X⁵ represents CH₂, CH, N or NH, Z¹ represents N, NH or O, Z² represents CH₂, CH, C or N, Z³ represents CH₂, CH, S, SO₂ or C=O, X^{5,27,2} indicates that X⁵ and Z² are

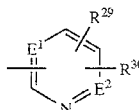
bonded to each other by a single bond or double bond, R²² and R²³, independently of each other, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group, and R²⁴ represents a hydrogen atom or alkyl group;



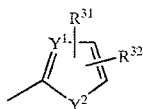
wherein X⁶ represents O or S, and R²⁵ and R²⁶, independently of each other, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group;



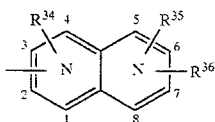
wherein R²⁷ and R²⁸, independently of each other, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group;



wherein E¹ and E², independently of each other, represent N or CH, and R²⁹ and R³⁰, independently of each other, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group;

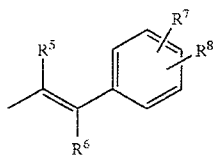


wherein Y^1 represents CH or N, Y^2 represents $-N(R^{33})-$, in which R^{33} means a hydrogen atom or alkyl group having 1 to 6 carbon atoms, O or S, and R^{31} and R^{32} , independently of each other, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group; and

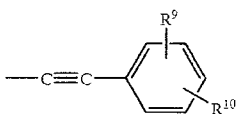


wherein numerals 1 to 8 indicate positions, each N indicates that any one of carbon atoms of positions 1 to 4 and any one of carbon atoms of positions 5 to 8 has been substituted by a nitrogen atom, and R^{34} , R^{35} and R^{36} , independently of one another, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group.

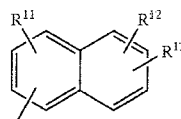
5. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to claim 1, wherein the group Q^4 represents any of the following groups:



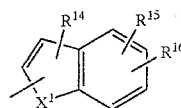
wherein R^5 and R^6 , independently of each other, represent a hydrogen atom or alkyl group, R^7 represents a hydrogen atom, and R^8 represents a hydrogen atom, halogen atom, alkyl group or alkynyl group;



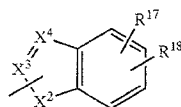
(k) wherein R^9 represents a hydrogen atom, and R^{10} represents a hydrogen atom, halogen atom, alkyl group or alkynyl group;



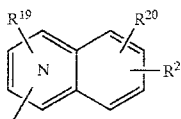
(c) wherein R^{11} and R^{12} both represent hydrogen atoms, and R^{13} represents a hydrogen atom, halogen atom, alkyl group or alkynyl group;



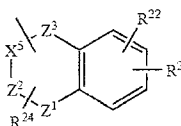
(d) wherein X^1 represents NH, NOH, N, O or S, R^{14} represents a hydrogen atom, halogen atom, acyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group or alkyl group, R^{15} represents a hydrogen atom or halogen atom, and R^{16} represents a hydrogen atom, halogen atom, alkyl group or alkynyl group;



(e) wherein X^2 represents NH, O or S, X^3 represents N, C or CH, X^4 represents N, C or CH, R^{17} represents a hydrogen atom, and R^{18} represents a hydrogen atom, halogen atom, alkyl group or alkynyl group, excluding the cases where X^3 and X^4 are combinations of C and CH, and are both C or CH;

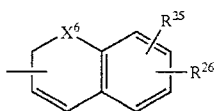


(f) wherein N indicates that 1 or 2 carbon atoms of the ring substituted by R^{19} have been substituted by a nitrogen atom, R^{19} and R^{20} both represent hydrogen atoms, and R^{21} represents a hydrogen atom, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group or halogenoalkyl group;

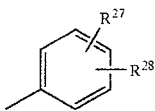


(g) wherein X^5 represents CH_2 , CH, N or NH, Z^1 represents N, NH or O, Z^2 represents CH_2 , CH, C or N, Z^3 represents CH_2 ,

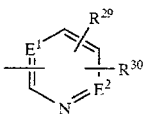
CII, S, SO₂ or C=O, X⁵-Z² indicates that X⁵ and Z² are bonded to each other by a single bond or double bond, R²² represents a hydrogen atom, R²³ represents a hydrogen atom, halogen atom, alkyl group or alkynyl group, and R²⁴ represents a hydrogen atom;



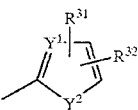
wherein X⁶ represents O, R²⁵ represents a hydrogen atom, and R²⁶ represents a hydrogen atom, halogen atom, alkyl group or alkynyl group;



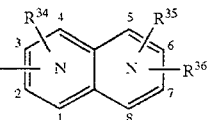
wherein R²⁷ represents a hydrogen atom or halogen atom, and R²⁸ represents a hydrogen atom, halogen atom, alkyl group or alkynyl group;



wherein E¹ and E², independently of each other, represent N or CH, R²⁹ represents a hydrogen atom or halogen atom, and R³⁰ represents a hydrogen atom, halogen atom, alkyl group or alkynyl group;



wherein Y¹ represents CH or N, Y² represents —N(R³³)—, in which R³³ means a hydrogen atom or alkyl group having 1 to 6 carbon atoms, O or S, R³¹ represents a hydrogen atom or halogen atom, and R³² represents a hydrogen atom, halogen atom, alkyl group or alkynyl group; and



wherein numerals 1 to 8 indicate positions, each N indicates that any one of carbon atoms of positions 1 to 4 and any one of carbon atoms of positions 5 to 8 has been substituted by a nitrogen atom, R³⁴ represents a hydrogen atom or halogen atom, R³⁵ represents a hydrogen atom or halogen atom, and R³⁶ represents a hydrogen atom, halogen atom, alkyl group or alkynyl group.

6. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 3, wherein the group Q⁴ in the formula (1) is a 4-chlorostyryl, 4-fluorostyryl, 4-bromostyryl, 4-ethynylstyryl, 4-chlorophenylethynyl, 4-fluorophenylethynyl, 4-bromophenylethynyl, 4-ethynylphenylethynyl, 6-chloro-2-naphthyl, 6-fluoro-2-naphthyl, 6-bromo-2-naphthyl, 6-ethynyl-2-naphthyl, 7-chloro-2-naphthyl, 7-fluoro-2-naphthyl, 7-bromo-2-naphthyl, 7-ethynyl-2-naphthyl, 5-chloroindol-2-yl, 5-fluoroindol-2-yl, 5-bromoindol-2-yl, 5-ethynylindol-2-yl, 5-methylindol-2-yl, 5-chloro-4-fluoroindol-2-yl, 5-chloro-3-fluoroindol-2-yl, 3-bromo-5-chloroindol-2-yl, 3-chloro-5-fluoroindol-2-yl, 3-bromo-5-fluoroindol-2-yl, 5-bromo-3-chloroindol-2-yl, 5-bromo-3-fluoroindol-2-yl, 5-chloro-3-formylindol-2-yl, 5-fluoro-3-formylindol-2-yl, 5-bromo-3-formylindol-2-yl, 5-ethynyl-3-formylindol-2-yl, 5-chloro-3-(N,N-dimethylcarbamoyl)indol-2-yl, 5-fluoro-3-(N,N-dimethylcarbamoyl)indol-2-yl, 5-bromo-3-(N,N-dimethylcarbamoyl)indol-2-yl, 5-ethynyl-3-(N,N-dimethylcarbamoyl)indol-2-yl, 6-chloroindol-2-yl, 6-fluoroindol-2-yl, 6-bromoindol-2-yl, 6-ethynylindol-2-yl, 6-methylindol-2-yl, 5-chlorobenzothiophen-2-yl, 5-fluorobenzothiophen-2-yl, 5-bromobenzothiophen-2-yl, 5-ethynylbenzothiophen-2-yl, 5-methylbenzothiophen-2-yl, 5-chloro-4-fluorobenzothiophen-2-yl, 6-chlorobenzothiophen-2-yl, 6-fluorobenzothiophen-2-yl, 6-bromobenzothiophen-2-yl, 6-ethynylbenzothiophen-2-yl, 6-methylbenzothiophen-2-yl, 5-chlorobenzofuran-2-yl, 5-fluorobenzofuran-2-yl, 5-bromobenzofuran-2-yl, 5-ethynylbenzofuran-2-yl, 5-methylbenzofuran-2-yl, 5-chloro-4-fluorobenzofuran-2-yl, 6-chlorobenzofuran-2-yl, 6-fluorobenzofuran-2-yl, 6-bromobenzofuran-2-yl, 6-ethynylbenzofuran-2-yl, 6-methylbenzofuran-2-yl, 5-chlorobenzimidazol-2-yl, 5-fluorobenzimidazol-2-yl, 5-bromobenzimidazol-2-yl, 5-ethynylbenzimidazol-2-yl, 6-chloroquinolin-2-yl, 6-fluoroquinolin-2-yl, 6-bromoquinolin-2-yl, 6-ethynylquinolin-2-yl, 7-chloroquinolin-3-yl, 7-fluoroquinolin-3-yl, 7-bromoquinolin-3-yl, 7-ethynylquinolin-3-yl, 7-chloroisoquinolin-3-yl, 7-fluoroisoquinolin-3-yl, 7-bromoisoquinolin-3-yl, 7-ethynylisoquinolin-3-yl, 7-chlorocinnolin-3-yl, 7-fluorocinnolin-3-yl, 7-bromocinnolin-3-yl, 7-ethynylcinnolin-3-yl, 7-chloro-2H-chromen-3-yl, 7-fluoro-2H-chromen-3-yl, 7-bromo-2H-chromen-3-yl, 7-ethynyl-2H-chromen-3-yl, 6-chloro-1,4-dihydroquinolin-4-one-2-yl, 6-fluoro-1,4-dihydroquinolin-4-one-2-yl, 6-bromo-1,4-dihydroquinolin-4-one-2-yl, 6-ethynyl-1,4-dihydroquinolin-4-one-2-yl, 6-chloro-1,4-dihydroquinazolin-4-one-2-yl, 6-fluoro-1,4-dihydroquinazolin-4-one-2-yl, 6-bromo-1,4-dihydroquinazolin-4-one-2-yl, 6-ethynyl-1,4-dihydroquinazolin-4-one-2-yl, 4-chlorophenyl, 4-fluorophenyl, 4-bromophenyl, 4-ethynylphenyl, 3-chlorophenyl, 3-fluorophenyl, 3-bromophenyl, 3-ethynylphenyl, 3-chloro-4-fluorophenyl, 4-chloro-3-fluorophenyl, 4-chloro-2-fluorophenyl, 2-chloro-4-fluorophenyl, 4-bromo-2-fluorophenyl, 2-bromo-4-fluorophenyl, 2,4-dichlorophenyl, 2,4-difluorophenyl, 2,4-dibromophenyl, 4-chloro-3-methylphenyl, 4-fluoro-3-

methylphenyl, 4-bromo-3-methylphenyl, 4-chloro-2-methylphenyl, 4-fluoro-2-methylphenyl, 4-bromo-2-methylphenyl, 3,4-dichlorophenyl, 3,4-difluorophenyl, 3,4-dibromophenyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, 4-chloro-2-pyridyl, 4-fluoro-2-pyridyl, 4-bromo-2-pyridyl, 4-ethynyl-2-pyridyl, 4-chloro-3-pyridyl, 4-fluoro-3-pyridyl, 4-bromo-3-pyridyl, 4-ethynyl-3-pyridyl, 5-chloro-2-pyridyl, 5-fluoro-2-pyridyl, 5-bromo-2-pyridyl, 5-ethynyl-2-pyridyl, 4-chloro-5-fluoro-2-pyridyl, 5-chloro-4-fluoro-2-pyridyl, 5-chloro-3-pyridyl, 5-fluoro-3-pyridyl, 5-bromo-3-pyridyl, 5-ethynyl-3-pyridyl, 6-chloro-3-pyridazinyl, 6-fluoro-3-pyridazinyl, 6-bromo-3-pyridazinyl, 5-ethynyl-3-pyridazinyl, 5-chloro-2-thiazolyl, 5-fluoro-2-thiazolyl, 5-bromo-2-thiazolyl, 5-ethynyl-2-thiazolyl, 2-chlorothiophen[2,3-b]pyridyl, 2-fluorothiophen[2,3-b]pyridyl, 2-bromothiophen[2,3-b]pyridyl, 2-ethynylthien[2,3-b]pyridyl or 2-ethynylthien[2,3-b]pyridyl group.

7. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 6, wherein the group Q^1 in the formula (1) is a saturated or unsaturated, bicyclic or tricyclic fused hydrocarbon group which may be substituted, or a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted.

8. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 6, wherein the group Q^1 in the formula (1) is a thienopyridyl group which may be substituted, tetrahydrothienopyridyl group which may be substituted, thiazolopyridyl group which may be substituted, tetrahydrothiazolopyridyl group which may be substituted, thiazolopyridazinyl group which may be substituted, tetrahydrothiazolopyridazinyl group which may be substituted, pyranothiazolyl group which may be substituted, dihydropyranothiazolyl group which may be substituted, furopyridyl group which may be substituted, tetrahydrofuropyridyl group which may be substituted, oxazolopyridyl group which may be substituted, tetrahydrooxazolopyridyl group which may be substituted, pyrrolopyridyl group which may be substituted, dihydropyrrolopyridyl group which may be substituted, tetrahydropyrrolopyridyl group which may be substituted, pyrrolopyrimidinyl group which may be substituted, dihydropyrrolopyrimidinyl group which may be substituted, oxazolopyridazinyl group which may be substituted, tetrahydrooxazolopyridazinyl group which may be substituted, pyrrolothiazolyl group which may be substituted, dihydropyrrolothiazolyl group which may be substituted, pyrazolooxazolyl group which may be substituted, dihydropyrazolooxazolyl group which may be substituted, benzobiazolyl group which may be substituted, tetrahydrobenzobiazolyl group which may be substituted, thiazolopyrimidinyl group which may be substituted, dihydrothiazolopyrimidinyl group which may be substituted, benzooxazepinyl group which may be substituted, tetrahydrobenzooxazepinyl group which may be substituted, thiazoloazepinyl group which may be substituted, tetrahydrothiazoloazepinyl group which may be substituted, thienooxazepinyl group which may be substituted, tetrahydrothienooxazepinyl group which may be substituted, 4,5,6,7-tetrahydro-5,6-tetramethylenethiazolopyridazinyl group which may be substituted, or 5,6-trimethylene-4,5,6,7-tetrahydrothiazolopyridazinyl group which may be substituted.

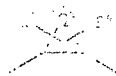
9. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 8, wherein the substituent(s) on the group Q^1 is/are 1 to 3

substituents selected from a hydroxyl group, halogen atoms, halogenoalkyl groups, an amino group, a cyano group, an amidino group, a hydroxyamidino group, C_1 - C_6 alkyl groups, C_2 - C_6 cycloalkyl, C_1 - C_6 alkyl groups, hydroxy- C_1 - C_6 alkyl groups, C_1 - C_6 alkoxy groups, C_1 - C_6 alkoxy C_1 - C_6 alkyl group, a carbonyl group, C_2 - C_6 carboxyalkyl groups, C_1 - C_6 alkoxy-carbonyl, C_1 - C_6 alkyl groups, amidino groups substituted by a C_1 - C_6 alkoxy-carbonyl group, C_2 - C_6 alkenyl groups, C_1 - C_6 alkynyl groups, C_2 - C_6 alkoxy-carbonyl groups, amino C_1 - C_6 alkyl groups, C_1 - C_6 alkylamino C_1 - C_6 alkyl groups, di(C_1 - C_6 alkyl)amino C_1 - C_6 alkyl groups, C_1 - C_6 alkoxy-carbonylamino- C_1 - C_6 alkyl groups, C_1 - C_6 alkanoyl groups, C_1 - C_6 alkanoylamino C_1 - C_6 alkyl groups, C_1 - C_6 alkyl-sulfonyl groups, C_1 - C_6 alkylsulfonylamino C_1 - C_6 alkyl groups, a carbamoyl group, C_1 - C_6 alkylcarbamoyl groups, N,N-di(C_1 - C_6 alkyl)carbamoyl groups, C_1 - C_6 alkylamino groups, di(C_1 - C_6 alkyl)amino groups, 5- or 6-membered heterocyclic groups containing one of nitrogen, oxygen and sulfur or the same or different two atoms thereof, 5- or 6-membered heterocyclic- C_1 - C_4 alkyl group, and 5- or 6-membered heterocyclic-amino C_1 - C_4 alkyl group.

10. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 9, wherein the group T^1 in the formula (1) is a carbonyl group, group $-C(=O)-C(=O)-N(R')-$, group $-C(=S)-C(=O)-N(R')-$, group $-C(=O)-C(=S)-N(R')-$ or group $-C(=S)-C(=S)-N(R')-$, in which R' means a hydrogen atom, hydroxyl group, alkyl group or alkoxy group.

11. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 9, wherein the group T^1 in the formula (1) is a group $-C(=O)-C(=O)-N(R')-$, group $-C(=S)-C(=O)-N(R')-$, group $-C(=O)-C(=S)-N(R')-$ or group $-C(=S)-C(=S)-N(R')-$, in which R' means a hydrogen atom, hydroxyl group, alkyl group or alkoxy group.

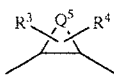
12. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 11, wherein the group Q^2 in the formula (1) is



wherein Q^2 means a cyclohexane group having 3 to 6 carbon atoms or a group $-(CH_2)_m-CH_2-A-CH_2-(CH_2)_n-$, in which m and n are independently of each other 0 or 1, and A has the same meaning as defined above, and R^3 and R^4 are independently of each other a hydrogen atom, hydroxyl group, alkyl group, alkoxy group, alkynyl group, halogen atom, halogenoalkyl group, amino group, hydroxyimino group, alkoxyimino group, aminoalkyl group, N-alkylaminoalkyl group, N,N-dialkylaminoalkyl group, acyl group, acylamino group, a cyano group which may be substituted, acylaminoalkyl group, alkoxy group, alkoxyalkyl group, hydroxyalkyl group, carboxyl group, carboxyalkyl group, alkoxy-carbonyl group, alkoxy-carbonylalkyl group, alkoxy-carbonylamino group, alkoxy-carbonylaminoalkyl group, carbamoyl group, N-alkylcarbamoyl group which may have a substituent on the alkyl group, N,N-dialkylcarbamoyl group which may have a substituent on the alkyl group(s),

N-alkenylcarbamoyl group, N-alkenylcarbamoylalkyl group, N-alkenyl-N-alkylcarbamoyl group, N-alkenyl-N-alkylcarbamoylalkyl group, N-alkoxy-carbamoyl group, N-alkyl-N-alkoxy-carbamoyl group, N-alkoxy-carbamoylalkyl group, N-alkyl-N-alkoxy-carbamoylalkyl group, carbazoyl group which may be substituted by 1 to 3 alkyl groups, alkylsulfonyl group, alkylsulfonylalkyl group, 3- to 6-membered heterocyclic carbonyl group which may be substituted, 3- to 6-membered heterocyclic carbonyloxyalkyl group which may be substituted, carbamoylalkyl group, carbamoyloxyalkyl group, N-alkylcarbamoyloxyalkyl group, N,N-dialkylcarbamoyloxyalkyl group, N-alkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), N,N-dialkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), alkylsulfonylamino group, alkylsulfonylaminoalkyl group, oxo group, acyloxy group, acyloxyalkyl group, arylsulfonyl group, alkoxycarbonylalkylsulfonyl group, carboxyalkylsulfonyl group, alkoxycarbonylacyl group, carboxyacyl group, alkoxyalkyloxycarbonyl group, halogenoacyl group, N,N-dialkylaminoacyl group, acyloxyacyl group, hydroxyacyl group, alkoxyacyl group, alkoxyalkylsulfonyl group, N,N-dialkylcarbamoylacyl group, N,N-dialkylcarbamoylalkylsulfonyl group or alkylsulfonylacyl group.

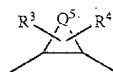
13. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 11, wherein the group Q^3 in the formula (1) is



wherein Q^5 means a group $-(CH_2)_m-CH_2-A-CH_2-(CH_2)_n$, in which m and n are independently of each other 0 or 1, and A has the same meaning as defined above, and R^3 and R^4 are independently of each other a hydrogen atom, hydroxyl group, alkyl group, alkenyl group, alkynyl group, halogen atom, halogenoalkyl group, amino group, hydroxyimino group, alkoxyimino group, aminoalkyl group, N-alkylaminoalkyl group, N,N-dialkylaminoalkyl group, acyl group, acylalkyl group, acylamino group which may be substituted, acylaminoalkyl group, alkoxy group, alkoxyalkyl group, hydroxyalkyl group, carboxyl group, carboxyalkyl group, alkoxy-carbonyl group, alkoxy-carbonylalkyl group, alkoxy-carbonylamino group, alkoxy-carbonylaminoalkyl group, carbamoyl group, N-alkylcarbamoyl group which may have a substituent on the alkyl group, N,N-dialkylcarbamoyl group which may have a substituent on the alkyl group(s), N-alkenylcarbamoyl group, N-alkenylcarbamoylalkyl group, N-alkenyl-N-alkylcarbamoyl group, N-alkenyl-N-alkylcarbamoylalkyl group, N-alkoxy-carbamoyl group, N-alkyl-N-alkoxy-carbamoyl group, N-alkoxy-carbamoylalkyl group, N-alkyl-N-alkoxy-carbamoylalkyl group, carbazoyl group which may be substituted by 1 to 3 alkyl groups, alkylsulfonyl group, alkylsulfonylalkyl group, 3- to 6-membered heterocyclic carbonyl group which may be substituted, 3- to 6-membered heterocyclic carbonyloxyalkyl group which may be substituted, carbamoylalkyl group, carbamoyloxyalkyl group, N-alkylcarbamoyloxyalkyl group, N,N-dialkylcarbamoyloxyalkyl group, N-alkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), N,N-dialkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), alkylsulfonylamino group, alkylsulfonylaminoalkyl group, oxo group, acyloxy group, acyloxyalkyl group, arylsulfonyl group, alkoxycarbonylalkylsulfonyl group, carboxyalkylsulfonyl group, alkoxy-carbonylacyl group, carboxyacyl group, alkoxyalkyloxycarbonyl group, halogenoacyl group, N,N-dialkylaminoacyl group, acyloxyacyl group, hydroxyacyl group, alkoxyacyl group, alkoxyalkylsulfonyl group, N,N-dialkylcarbamoylacyl group, N,N-dialkylcarbamoylalkylsulfonyl group or alkylsulfonylacyl group.

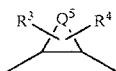
lamino group, alkylsulfonylaminoalkyl group, oxo group, acyloxy group, acyloxyalkyl group, arylsulfonyl group, alkoxycarbonylalkylsulfonyl group, carboxyalkylsulfonyl group, alkoxy-carbonylacyl group, carboxyacyl group, alkoxyalkyloxycarbonyl group, halogenoacyl group, N,N-dialkylaminoacyl group, acyloxyacyl group, hydroxyacyl group, alkoxyacyl group, alkoxyalkylsulfonyl group, N,N-dialkylcarbamoylacyl group, N,N-dialkylcarbamoylalkylsulfonyl group or alkylsulfonylacyl group.

14. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 11, wherein the group Q^3 in the formula (1) is



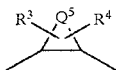
wherein Q^3 means an alkylene group having 3 to 6 carbon atoms, and R^3 and R^4 are independently of each other a hydrogen atom, hydroxyl group, alkyl group, alkenyl group, alkynyl group, halogen atom, halogenoalkyl group, amino group, hydroxyimino group, alkoxyimino group, aminoalkyl group, N-alkylaminoalkyl group, N,N-dialkylaminoalkyl group, acyl group, acylalkyl group, acylamino group which may be substituted, acylaminoalkyl group, alkoxy group, alkoxyalkyl group, hydroxyalkyl group, carboxyl group, carboxyalkyl group, alkoxy-carbonyl group, alkoxy-carbonylalkyl group, alkoxy-carbonylamino group, alkoxy-carbonylaminoalkyl group, carbamoyl group, N-alkylcarbamoyl group which may have a substituent on the alkyl group, N,N-dialkylcarbamoyl group which may have a substituent on the alkyl group(s), N-alkenylcarbamoyl group, N-alkenylcarbamoylalkyl group, N-alkenyl-N-alkylcarbamoyl group, N-alkenyl-N-alkylcarbamoylalkyl group, N-alkoxy-carbamoyl group, N-alkyl-N-alkoxy-carbamoyl group, N-alkoxy-carbamoylalkyl group, N-alkyl-N-alkoxy-carbamoylalkyl group, carbazoyl group which may be substituted by 1 to 3 alkyl groups, alkylsulfonyl group, alkylsulfonylalkyl group, 3- to 6-membered heterocyclic carbonyl group which may be substituted, 3- to 6-membered heterocyclic carbonyloxyalkyl group which may be substituted, carbamoylalkyl group, carbamoyloxyalkyl group, N-alkylcarbamoyloxyalkyl group, N,N-dialkylcarbamoyloxyalkyl group, N-alkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), N,N-dialkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), alkylsulfonylamino group, alkylsulfonylaminoalkyl group, oxo group, acyloxy group, acyloxyalkyl group, arylsulfonyl group, alkoxycarbonylalkylsulfonyl group, carboxyalkylsulfonyl group, alkoxy-carbonylacyl group, carboxyacyl group, alkoxyalkyloxycarbonyl group, halogenoacyl group, N,N-dialkylaminoacyl group, acyloxyacyl group, hydroxyacyl group, alkoxyacyl group, alkoxyalkylsulfonyl group, N,N-dialkylcarbamoylacyl group, N,N-dialkylcarbamoylalkylsulfonyl group or alkylsulfonylacyl group.

15. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 11, wherein the group Q^3 in the formula (1) is



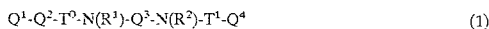
wherein Q^5 means an alkylene group having 4 carbon atoms, R^3 is a hydrogen atom, and R^4 is an N,N-dialkylcarbamoyl group which may have a substituent on the alkyl group(s).

16. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 11, wherein the group Q^3 in the formula (1) is



wherein Q^5 means an alkylene group having 4 carbon atoms, R^3 is a hydrogen atom, and R^4 is an N,N-dimethylcarbamoyl group.

17. The compound according to claim 1, which is represented by the general formula (1):



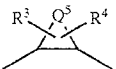
wherein

R^1 and R^2 , independently of each other, represent a hydrogen atom, hydroxyl group, alkyl group or alkoxy group;

Q^1 represents a saturated or unsaturated, 5- or 6-membered cyclic hydrocarbon group which may be substituted, a saturated or unsaturated, 5- to 7-membered heterocyclic group which may be substituted, a saturated or unsaturated, bicyclic or tricyclic fused hydrocarbon group which may be substituted, or a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted;

Q^2 represents a single bond, a saturated or unsaturated, 5- or 6-membered divalent cyclic hydrocarbon group which may be substituted, a saturated or unsaturated, 5- to 7-membered divalent heterocyclic group which may be substituted, a saturated or unsaturated, divalent bicyclic or tricyclic fused hydrocarbon group which may be substituted, or a saturated or unsaturated, divalent bicyclic or tricyclic fused heterocyclic group which may be substituted;

Q^3 represents the following group:



in which Q^5 means a group $-(CH_2)_m-CH_2-A-CH_2-(CH_2)_n-$, in which m and n are independently of each other 0 or an integer of 1-3, and A means an oxygen atom, nitrogen atom, sulfur atom, $-SO-$, $-SO_2-$, $-NH-$, $-O-NH-$, $-NH-NH-$, $-S-NH-$, $-SO-NH-$ or $-SO_2-NH-$, and R^3 and R^4 are substituents on carbon atom(s), nitrogen atom(s) or a sulfur atom(s) of a ring comprising Q^5 and are inde-

pendently of each other a hydrogen atom, hydroxyl group, alkyl group, alkenyl group, alkynyl group, halogen atom, halogenoalkyl group, cyano group, cyanoalkyl group, amino group, aminoalkyl group, N-alkylaminoalkyl group, N,N-dialkylaminoalkyl group, acyl group, acylalkyl group, acylamino group which may be substituted, alkoxyimino group, hydroxyimino group, acylaminoalkyl group, alkoxy group, alkoxyalkyl group, hydroxyalkyl group, carboxyl group, carboxyalkyl group, alkoxy carbonyl group, alkoxy carbonylalkyl group, alkoxy carbonylalkylamino group, carboxyalkylamino group, alkoxy carbonylamino group, alkoxy carbonylaminoalkyl group, carbamoyl group, N-alkylcarbamoyl group which may have a substituent on the alkyl group(s), N,N-dialkylcarbamoyl group which may have a substituent on the alkyl group(s), N-alkenylcarbamoyl group, N-alkenylcarbamoylalkyl group, N-alkenyl-N-alkylcarbamoyl group, N-alkenyl-N-alkylcarbamoylalkyl group, N-alkoxy carbamoyl group, N-alkyl-N-alkoxy carbamoyl group, N-alkoxy carbamoylalkyl group, N-alkyl-N-alkoxy carbamoylalkyl group, carbazoyl group which may be substituted by 1 to 3 alkyl groups, alkylsulfonyl group, alkylsulfonylalkyl group, 3- to 6-membered heterocyclic carbonyl group which may be substituted, carbamoylalkyl group, N-alkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), N,N-dialkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), carbamoyloxyalkyl group, N-alkylcarbamoyloxyalkyl group, N,N-dialkylcarbamoyloxyalkyl group, 3- to 6-membered heterocyclic carbonylalkyl group which may be substituted, 3- to 6-membered heterocyclic carbonyloxyalkyl group which may be substituted, aryl group, aralkyl group, heteroaryl group, heteroarylalkyl group, alkylsulfonylamino group, arylsulfonylamino group, alkylsulfonylaminoalkyl group, arylsulfonylaminoalkyl group, alkylsulfonylaminocarbonyl group, arylsulfonylaminocarbonyl group, alkylsulfonylaminocarbonylalkyl group, arylsulfonylaminocarbonylalkyl group, oxo group, carbamoyloxy group, aralkyloxy group, carboxyalkyloxy group, acyloxy group, acyloxyalkyl group, arylsulfonyl group, alkoxy carbonylalkylsulfonyl group, carboxyalkylsulfonyl group, alkoxy carbonylacyl group, alkoxyalkyloxycarbonyl group, hydroxyacyl group, alkoxyacyl group, halogenoacyl group, carboxyacyl group, aminoacyl group, acyloxyacyl group, acyloxyalkylsulfonyl group, hydroxyalkylsulfonyl group, alkoxyalkylsulfonyl group, 3- to 6-membered heterocyclic sulfonyl group which may be substituted, N-alkylaminoacyl group, N,N-dialkylaminoacyl group, N,N-dialkylcarbamoylacyl group which may have a substituent on the alkyl group(s), N,N-dialkylcarbamoylalkylsulfonyl group which may have a substituent on the alkyl group(s) or alkylsulfonylacyl group, or R^3 and R^4 , together with each other, denote an alkylene group having 1 to 5 carbon atoms, alkenylene group having 2 to 5 carbon atoms, alkylenedioxy group having 1 to 5 carbon atoms or carbonyldioxy group;

Q^4 represents an aryl group which may be substituted, an arylalkenyl group which may be substituted, an arylalkynyl group which may be substituted, a heteroaryl group which may be substituted, a heteroarylalkenyl group which may be substituted, a saturated or unsat-

urated, bicyclic or tricyclic fused hydrocarbon group which may be substituted, or a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted;

T⁰ represents a carbonyl or thiocarbonyl group; and

T¹ represents a carbonyl group, sulfonyl group or thiocarbonyl group;

a salt thereof, a solvate thereof, or an N-oxide thereof.

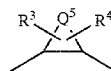
18. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to claim 17, wherein the group Q¹ is a saturated or unsaturated, bicyclic or tricyclic fused hydrocarbon group which may be substituted, or a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted, and Q² is a single bond.

19. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to claim 17 or 18, wherein the group Q¹ is a thienopyridyl group which may be substituted, tetrahydrothienopyridyl group which may be substituted, thiazolopyridyl group which may be substituted, tetrahydrothiazolopyridyl group which may be substituted, thiazolopyridazinyl group which may be substituted, tetrahydrothiazolopyridazinyl group which may be substituted, pyranothiazolyl group which may be substituted, dihydropyranothiazolyl group which may be substituted, furopyridyl group which may be substituted, tetrahydrofuropyridyl group which may be substituted, oxazolopyridyl group which may be substituted, tetrahydrooxazolopyridyl group which may be substituted, pyrrolopyridyl group which may be substituted, dihydropyrrolopyridyl group which may be substituted, tetrahydropyrrolopyridyl group which may be substituted, pyrrolopyrimidinyl group which may be substituted, dihydropyrrolopyrimidinyl group which may be substituted, oxazolopyridazinyl group which may be substituted, tetrahydrooxazolopyridazinyl group which may be substituted, pyrrolothiazolyl group which may be substituted, dihydropyrrolothiazolyl group which may be substituted, pyrrolooxazolyl group which may be substituted, dihydropyrrolooxazolyl group which may be substituted, benzothiazolyl group which may be substituted, tetrahydrobenzothiazolyl group which may be substituted, thiazolopyrimidinyl group which may be substituted, dihydrothiazolopyrimidinyl group which may be substituted, benzoazepinyl group which may be substituted, tetrahydrobenzoazepinyl group which may be substituted, thiazoloazepinyl group which may be substituted, tetrahydrothiazoloazepinyl group which may be substituted, thienoazepinyl group which may be substituted, tetrahydrothienoazepinyl group which may be substituted, 4,5,6,7-tetrahydro-5,6-tetramethylenethiazolopyridazinyl group which may be substituted, or 5,6-trimethylene-4,5,6,7-tetrahydrothiazolopyridazinyl group which may be substituted.

20. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 17 to 19, wherein the substituent(s) on the group Q¹ are 1 to 3 substituent(s) selected from a hydroxyl group, halogen atoms, halogenoalkyl groups, an amino group, a cyano group, an amidino group, a hydroxyamidino group, C₁-C₆ alkyl groups, C₃-C₆ cycloalkyl C₁-C₆ alkyl groups, hydroxy-C₁-C₆ alkyl groups, C₁-C₆ alkoxy groups, C₁-C₆ alkoxy C₁-C₆ alkyl groups, a carboxyl group, C₂-C₆ carboxyalkyl groups, C₂-C₆ alkoxy carbonyl-C₁-C₆ alkyl groups, amidino groups substituted by a C₂-C₆ alkoxy carbonyl group, C₂-C₆

alkenyl groups, C₂-C₆ alkynyl groups, C₂-C₆ alkoxy carbonyl groups, amino C₁-C₆ alkyl groups, C₁-C₆ alkylamino C₁-C₆ alkyl groups, di(C₁-C₆ alkyl)amino C₁-C₆ alkyl groups, C₂-C₆ alkoxy carbonylamino C₁-C₆ alkyl groups, C₁-C₆ alkanoyl groups, C₁-C₆ alkanoylamino C₁-C₆ alkyl groups, C₁-C₆ alkylsulfonyl groups, C₁-C₆ alkylsulfonylamino C₁-C₆ alkyl groups, a carbamoyl group, C₁-C₆ alkylcarbamoyl groups, N,N-di(C₁-C₆ alkyl)carbamoyl groups, C₁-C₆ alkylamino groups, di(C₁-C₆ alkyl)amino groups, 5- or 6-membered heterocyclic groups containing one of nitrogen, oxygen and sulfur or the same or different two atoms thereof, 5- or 6-membered heterocyclic-C₁-C₄ alkyl group, and 5- or 6-membered heterocyclic-amino C₁-C₄ alkyl group.

21. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 17 to 20, wherein the group Q³ in the formula (1) is



wherein Q⁵ means a group $-(CH_2)_m-CH_2-A-CH_2-(CH_2)_n-$, in which m and n are independently of each other 0 or 1, and A has the same meaning as defined above, and R³ and R⁴ are independently of each other a hydrogen atom, hydroxyl group, alkyl group, alkenyl group, alkynyl group, halogen atom, halogenoalkyl group, amino group, hydroxyimino group, alkoxyimino group, aminoalkyl group, N-alkylaminoalkyl group, N,N-dialkylaminoalkyl group, acyl group, acylalkyl group, acylamino group which may be substituted, acylaminoalkyl group, alkoxy group, alkoxyalkyl group, hydroxyalkyl group, carboxyl group, carboxyalkyl group, alkoxy carbonyl group, alkoxy carbonylalkyl group, alkoxy carbonylamino group, alkoxy carbonylaminoalkyl group, carbamoyl group, N-alkylcarbamoyl group which may have a substituent on the alkyl group, N,N-dialkylcarbamoyl group which may have a substituent on the alkyl group(s), N-alkenylcarbamoyl group, N-alkenylcarbamoylalkyl group, N-alkenyl-N-alkylcarbamoyl group, N-alkenyl-N-alkylcarbamoylalkyl group, N-alkoxy carbamoyl group, N-alkyl-N-alkoxy carbamoyl group, N-alkoxy carbamoylalkyl group, N-alkyl-N-alkoxy carbamoylalkyl group, carbazoyl group which may be substituted by 1 to 3 alkyl groups, alkylsulfonyl group, alkylsulfonylalkyl group, 3- to 6-membered heterocyclic carbonyl group which may be substituted, 3- to 6-membered heterocyclic carbonyloxyalkyl group which may be substituted, carbamoylalkyl group, carbamoyloxyalkyl group, N-alkylcarbamoyloxyalkyl group, N,N-dialkylcarbamoyloxyalkyl group, N-alkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), N,N-dialkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), alkylsulfonylamino group, alkylsulfonylaminoalkyl group, oxo group, acyloxy group, acyloxyalkyl group, arylsulfonyl group, alkoxy carbonylalkylsulfonyl group, carboxyalkylsulfonyl group, alkoxy carbonylacyl group, carboxyacyl group, alkoxyalkyloxy carbonyl group, halogenoacyl group, N,N-dialkylaminoacyl group, acyloxyacyl group, hydroxyacyl group, alkoxyacyl group, alkoxyalkylsulfonyl group, N,N-dialkylcarbamoylacyl group, N,N-dialkylcarbamoylalkylsulfonyl group or alkylsulfonylalkyl group.

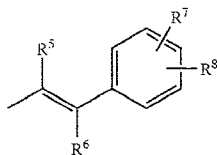
22. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 17 to 21, wherein the group Q^4 in the formula (1) is a group selected from the group consisting of a naphthyl group which may be substituted, an anthryl group which may be substituted, a phenanthryl group which may be substituted, a styryl group which may be substituted, a phenylethynyl group which may be substituted, a thienylethenyl group which may be substituted, a pyridylethenyl group which may be substituted, an indenyl group which may be substituted, an indanyl group which may be substituted, a tetrahydronaphthyl group which may be substituted, a benzofuryl group which may be substituted, an isobenzofuryl group which may be substituted, a benzothieryl group which may be substituted, an indolyl group which may be substituted, an indolinyl group which may be substituted, an isoindolyl group which may be substituted, an isoindolinyl group which may be substituted, an indazolyl group which may be substituted, a quinolyl group which may be substituted, a dihydroquinolyl group which may be substituted, a 4-oxodihydroquinolyl group (dihydroquinolin-4-on) which may be substituted, a tetrahydroquinolyl group which may be substituted, an isoquinolyl group which may be substituted, a tetrahydroisoquinolyl group which may be substituted, a chromenyl group which may be substituted, a chromanyl group which may be substituted, an isochromanyl group which may be substituted, a 4H-4-oxobenzopyranyl group which may be substituted, a 3,4-dihydro-4H-4-oxobenzopyranyl group which may be substituted, a 4H-quinoliziny group which may be substituted, a quinazolinyl group which may be substituted, a dihydroquinazolinyl group which may be substituted, a tetrahydroquinazolinyl group which may be substituted, a quinoxaliny group which may be substituted, a tetrahydroquinoxaliny group which may be substituted, a cinnoliny group which may be substituted, a tetrahydrocinnoliny group which may be substituted, an indoliziny group which may be substituted, a tetrahydroindoliziny group which may be substituted, a benzothiazolyl group which may be substituted, a tetrahydrobenzothiazolyl group which may be substituted, a benzoxazolyl group which may be substituted, a benzoisothiazolyl group which may be substituted, a benzoisoxazolyl group which may be substituted, a benzimidazolyl group which may be substituted, a naphthyridiny group which may be substituted, a tetrahydronaphthyridiny group which may be substituted, a thienopyridyl group which may be substituted, a tetrahydrothienopyridyl group which may be substituted, a thiazolopyridyl group which may be substituted, a thiazolopyridazinyl group which may be substituted, a tetrahydrothiazolopyridazinyl group which may be substituted, a pyrrolopyridyl group which may be substituted, a dihydropyrrolopyridyl group which may be substituted, a tetrahydropyrrolopyridyl group which may be substituted, a pyrrolopyrimidinyl group which may be substituted, a dihydropyrrolopyrimidinyl group which may be substituted, a pyridoquinazolinyl group which may be substituted, a dihydropyridoquinazolinyl group which may be substituted, a pyridopyrimidinyl group which may be substituted, a tetrahydropyridopyrimidinyl group which may be substituted, a pyranothiazolyl group which may be substituted, a dihydropyranothiazolyl group which may be substituted, a furopyridyl group which may be substituted, a tetrahydrofuropyridyl group which may be substituted, an oxazolopyridyl group which may be substi-

tuted, a tetrahydrooxazolopyridyl group which may be substituted, an oxazolopyridazinyl group which may be substituted, a tetrahydrooxazolopyridazinyl group which may be substituted, a pyrrolothiazolyl group which may be substituted, a dihydropyrrolothiazolyl group which may be substituted, a pyrrolooxazolyl group which may be substituted, a dihydropyrrolooxazolyl group which may be substituted, a thienopyrrolyl group which may be substituted, a thiazolopyrimidinyl group which may be substituted, a 4-oxo-tetrahydrocinnoliny group which may be substituted, a 1,2,4-benzothiadiazinyl group which may be substituted, a 1,1-dioxy-2H-1,2,4-benzothiadiazinyl group which may be substituted, a 1,2,4-benzoxadiazinyl group which may be substituted, a cyclopentapyranyl group which may be substituted, a thienofuranyl group which may be substituted, a furopyranyl group which may be substituted, a pyridoxazinyl group which may be substituted, a pyrazoloxazolyl group which may be substituted, an imidazothiazolyl group which may be substituted, an imidazopyridyl group which may be substituted, a tetrahydroimidazopyridyl group which may be substituted, a pyrazinopyridazinyl group which may be substituted, a benzisoquinolyl group which may be substituted, a furocinnolyl group which may be substituted, a pyrazolothiazolopyridazinyl group which may be substituted, a tetrahydropyrazolothiazolopyridazinyl group which may be substituted, a hexahydrothiazolopyridazinopyridazinyl group which may be substituted, an imidazotriazinyl group which may be substituted, an oxazolopyridyl group which may be substituted, a benzoxepinyl group which may be substituted, a benzoazepinyl group which may be substituted, a tetrahydrobenzoazepinyl group which may be substituted, a benzodiazepinyl group which may be substituted, a benzotriazepinyl group which may be substituted, a thienoazepinyl group which may be substituted, a tetrahydrothienoazepinyl group which may be substituted, a thienodiazepinyl group which may be substituted, a thienotriazepinyl group which may be substituted, a thiazoloazepinyl group which may be substituted, a tetrahydrothiazoloazepinyl group which may be substituted, a 4,5,6,7-tetrahydro-5,6-tetramethylenethiazolopyridazinyl group which may be substituted, and a 5,6-trimethylene-4,5,6,7-tetrahydrothiazolopyridazinyl group which may be substituted.

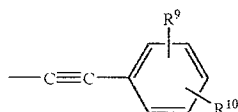
23. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 17 to 21, wherein the substituent(s) on the group Q^4 are 1 to 3 substituents selected from a hydroxyl group, halogen atoms, halogenoalkyl groups, an amino group, a cyano group, aminoalkyl groups, a nitro group, hydroxyalkyl groups, alkoxyalkyl groups, a carboxyl group, carboxyalkyl groups, alkoxycarbonylalkyl groups, acyl groups, an amidino group, a hydroxyamidino group, linear, branched or cyclic alkyl groups having 1 to 6 carbon atoms, linear, branched or cyclic alkoxy groups having 1 to 6 carbon atoms, amidino groups substituted by an linear, branched or cyclic alkoxycarbonyl group having 2 to 7 carbon atoms, linear, branched or cyclic alkenyl groups having 2 to 6 carbon atoms, linear or branched alkynyl groups having 2 to 6 carbon atoms, linear, branched or cyclic alkoxycarbonyl groups having 2 to 6 carbon atoms, a carbamoyl group, mono- or dialkylcarbamoyl groups substituted by a linear, branched or cyclic alkyl groups having 1 to 6 carbon atoms on the nitrogen atom(s), mono- or di-alkylamino groups substituted by linear,

branched or cyclic alkyl groups having 1 to 6 carbon atoms, and 5- or 6-membered nitrogen-containing heterocyclic groups.

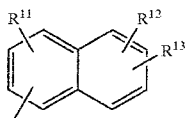
24. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 17 to 21, wherein the group Q^4 is



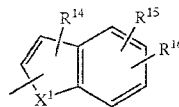
wherein R^5 and R^6 , independently of each other, represent a hydrogen atom, cyano group, halogen atom, alkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, alkoxycarbonyl group, alkoxycarbonylalkyl group, or phenyl group which may be substituted by a cyano group, hydroxyl group, halogen atom, alkyl group or alkoxy group, and R^7 and R^8 , independently of each other, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group;



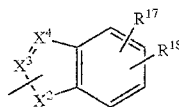
wherein R^9 and R^{10} , independently of each other, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group;



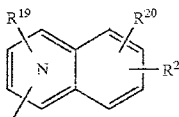
wherein R^{11} , R^{12} and R^{13} , independently of one another, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group;



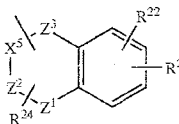
wherein X^1 represents CH_2 , CH, NH, NOH, N, O or S, and R^{14} , R^{15} and R^{16} , independently of one another, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group;



wherein X^2 represents NH, N, O or S, X^3 represents N, C or CH, X^4 represents N, C or CH, and R^{17} and R^{18} , independently of each other, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group, excluding the cases where X^3 and X^4 are combinations of C and CH, and are both C or CH;

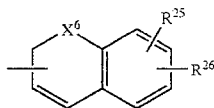


wherein N indicates that 1 or 2 carbon atoms of the ring substituted by R^{19} have been substituted by a nitrogen atom, and R^{19} , R^{20} and R^{21} , independently of one another, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group;

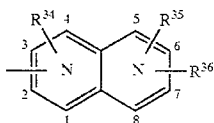


wherein X^5 represents CH_2 , CH, N or NH, Z^1 represents N, NH or O, Z^2 represents CH_2 , CH, C or N, Z^3 represents CH_2 ,

CH, S, SO₂ or C=O, X^{5-Z2} indicates that X⁵ and Z² are bonded to each other by a single bond or double bond, R²² and R²³, independently of each other, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group, and R²⁴ represents a hydrogen atom or alkyl group;

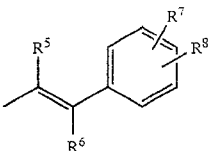


wherein X⁶ represents O or S, and R²⁵ and R²⁶, independently of each other, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group; or

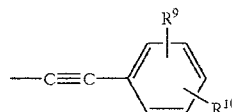


wherein numerals 1 to 8 indicate positions, each N indicates that any one of carbon atoms of positions 1 to 4 and any one of carbon atoms of positions 5 to 8 has been substituted by a nitrogen atom, and R³⁴, R³⁵ and R³⁶, independently of one another, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group.

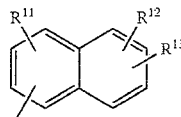
25. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 17 to 21, wherein the group Q⁴ represents any of the following groups:



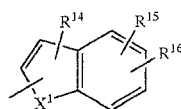
wherein R⁵ and R⁶, independently of each other, represent a hydrogen atom or alkyl group, R⁷ represents a hydrogen atom, and R⁸ represents a hydrogen atom, halogen atom, alkyl group or alkynyl group;



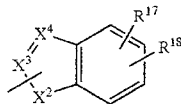
wherein R⁹ represents a hydrogen atom, and R¹⁰ represents a hydrogen atom, halogen atom, alkyl group or alkynyl group;



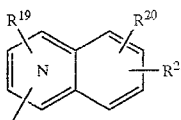
wherein R¹¹ and R¹² both represent hydrogen atoms, and R¹³ represents a hydrogen atom, halogen atom, alkyl group or alkynyl group;



wherein X¹ represents NH, NOH, N, O or S, R¹⁴ represents a hydrogen atom, halogen atom, acyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group or alkyl group, R¹⁵ represents a hydrogen atom or halogen atom, and R¹⁶ represents a hydrogen atom, halogen atom, alkyl group or alkynyl group;

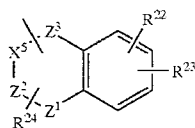


wherein X² represents NH, O or S, X³ represents N, C or CH, X⁴ represents N, C or CH, R¹⁷ represents a hydrogen atom, and R¹⁸ represents a hydrogen atom, halogen atom, alkyl group or alkynyl group, excluding the cases where X³ and X⁴ are combinations of C and CH, and are both C or CH;



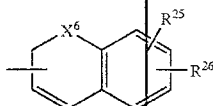
wherein N indicates that 1 or 2 carbon atoms of the ring substituted by R¹⁹ have been substituted by a nitrogen atom, R¹⁹ and R²⁰ both represent hydrogen atoms, and R²¹ represents

sents a hydrogen atom, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group or halogenoalkyl group;



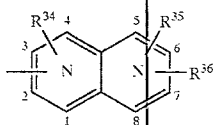
(g)

wherein X⁵ represents CH₂, CH, N or NH, Z¹ represents N, NH or O, Z² represents CH₂, CH, C or N, Z³ represents CH₂, CH, S, SO₂ or C=O, X⁵⁻²² indicates that X⁵ and Z² are bonded to each other by a single bond or double bond, R²² represents a hydrogen atom, R²³ represents a hydrogen atom, halogen atom, alkyl group or alkynyl group, and R²⁴ represents a hydrogen atom;



(h)

wherein X⁶ represents O, R²⁵ represents a hydrogen atom, and R²⁶ represents a hydrogen atom, halogen atom, alkyl group or alkynyl group; or



(i)

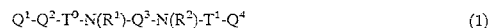
wherein numerals 1 to 8 indicate positions, each N indicates that any one of carbon atoms of positions 1 to 4 and any one of carbon atoms of positions 5 to 8 has been substituted by a nitrogen atom, R³⁴ represents a hydrogen atom or halogen atom, R³⁵ represents a hydrogen atom or halogen atom, and R³⁶ represents a hydrogen atom, halogen atom, alkyl group or alkynyl group.

26. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 17 to 21, wherein the group Q⁴ is a 4-chlorostyryl, 4-fluorostyryl, 4-bromostyryl, 4-ethynylstyryl, 4-chlorophenylethynyl, 4-fluorophenylethynyl, 4-bromophenylethynyl, 4-ethynylphenylethynyl, 6-chloro-2-naphthyl, 6-fluoro-2-naphthyl, 6-bromo-2-naphthyl, 6-ethynyl-2-naphthyl, 7-chloro-2-naphthyl, 7-fluoro-2-naphthyl, 7-bromo-2-naphthyl, 7-ethynyl-2-naphthyl, 5-chloroindol-2-yl, 5-fluoroindol-2-yl, 5-bromoindol-2-yl, 5-ethynylindol-2-yl, 5-methylindol-2-yl, 5-chloro-4-fluoroindol-2-yl, 5-chloro-3-fluoroindol-2-yl, 3-bromo-5-chloroindol-2-yl, 3-chloro-5-fluoroindol-2-yl, 3-bromo-5-fluoroindol-2-yl, 5-bromo-3-chloroindol-2-yl, 5-bromo-3-fluoroindol-2-yl, 5-chloro-3-formylindol-2-yl, 5-fluoro-3-formylindol-2-yl, 5-bromo-3-formylindol-2-yl, 5-ethynyl-3-formylindol-2-yl, 5-chloro-3-(N,N-dimethylcarbamoyl)indol-2-yl, 5-fluoro-3-(N,N-dimethylcarbamoyl)indol-2-yl, 5-bromo-3-(N,N-

dimethylcarbamoyl)indol-2-yl, 5-ethynyl-3-(N,N-dimethylcarbamoyl)indol-2-yl, 6-chloroindol-2-yl, 6-fluoroindol-2-yl, 6-bromoindol-2-yl, 6-ethynylindol-2-yl, 6-methylindol-2-yl, 5-chlorobenzothiophen-2-yl, 5-fluorobenzothiophen-2-yl, 5-bromobenzothiophen-2-yl, 5-ethynylbenzothiophen-2-yl, 5-methylbenzothiophen-2-yl, 5-chloro-4-fluorobenzothiophen-2-yl, 6-chlorobenzothiophen-2-yl, 6-fluorobenzothiophen-2-yl, 6-bromobenzothiophen-2-yl, 6-ethynylbenzothiophen-2-yl, 6-methylbenzothiophen-2-yl, 5-chlorobenzofuran-2-yl, 5-fluorobenzofuran-2-yl, 5-bromobenzofuran-2-yl, 5-ethynylbenzofuran-2-yl, 5-methylbenzofuran-2-yl, 5-chloro-4-fluorobenzofuran-2-yl, 6-chlorobenzofuran-2-yl, 6-fluorobenzofuran-2-yl, 6-bromobenzofuran-2-yl, 6-ethynylbenzofuran-2-yl, 6-methylbenzofuran-2-yl, 5-chlorobenzimidazol-2-yl, 5-fluorobenzimidazol-2-yl, 5-bromobenzimidazol-2-yl, 5-ethynylbenzimidazol-2-yl, 6-chloroquinolin-2-yl, 6-fluoroquinolin-2-yl, 6-bromoquinolin-2-yl, 6-ethynylquinolin-2-yl, 7-chloroquinolin-3-yl, 7-fluoroquinolin-3-yl, 7-bromoquinolin-3-yl, 7-ethynylquinolin-3-yl, 7-chloroisoquinolin-3-yl, 7-fluoroisoquinolin-3-yl, 7-bromoisoquinolin-3-yl, 7-ethynylisoquinolin-3-yl, 7-chlorocinnolin-3-yl, 7-fluorocinnolin-3-yl, 7-bromocinnolin-3-yl, 7-ethynylcinnolin-3-yl, 7-chloro-2H-chromen-3-yl, 7-fluoro-2H-chromen-3-yl, 7-bromo-2H-chromen-3-yl, 7-ethynyl-2H-chromen-3-yl, 6-chloro-1,4-dihydroquinolin-4-one-2-yl, 6-fluoro-1,4-dihydroquinolin-4-one-2-yl, 6-bromo-1,4-dihydroquinolin-4-one-2-yl, 6-ethynyl-1,4-dihydroquinolin-4-one-2-yl, 6-chloro-1,4-dihydroquinazolin-4-one-2-yl, 6-fluoro-1,4-dihydroquinazolin-4-one-2-yl, 6-bromo-1,4-dihydroquinazolin-4-one-2-yl, 6-ethynyl-1,4-dihydroquinazolin-4-one-2-yl, 2-chlorothieno[2,3-b]pyrrol-5-yl, 2-fluorothieno[2,3-b]pyrrol-5-yl, 2-bromothieno[2,3-b]pyrrol-5-yl or 2-ethynylthieno[2,3-b]pyrrol-5-yl group.

27. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 17 to 26, wherein T¹ is a carbonyl group.

28. The compound according to claim 1, which is represented by the general formula (1):



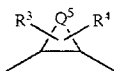
wherein

R¹ and R², independently of each other, represent a hydrogen atom, hydroxyl group, alkyl group or alkoxy group;

Q¹ represents a saturated or unsaturated, 5- or 6-membered cyclic hydrocarbon group which may be substituted, a saturated or unsaturated, 5- to 7-membered heterocyclic group which may be substituted, a saturated or unsaturated, bicyclic or tricyclic fused hydrocarbon group which may be substituted, or a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted;

Q² represents a single bond, a saturated or unsaturated, 5- or 6-membered divalent cyclic hydrocarbon group which may be substituted, a saturated or unsaturated, 5- to 7-membered divalent heterocyclic group which may be substituted, a saturated or unsaturated, divalent bicyclic or tricyclic fused hydrocarbon group which may be substituted, or a saturated or unsaturated, divalent bicyclic or tricyclic fused heterocyclic group which may be substituted;

Q³ represents the following group:



in which Q⁵ means an alkylene group having 1 to 8 carbon atoms, an alkenylene group having 2 to 8 carbon atoms or a group $-(CH_2)_m-CH_2-A-CH_2-(CH_2)_n-$, in which m and n are independently of each other 0 or an integer of 1-3, and A means an oxygen atom, nitrogen atom, sulfur atom, $-SO-$, $-SO_2-$, $-NH-$, $-O-NH-$, $-NH-NH-$, $-S-NH-$, $-SO-NH-$ or $-SO_2-NH-$, and R³ and R⁴ are substituents on carbon atom(s) of a ring comprising Q⁵ and are independently of each other a hydrogen atom, hydroxyl group, alkyl group, alkenyl group, alkynyl group, halogen atom, halogenoalkyl group, cyano group, cyanoalkyl group, amino group, aminoalkyl group, N-alkylaminoalkyl group, N,N-dialkylaminoalkyl group, acyl group, acylalkyl group, acylamino group which may be substituted, alkoxyimino group, hydroxyimino group, acylaminoalkyl group, alkoxy group, alkoxyalkyl group, hydroxyalkyl group, carboxyl group, carboxyalkyl group, alkoxy carbonyl group, alkoxy carbonylalkyl group, alkoxy carbonylalkylamino group, carboxyalkylamino group, alkoxy carbonylamino group, alkoxy carbonylaminoalkyl group, carbamoyl group, N-alkylcarbamoyl group which may have a substituent on the alkyl group, N,N-dialkylcarbamoyl group which may have a substituent on the alkyl group(s), N-alkenylcarbamoyl group, N-alkenylcarbamoylalkyl group, N-alkenyl-N-alkylcarbamoyl group, N-alkenyl-N-alkylcarbamoylalkyl group, N-alkoxy carbamoyl group, N-alkyl-N-alkoxy carbamoyl group, N-alkoxy carbamoylalkyl group, N-alkyl-N-alkoxy carbamoylalkyl group, carbazoyl group which may be substituted by 1 to 3 alkyl groups, alkylsulfonyl group, alkylsulfonylalkyl group, 3- to 6-membered heterocyclic carbonyl group which may be substituted, carbamoylalkyl group, N-alkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), N,N-dialkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), carbamoyloxyalkyl group, N-alkylcarbamoyloxyalkyl group, N,N-dialkylcarbamoyloxyalkyl group, 3- to 6-membered heterocyclic carbonylalkyl group which may be substituted, 3- to 6-membered heterocyclic carbonyloxyalkyl group which may be substituted, aryl group, aralkyl group, heteroaryl group, heteroarylalkyl group, alkylsulfonylamino group, arylsulfonylamino group, alkylsulfonylaminoalkyl group, arylsulfonylaminoalkyl group, alkylsulfonylamino carbonyl group, arylsulfonylamino carbonylalkyl group, arylsulfonylamino carbonylalkyl group, oxo group, carbamoyloxy group, aralkyloxy group, carboxyalkyloxy group, acyloxy group, acyloxyalkyl group, arylsulfonyl group, alkoxy carbonylalkylsulfonyl group, carboxyalkylsulfonyl group, alkoxy carbonylalkyl group, alkoxyalkyloxycarbonyl group, hydroxyacyl group, alkoxyacyl group, halogenoacyl group, carboxyacyl group, aminoacyl group, acyloxyacyl group, acyloxyalkylsulfonyl group, hydroxyalkyl-

sulfonyl group, alkoxyalkylsulfonyl group, 3- to 6-membered heterocyclic sulfonyl group which may be substituted, N-alkylaminoacyl group, N,N-dialkylaminoacyl group, N,N-dialkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), N,N-dialkylcarbamoylalkylsulfonyl group which may have a substituent on the alkyl group(s) or alkylsulfonylalkyl group, or R³ and R⁴, together with each other, denote an alkylene group having 1 to 5 carbon atoms, alkenylene group having 2 to 5 carbon atoms, alkylenedioxy group having 1 to 5 carbon atoms or carbonyldioxy group;

Q⁴ represents an aryl group which may be substituted, an arylalkenyl group which may be substituted, an arylalkynyl group which may be substituted, a heteroaryl group which may be substituted, a heteroarylalkenyl group which may be substituted, a saturated or unsaturated, bicyclic or tricyclic fused hydrocarbon group which may be substituted, or a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted;

T⁰ represents a carbonyl or thiocarbonyl group; and

T¹ represents group $-C(=O)-C(=O)-N(R')$ —, group $-C(=S)-C(=O)-N(R')$ —, group $-C(=O)-C(=S)-N(R')$ —, group $-C(=S)-C(=S)-N(R')$ —, in which R' means a hydrogen atom, hydroxyl group, alkyl group or alkoxy group, group $-C(=O)-A^1-N(R'')$ —, in which A¹ means an alkylene group having 1 to 5 carbon atoms, which may be substituted, and R'' means a hydrogen atom, hydroxyl group, alkyl group or alkoxy group, group $-C(=O)-NH-$, group $-C(=S)-NH-$, group $-C(=O)-NH-NH-$, group $-C(=O)-A^2-C(=O)-$, in which A² means a single bond or alkylene group having 1 to 5 carbon atoms, group $-C(=O)-A^3-C(=O)-NH-$, in which A³ means an alkylene group having 1 to 5 carbon atoms, group $-C(=O)-C(=NOR^a)-N(R^b)-$, group $-C(=S)-C(=NOR^a)-N(R^b)-$, in which R^a means a hydrogen atom, alkyl group or alkanoyl group, and R^b means a hydrogen atom, hydroxyl group, alkyl group or alkoxy group, group $-C(=O)-N=N-$, group $-C(=S)-N=N-$, or thiocarbonyl group,

a salt thereof, a solvate thereof, or an N-oxide thereof.

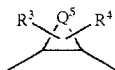
29. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to claim 28, wherein the group Q¹ is a saturated or unsaturated, bicyclic or tricyclic fused hydrocarbon group which may be substituted, or a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted, and Q² is a single bond.

30. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to claim 28 or 29, wherein the group Q¹ is a thienopyridyl group which may be substituted, tetrahydrothienopyridyl group which may be substituted, thiazolopyridyl group which may be substituted, tetrahydrothiazolopyridyl group which may be substituted, thiazolopyridazinyl group which may be substituted, tetrahydrothiazolopyridazinyl group which may be substituted, pyranothiazolyl group which may be substituted, dihydropyranothiazolyl group which may be substituted, furopyridyl group which may be substituted, tetrahydrofuryl group which may be substituted, oxazolopyridyl group

which may be substituted, tetrahydrooxazopyridyl group which may be substituted, pyrrolopyridyl group which may be substituted, dihydropyrrolopyridyl group which may be substituted, tetrahydropyrrolopyridyl group which may be substituted, pyrrolopyrimidinyl group which may be substituted, dihydropyrrolopyrimidinyl group which may be substituted, oxazopyridazinyl group which may be substituted, tetrahydrooxazopyridazinyl group which may be substituted, pyrrolothiazolyl group which may be substituted, dihydropyrrolothiazolyl group which may be substituted, pyrrolooxazolyl group which may be substituted, dihydropyrrolooxazolyl group which may be substituted, benzothiazolyl group which may be substituted, tetrahydrobenzothiazolyl group which may be substituted, thiazolopyrimidinyl group which may be substituted, dihydrothiazolopyrimidinyl group which may be substituted, benzoazepinyl group which may be substituted, tetrahydrobenzoazepinyl group which may be substituted, thiazoloazepinyl group which may be substituted, tetrahydrothiazoloazepinyl group which may be substituted, thienoazepinyl group which may be substituted, tetrahydrothienoazepinyl group which may be substituted, 4,5,6,7-tetrahydro-5,6-tetramethylenethiazolopyridazinyl group which may be substituted, or 5,6-trimethylene-4,5,6,7-tetrahydrothiazolopyridazinyl group which may be substituted.

31. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 28 to 30, wherein the substituent(s) on the group Q¹ are 1 to 3 substituent(s) selected from a hydroxyl group, halogen atoms, halogenoalkyl groups, an amino group, a cyano group, an amidino group, a hydroxyamidino group, C₁-C₆ alkyl groups, C₃-C₆ cycloalkyl C₁-C₆ alkyl groups, hydroxy C₁-C₆ alkyl groups, C₁-C₆ alkoxy groups, C₁-C₆ alkoxy C₁-C₆ alkyl groups, a carboxyl group, C₂-C₆ carboxyalkyl groups, C₁-C₆ alkoxy carbonyl C₁-C₆ alkyl groups, amidino groups substituted by a C₂-C₆ alkoxy carbonyl group, C₂-C₆ alkenyl groups, C₂-C₆ alkynyl groups, C₂-C₆ alkoxy carbonyl groups, amino C₁-C₆ alkyl groups, C₁-C₆ alkylamino C₁-C₆ alkyl groups, di(C₁-C₆ alkyl)amino C₁-C₆ alkyl groups, C₂-C₆ alkoxy carbonylamino-C₁-C₆ alkyl groups, C₁-C₆ alkanoyl groups, C₁-C₆ alkanoylamino C₁-C₆ alkyl groups, C₁-C₆ alkylsulfonyl groups, C₁-C₆ alkylsulfonylamino C₁-C₆ alkyl groups, a carbamoyl group, C₁-C₆ alkyl carbamoyl groups, N,N-di(C₁-C₆ alkyl)carbamoyl groups, C₁-C₆ alkylamino groups, di(C₁-C₆ alkyl)amino groups, 5- or 6-membered heterocyclic groups containing one of nitrogen, oxygen and sulfur or the same or different two atoms thereof, 5- or 6-membered heterocyclic-C₁-C₄ alkyl group, and 5- or 6-membered heterocyclic-amino-C₁-C₄ alkyl group.

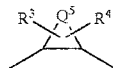
32. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 28 to 31, wherein the group Q³ is



wherein Q⁵ means an alkylene group having 3 to 6 carbon atoms or a group $-(CH_2)_m-CH_2-A-CH_2-(CH_2)_n-$, in which m and n are independently of each other 0 or 1, and A has the same meaning as defined above, and R³ and R⁴ are independently of each other a hydrogen atom, hydroxyl

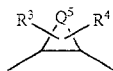
group, alkyl group, alkenyl group, alkynyl group, halogen atom, halogenoalkyl group, amino group, hydroxyimino group, alkoxyimino group, aminoalkyl group, N-alkylaminoalkyl group, N,N-dialkylaminoalkyl group, acyl group, acylalkyl group, acylamino group which may be substituted, acylaminoalkyl group, alkoxy group, alkoxyalkyl group, hydroxyalkyl group, carboxyl group, carboxyalkyl group, alkoxy carbonyl group, alkoxy carbonylalkyl group, alkoxy carbonylamino group, alkoxy carbonylaminoalkyl group, carbamoyl group, N-alkylcarbamoyl group which may have a substituent on the alkyl group, N,N-dialkylcarbamoyl group which may have a substituent on the alkyl group(s), N-alkenylcarbamoyl group, N-alkenylcarbamoylalkyl group, N-alkenyl-N-alkylcarbamoyl group, N-alkenyl-N-alkylcarbamoylalkyl group, N-alkoxy carbamoyl group, N-alkyl-N-alkoxy carbamoyl group, N-alkoxy carbamoylalkyl group, N-alkyl-N-alkoxy carbamoylalkyl group, carbazoyl group which may be substituted by 1 to 3 alkyl groups, alkylsulfonyl group, alkylsulfonylalkyl group, 3- to 6-membered heterocyclic carbonyl group which may be substituted, 3- to 6-membered heterocyclic carbonyloxyalkyl group which may be substituted, carbamoylalkyl group, carbamoyloxyalkyl group, N-alkylcarbamoyloxyalkyl group, N,N-dialkylcarbamoyloxyalkyl group, N-alkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), N,N-dialkylcarbamoylalkyl group which may have a substituent on the alkyl group(s), alkylsulfonylamino group, alkylsulfonylaminoalkyl group, oxo group, acyloxy group, acyloxyalkyl group, arylsulfonyl group, alkoxy carbonylalkylsulfonyl group, carboxyalkylsulfonyl group, alkoxy carbonylacyl group, carboxyacyl group, alkoxyalkyloxy carbonyl group, halogenoacyl group, N,N-dialkylaminoacyl group, acyloxyacyl group, hydroxyacyl group, alkoxyacyl group, alkoxyalkylsulfonyl group, N,N-dialkylcarbamoylacyl group, N,N-dialkylcarbamoylalkylsulfonyl group or alkylsulfonylacyl group.

33. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 28 to 31, wherein the group Q³ is



wherein Q⁵ means an alkylene group having 4 carbon atoms, R³ is a hydrogen atom, and R⁴ is an N,N-dialkylcarbamoyl group which may have a substituent on the alkyl group(s).

34. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 28 to 31, wherein the group Q³ is



wherein Q⁵ means an alkylene group having 4 carbon atoms, R³ is a hydrogen atom, and R⁴ is an N,N-dimethylcarbamoyl group.

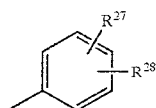
35. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 28 to 34, wherein the group Q⁴ is a group selected from a phenyl

40

group which may be substituted, a pyridyl group which may be substituted, a pyridazinyl group which may be substituted, a furyl group which may be substituted, a thienyl group which may be substituted, a pyrrolyl group which may be substituted, a thiazolyl group which may be substituted, an oxazolyl group which may be substituted, a pyrimidinyl group which may be substituted and a tetrazolyl group which may be substituted,

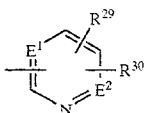
36. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 28 to 35, wherein the substituent(s) on the group Q^4 are 1 to 3 substituents selected from a hydroxyl group, halogen atoms, halogenoalkyl groups, an amino group, a cyano group, aminoalkyl groups, a nitro group, hydroxyalkyl groups, alkoxyalkyl groups, a carboxyl group, carboxyalkyl groups, alkoxycarbonylalkyl groups, acyl groups, an amidino group, a hydroxyamidino group, linear, branched or cyclic alkyl groups having 1 to 6 carbon atoms, linear, branched or cyclic alkoxy groups having 1 to 6 carbon atoms, amidino groups substituted by a linear, branched or cyclic alkoxycarbonyl group having 2 to 7 carbon atoms, linear, branched or cyclic alkenyl groups having 2 to 6 carbon atoms, linear or branched alkynyl groups having 2 to 6 carbon atoms, linear, branched or cyclic alkoxycarbonyl groups having 2 to 6 carbon atoms, a carbamoyl group, mono- or dialkylcarbamoyl groups substituted by a linear, branched or cyclic alkyl groups having 1 to 6 carbon atoms on the nitrogen atom(s), mono- or di-alkylamino groups substituted by linear, branched or cyclic alkyl groups having 1 to 6 carbon atoms, and 5- or 6-membered nitrogen-containing heterocyclic groups.

37. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 28 to 34, wherein the group Q^4 is



(i)

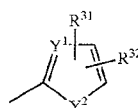
wherein R^{27} and R^{28} , independently of each other, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group;



(j)

wherein E^1 and E^2 , independently of each other, represent N or CH, and R^{29} and R^{30} , independently of each other, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group,

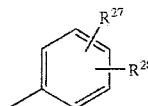
hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group; or



(k)

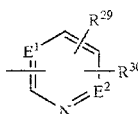
wherein Y^1 represents CH or N, Y^2 represents $—N(R^{33})—$, in which R^{33} means a hydrogen atom or alkyl group having 1 to 6 carbon atoms, O or S, and R^{31} and R^{32} , independently of each other, represent a hydrogen atom, hydroxyl group, nitro group, amino group, cyano group, halogen atom, alkyl group, alkenyl group, alkynyl group, halogenoalkyl group, hydroxyalkyl group, alkoxy group, alkoxyalkyl group, carboxyl group, carboxyalkyl group, acyl group, carbamoyl group, N-alkylcarbamoyl group, N,N-dialkylcarbamoyl group, alkoxycarbonyl group, amidino group or alkoxycarbonylalkyl group.

38. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 28 to 34, wherein the group Q^4 is



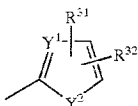
(l)

wherein R^{27} is a hydrogen atom or halogen atom, and R^{28} is a hydrogen atom, halogen atom, alkyl group or alkynyl group;



(m)

wherein E^1 and E^2 , independently of each other, represent N or CH, R^{29} is a hydrogen atom or halogen atom, and R^{30} is a hydrogen atom, halogen atom, alkyl group or alkynyl group; or



(n)

wherein Y^1 is CH or N, Y^2 is $—N(R^{33})—$, in which R^{33} means a hydrogen atom or alkyl group having 1 to 6 carbon

atoms, O or S, and R³¹ is a hydrogen atom or halogen atom and R³² is a hydrogen atom, halogen atom, alkyl group or alkyenyl group.

39. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 28 to 34, wherein the group Q⁴ is 4-chlorophenyl, 4-fluorophenyl, 4-bromophenyl, 4-ethynylphenyl, 3-chlorophenyl, 3-fluorophenyl, 3-bromophenyl, 3-ethynylphenyl, 3-chloro-4-fluorophenyl, 4-chloro-3-fluorophenyl, 4-chloro-2-fluorophenyl, 2-chloro-4-fluorophenyl, 4-bromo-2-fluorophenyl, 2-bromo-4-fluorophenyl, 2,4-dichlorophenyl, 2,4-difluorophenyl, 2,4-dibromophenyl, 4-chloro-3-methylphenyl, 4-fluoro-3-methylphenyl, 4-bromo-3-methylphenyl, 4-chloro-2-methylphenyl, 4-fluoro-2-methylphenyl, 4-bromo-2-methylphenyl, 3,4-dichlorophenyl, 3,4-difluorophenyl, 3,4-dibromophenyl, 2-pyridyl, 3-pyridyl, 4-pyridyl, 4-chloro-2-pyridyl, 4-fluoro-2-pyridyl, 4-bromo-2-pyridyl, 4-ethynyl-2-pyridyl, 4-chloro-3-pyridyl, 4-fluoro-3-pyridyl, 4-bromo-3-pyridyl, 4-ethynyl-3-pyridyl, 5-chloro-2-pyridyl, 5-fluoro-2-pyridyl, 5-bromo-2-pyridyl, 5-ethynyl-2-pyridyl, 4-chloro-5-fluoro-2-pyridyl, 5-chloro-4-fluoro-2-pyridyl, 5-chloro-3-pyridyl, 5-fluoro-3-pyridyl, 5-bromo-3-pyridyl, 5-ethynyl-3-pyridyl, 6-chloro-3-pyridazinyl, 6-fluoro-3-pyridazinyl, 6-bromo-3-pyridazinyl, 6-ethynyl-3-pyridazinyl, 5-chloro-2-thiazolyl, 5-fluoro-2-thiazolyl, 5-bromo-2-thiazolyl or 5-ethynyl-2-thiazolyl.

40. The compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 28 to 39, wherein the group T¹ is a group —C(=O)—C(=O)—N(R')—, group —C(=S)—C(=O)—N(R')—, group —C(=O)—C(=S)—N(R')— or group —C(=S)—N(R')—.

41. A medicine comprising the compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 40.

42. An activated blood coagulation factor X inhibitor comprising the compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 40.

43. An anticoagulant comprising the compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 40.

44. An agent for preventing and/or treating thrombosis or embolism, comprising the compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 40.

45. An agent for preventing and/or treating cerebral infarction, cerebral embolism, myocardial infarction, angina pectoris, pulmonary infarction, pulmonary embolism, Buerger's disease, deep venous thrombosis, disseminated intravascular coagulation syndrome, thrombus formation after valve or joint replacement, thrombus formation and reocclusion after angioplasty, systemic inflammatory response syndrome (SIRS), multiple organ dysfunction syndrome (MODS), thrombus formation during extracorporeal circulation, or blood clotting upon blood drawing, comprising the compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 40.

46. A medicinal composition comprising the compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 40, and a pharmaceutically acceptable carrier.

47. Use of the compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 40 for preparation of a medicine.

48. Use of the compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 40 for preparation of an activated blood coagulation factor X inhibitor.

49. Use of the compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 40 for preparation of an anticoagulant.

50. Use of the compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 40 for preparation of an agent for preventing and/or treating thrombosis or embolism.

51. Use of the compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 40 for preparation of an agent for preventing and/or treating cerebral infarction, cerebral embolism, myocardial infarction, angina pectoris, pulmonary infarction, pulmonary embolism, Buerger's disease, deep venous thrombosis, disseminated intravascular coagulation syndrome, thrombus formation after valve or joint replacement, thrombus formation and reocclusion after angioplasty, systemic inflammatory response syndrome (SIRS), multiple organ dysfunction syndrome (MODS), thrombus formation during extracorporeal circulation, or blood clotting upon blood drawing.

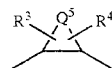
52. A method for treating thrombosis or embolism, which comprises administering an effective amount of the compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 40.

53. A method for treating cerebral infarction, cerebral embolism, myocardial infarction, angina pectoris, pulmonary infarction, pulmonary embolism, Buerger's disease, deep venous thrombosis, disseminated intravascular coagulation syndrome, thrombus formation after valve or joint replacement, thrombus formation and reocclusion after angioplasty, systemic inflammatory response syndrome (SIRS), multiple organ dysfunction syndrome (MODS), thrombus formation during extracorporeal circulation, or blood clotting upon blood drawing, which comprises administering an effective amount of the compound, the salt thereof, the solvate thereof, or the N-oxide thereof according to any one of claims 1 to 40.

54. A compound represented by the following general formula (4):

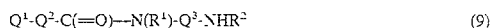


wherein R¹, R² and T¹ have the same meanings as defined in claim 1, Q³ represents the following group:

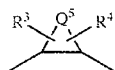


wherein Q⁵, R³ and R⁴ have the same meanings as defined in claim 1, and Q⁴ represents an aryl group which may be substituted, a heteroaryl group which may be substituted, a saturated or unsaturated, bicyclic or tricyclic hydrocarbon group which may be substituted, or a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted; a salt thereof, a solvate thereof, or an N-oxide thereof.

55. A compound represented by the following general formula (9):



wherein Q^2 , R^1 and R^2 have the same meanings as defined in claim 1, Q^1 represents a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted, and Q^3 represents the following group:

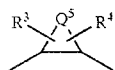


in which Q^5 , R^3 and R^4 have the same meanings as defined in claim 1, a salt thereof, a solvate thereof, or an N-oxide thereof.

56. A compound represented by the following general formula (4):

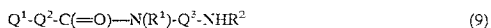


wherein R^1 , R^2 and T^1 have the same meanings as defined in claim 17, Q^3 represents the following group:

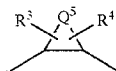


wherein Q^5 , R^3 and R^4 have the same meanings as defined in claim 17, and Q^4 represents an aryl group which may be substituted, a heteroaryl group which may be substituted, a saturated or unsaturated, bicyclic or tricyclic hydrocarbon group which may be substituted, or a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted; and a salt thereof, a solvate thereof, or an N-oxide thereof.

57. A compound represented by the following general formula (9):



wherein Q^2 , R^1 and R^2 have the same meanings as defined in claim 17, Q^1 represents a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted, and Q^3 represents the following group:

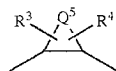


in which Q^5 , R^3 and R^4 have the same meanings as defined in claim 17, a salt thereof, a solvate thereof, or an N-oxide thereof.

58. A compound represented by the following general formula (4):



wherein R^1 , R^2 and T^1 have the same meanings as defined in claim 28, Q^3 represents the following group:

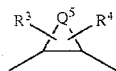


wherein Q^5 , R^3 and R^4 have the same meanings as defined in claim 28, and Q^4 represents an aryl group which may be substituted, a heteroaryl group which may be substituted, a saturated or unsaturated, bicyclic or tricyclic hydrocarbon group which may be substituted, or a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted; and a salt thereof, a solvate thereof, or an N-oxide thereof.

59. A compound represented by the following general formula (9):



wherein Q^2 , R^1 and R^2 have the same meanings as defined in claim 28, Q^1 represents a saturated or unsaturated, bicyclic or tricyclic fused heterocyclic group which may be substituted, and Q^3 represents the following group:



in which Q^5 , R^3 and R^4 have the same meanings as defined in claim 28, a salt thereof, a solvate thereof, or an N-oxide thereof.

* * * * *