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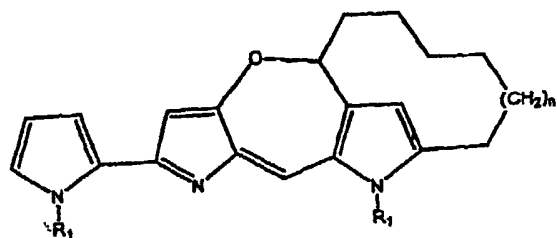
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: POLYRPROLES AS AGENTS FOR TREATING CANCER, TREATING VIRAL DISEASES AND CAUSING IMMUNOSUPPRESSION



(1)

(57) Abstract: The present invention relates to novel Pyrrole-Type compounds (I), compositions comprising Pyrrole-Type compounds, and methods useful for treating or preventing cancer or a neoplastic disorder comprising administering a Pyrrole-Type compound. The compounds, compositions, and methods of the invention are also useful for inhibiting the growth of a cancer cell or neoplastic cell. The present invention also relates to novel Pyrrole-Type compounds, compositions, and methods useful for treating or preventing a viral

infection. The compounds, compositions, and methods of the invention are also useful for inhibiting the replication and/or infectivity of a virus. The present invention also relates to novel Pyrrole-Type compounds, compositions, and methods useful for causing immunosuppression. The present invention also relates to novel Pyrrole-Type compounds, compositions, and methods useful for treating or preventing an autoimmune disease. Formula (I).

INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA 02/01104

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07D403/14 C07D409/14 C07D207/44 A61K31/4025 A61P35/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BOGER D L ET AL: "TOTAL SYNTHESIS OF PRODIGIOSIN, PRODIGIOSENE AND DESMETHOXYPRODIGIOSIN: DIELS-ALDER REACTIONS OF HETEROCYCLIC AZADIENES AND DEVELOPMENT OF AN EFFECTIVE PALLADIUM(II)-PROMOTED 2,2'-BIPYRROLE COUPLING PROCEDURE" JOURNAL OF ORGANIC CHEMISTRY, AMERICAN CHEMICAL SOCIETY. EASTON, US, vol. 53, no. 7, 1988, pages 1405-1415, XP002072029 ISSN: 0022-3263 cited in the application page 1405 -page 1406 --- -/--	1-360

☒ Further documents are listed in the continuation of box C.

☐ Patent family members are listed in annex.

° Special categories of cited documents :

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

L document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

24 October 2002

Date of mailing of the international search report

06.03.03

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/CA 02/01104

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 1998, no. 10, 31 August 1998 (1998-08-31) & JP 10 120563 A (AKOU KASEI KK), 12 May 1998 (1998-05-12) cited in the application abstract -----	1-6

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA 02/01104

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-6, 38-46, 78-86, 118-126, 158-166, 198-206, 238-246, 278-286, 318-326, 358-360

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FORM PCT/ISA/210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-6, 38-46, 78-86, 118-126, 158-166, 198-206, 238-246, 278-286, 318-326, 358-360

Compounds containing a tetracyclic ring system.

2. Claims: 7-15, 47-55, 87-95, 127-135, 167-175, 207-215, 247-255, 287-295, 327-335

Compounds with a substituent R3.

3. Claims: 16-24, 56-64, 96-104, 136-144, 176-184, 216-224, 256-264, 296-304, 336-344

Compounds containing two thiophene rings.

4. Claims: 25-28, 65-68, 105-108, 145-148, 185-188, 225-228, 265-268, 305-308, 345-348

Compound containing one furan and two pyrrole rings.

5. Claims: 29-31, 69-71, 109-111, 149-151, 189-191, 229-231, 269-271, 309-311, 349-351

Compounds containing a indole ring being connected in position 3.

6. Claims: 32-34, 72-74, 112-114, 152-154, 192-194, 232-234, 272-274, 312-314, 352-354

Compounds containing a indole ring being connected in position 2.

7. Claims: 35-37, 75-77, 115-117, 155-157, 195-197, 235-237, 275-277, 315-317, 355-357

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/CA 02/01104

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 10120563 A	12-05-1998	NONE	