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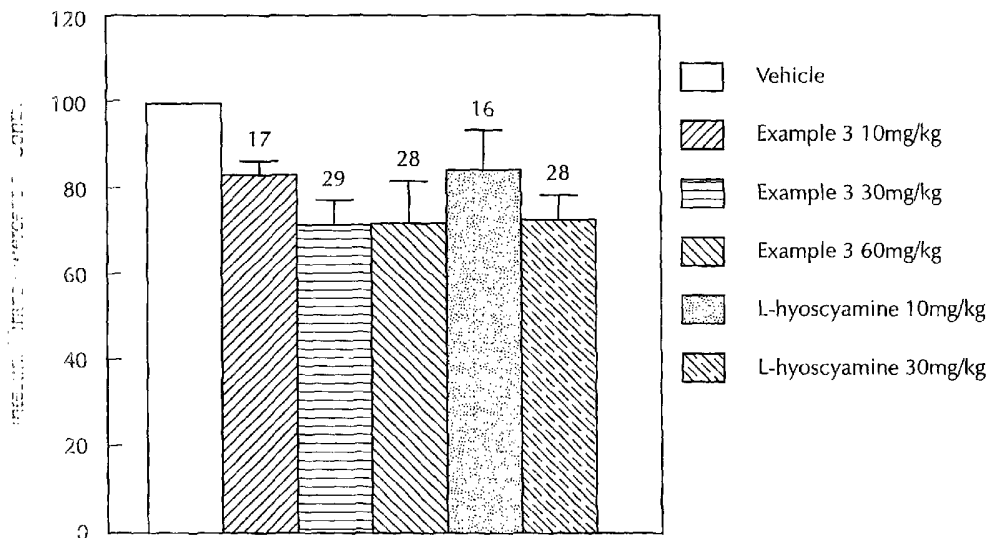
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(54) Title: METHOD OF TREATING IRRITABLE BOWEL SYNDROME (IBS)



(57) Abstract: The invention features a method of treating irritable bowel syndrome (IBS) by administering quaternary ammonium compounds of formulae I-V, described herein.

INTERNATIONAL SEARCH REPORT

PCT/IB2004/001218

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K31/14 A61K31/4025 A61P1/00

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 A61K A61P

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)

EPO-Internal, EMBASE, BIOSIS, WPI Data, PAJ, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 801 067 A (YAMANOUCHI PHARMA CO LTD) 15 October 1997 (1997-10-15) cited in the application page 3, lines 11-46 page 6, lines 15-39 page 9, lines 3-8; tables 4,21-28,30,32 -----	1,6-13
A	EP 1 300 407 A (L V A T S A LAB SA) 9 April 2003 (2003-04-09) page 3, paragraph 7-10 page 4, paragraphs 14,18,19; examples 3,64-69 -----	1,6-13
A	US 6 207 678 B1 (BURNS CHRISTOPHER JOHN ET AL) 27 March 2001 (2001-03-27) columns 1,2; claim 28 column 14, lines 44-61 ----- -/--	1,6-13



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

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"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

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Date of the actual completion of the international search

22 July 2004

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INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	"N-substituted quinuclidinol esters as potential therapeutic antimuscarinic agents" EXPERT OPINION ON THERAPEUTIC PATENTS 01 MAR 2003 UNITED KINGDOM, vol. 13, no. 3, 1 March 2003 (2003-03-01), pages 377-380, XP001182801 ISSN: 1354-3776 the whole document -----	1,6-13
A	SUBISSI A ET AL: "Effects of spasmolytics on K+-induced contraction of rat intestine in vivo." EUROPEAN JOURNAL OF PHARMACOLOGY. 23 DEC 1983, vol. 96, no. 3-4, 23 December 1983 (1983-12-23), pages 295-301, XP0009007626 ISSN: 0014-2999 the whole document -----	1,6-13
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INTERNATIONAL SEARCH REPORT

PCT/IB2004/001218

Box II Observations where certain claims were found unsearchable (Continuation of item 2 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 III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

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

see additional sheet

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, 6-13 (partially)

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest.

☐ No protest accompanied the payment of additional search fees.

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

1. claims: 1, 6-13 (partially)

The use of a compound of formula I for preparing a medicament for treating irritable bowel disease (IBS)

2. claims: 2, 6-13 (partially)

The use of a compound of formula II for preparing a medicament for treating IBS

3. claims: 3, 6-13 (partially)

The use of a compound of formula III for preparing a medicament for treating IBS

4. claims: 4, 6-13 (partially)

The use of a compound of formula IV for preparing a medicament for treating IBS

5. claims: 5, 6-13 (partially)

The use of a compound of formula V for preparing a medicament for treating IBS
