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(54) Title: METHOD FOR THE PREVENTION AND TREATMENT OF MASTITIS

(57) Abstract

A method for treating or preventing mastitis in mammals is disclosed. The method contemplates the intramammary injection or dipping the teat with micrococcin antibiotics, preferably micrococcin P1 or P2, which do not interfere with the production of cheese and yoghurt using milk from treated animals. Hydrophobic antibiotics such as micrococcin P1 or P2 can be administered prior to infection to effectively suppress the rate, severity, and duration of subsequent bacterial infection, or can be administered subsequent to infection to effectively treat mastitis.

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INTERNATIONAL SEARCH REPORT

Intern. nal Application No
PCT/EP 97/03212

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 A61K38/05 C07K5/06 C12P21/02 A23C9/123 A23C19/05
//(C12P21/02,C12R1:44)

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 6 A61K C07K C12P A23C

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.
A	WO 95 05844 A (CIBA-GEIGY AG) 2 March 1995 see page 3, line 7 - page 4, line 1; claims; table 5 see page 15, line 15 - page 19, line 12 ---	1-3,5-10
A	S. BUDAVARI ET AL, EDITORS: "THE MERCK INDEX, 11th. EDITION" 1989 , MERCK & CO., INC. , RAHWAY, N.J., U.S.A. XP002018736 * page 972, monograph nr. 6103 * --- -/--	1-3,5-10

[X] Further documents are listed in the continuation of box C.

[X] 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

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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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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
9 October 1997	09. 01. 98

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	RYCKEBOSCH, A

Form PCT/ISA/210 (second sheet) (July 1992)

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	NATURE, vol. 178, 7 July 1956, LONDON GB, pages 44-45, XP002043055 E.P. ABRAHAM ET AL.: "PROBABLE IDENTITY OF AN ANTIBIOTIC PRODUCED BY A SPORE-BEARING BACILLUS OF THE B. pumilus GROUP WITH MICROCOCCIN." see the whole document ---	1-3,5-10
A	JOURNAL OF THE CHEMICAL SOCIETY, CHEMICAL COMMUNICATIONS., no. 6, 15 March 1978, LETCHWORTH GB, pages 256-258, XP002043056 B.W. BYCROFT ET AL.: "THE STRUCTURES OF THE HIGHLY MODIFIED PEPTIDE ANTIBIOTICS MICROCOCCIN P1 AND P2." cited in the application see the whole document ---	1-3,5-10
A	ANTIBIOTICS AND CHEMOTHERAPY, vol. 10, no. 7, July 1960, BASEL, CH, pages 422-429, XP002018735 J.D. LEVIN ET AL.: "AN AGAR DIFFUSION MICROBIOLOGICAL ASSAY FOR THIOSTREPTON" see page 428, line 17 - page 429, line 2 -----	1-3,5-10

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INTERNATIONAL SEARCH REPORT

Ir. ..ational application No.
PCT/EP 97/03212

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. [X] Claims Nos.: 5-7,9 + partially 8
because they relate to subject matter not required to be searched by this Authority, namely:
Remark: Although claims 5-7,9 (completely) and 8 (partially as far as being dependent on claim 5) are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

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:

see annex

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. [X] 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.:

claims 1-3,5-10

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 FROM PCT/ISA/ 210

1. Claims: 1-3,5-10

Use of a micrococcin for preparing a drug for treating or preventing mastitis in a mammal, wherein said drug does not interfere with the production of cheese and yoghurt using milk from treated animals; method for treating or preventing mastitis and method for the production of cheese and yoghurt using milk from micrococcin treated mammals.

2. Claim : 4

Use of Staphylococcus sciuri for the preparation of hydrophobic micrococcin antibiotic.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Intern. ..nal Application No
PCT/EP 97/03212

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9505844 A	02-03-95	AU 7534694 A	21-03-95
		CA 2169847 A	02-03-95
		EP 0789581 A	20-08-97
		JP 9502171 T	04-03-97