European Patent Office

Application Number
EP 01 98 3297

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

European Patent Office

LACK OF UNITY OF INVENTION
SHEET B

Application Number
EP 01 98 3297

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-36 (partially)

   Subject-matter related to the polynucleotide and the polypeptide having the sequences shown in SEQ ID N°1 and 2.

   ---

2. claims: 1-36 (partially)

   Subject-matter related to the polynucleotide and the polypeptide having the sequences shown in SEQ ID N°3 and 4.

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3. claims: 1-36 (partially)

   Subject-matter related to the polynucleotide and the polypeptide having the sequences shown in SEQ ID N°5 and 6.

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4. claims: 1-36 (partially)

   Subject-matter related to the polynucleotide and the polypeptide having the sequences shown in SEQ ID N°7 and 8.

   ---

5. claims: 1-36 (partially)

   Subject-matter related to the polynucleotide and the polypeptide having the sequences shown in SEQ ID N°9 and 10.

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6. claims: 1-36 (partially)

   Subject-matter related to the polynucleotide and the polypeptide having the sequences shown in SEQ ID N°11 and 12.

   ---

7. claims: 1-36 (partially)

   Subject-matter related to the polynucleotide and the polypeptide having the sequences shown in SEQ ID N°13 and 14.

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8. claims: 1-36 (partially)

   Subject-matter related to the polynucleotide and the polypeptide having the sequences shown in SEQ ID N°15 and 16.

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

9. claims: 1-36 (partially)

Subject-matter related to the polynucleotide and the polypeptide having the sequences shown in SEQ ID N°17 and 18.

Reason for the limitation of the search:

Present claims 1-4, 13, 14, 17, 24 relate to a compound defined by reference to a desirable characteristic or property, namely comprising, mimicking or cross-reacting with a B-cell or T-cell epitope of the Lawsonia spp. polypeptides flhB, fliR, ntrC, glnH, motA, motB, tlyC, ytfM or ytfN.

The claims cover all compounds having this characteristic or property, whereas the application provides support within the meaning of Article 84 EPC and/or disclosure within the meaning of Article 83 EPC for only a very limited number of such compounds. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, the claims also lack clarity (Article 84 EPC). An attempt is made to define the compound by reference to a result to be achieved. Again, this lack of clarity in the present case is such as to render a meaningful search over the whole of the claimed scope impossible. Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to the polypeptides having the sequence shown in SEQ ID N°2, 4, 6, 8, 10, 12, 14, 16, 18 and the fragments thereof

Claim 32 refers to probes or primers comprising nucleic acid sequence selected from the SEQ IDs 18 to 68. However the SEQ IDs 61 to 68 correspond to polypeptide sequences, therefore probes or primers comprising said SEQ IDs 61 to 68 cannot be searched.

European Patent Office

SUPPLEMENTARY PARTIAL EUROPEAN SEARCH REPORT

which under Rule 45 of the European Patent Convention shall be considered, for the purposes of subsequent proceedings, as the European search report

Application Number EP 01 98 3297

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	CARPENTER PHILLIP B ET AL: "Bacillus subtilis flagellar proteins FliP, FliQ, FliR and FlhB are related to Shigella flexneri virulence factors" GENE (AMSTERDAM), vol. 137, no. 2, 1993, pages 243-245, XP002306955 ISSN: 0378-1119 * abstract; figure 1d *	5	C07K14/195 C07K16/12 C12N15/31 A61K39/02 A61P1/00 G01N33/537 C12Q1/04
A,D	WO 97/20050 A (PIG RESEARCH AND DEV CORP ; HASSE DETLEF (AU); DARATECH PTY LTD (AU);) 5 June 1997 (1997-06-05) * abstract; claims 1-90; examples 1-20 *		
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TECHNICAL FIELDS SEARCHED (Int.Cl.7)

C07K

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

INCOMPLETE SEARCH

The Search Division considers that the present application, or some or all of its claims, does/do not comply with the EPC to such an extent that a meaningful search into the state of the art cannot be carried out, or can only be carried out partially, for the following claims:

Claims searched completely :

Claims searched incompletely :

Claims not searched :

Reason for the limitation of the search:

see sheet C

5

Place of search	Date of completion of the search	Examiner
Munich	17 February 2005	Loubradou, G

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 03.82 (P04C20)

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
A	DALE C JANE H ET AL: "Identification and sequencing of the groE operon and flanking genes of Lawsonia intracellularis: Use in phylogeny" MICROBIOLOGY, SOCIETY FOR GENERAL MICROBIOLOGY, READING, GB, vol. 144, no. 8, August 1998 (1998-08), pages 2073-2084, XP002156652 ISSN: 1350-0872 * the whole document *		
A	DATABASE EMBL 1 October 2000 (2000-10-01), TAKAMI ET AL.: "Flagellar biosynthetic protein fliR" XP002318060 Database accession no. Q9KA50 * abstract *		TECHNICAL FIELDS SEARCHED (Int.Cl.7)
X	PAWLOWSKI K ET AL: "CHARACTERIZATION OF A NOVEL AZORHIZOBIUM-CAULINODANS ORS571 TWO-COMPONENT REGULATORY SYSTEM NTRY-NTRX INVOLVED IN NITROGEN FIXATION AND METABOLISM" MOLECULAR AND GENERAL GENETICS, vol. 231, no. 1, 1991, pages 124-138, XP001205245 ISSN: 0026-8925 * abstract; figures 2,5 *	5	

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DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	STEGLITZ-MÖRSDORF U ET AL: "Cloning, heterologous expression, and sequencing of the Proteus vulgaris glnAntrBC operon and implications of nitrogen control on heterologous urease expression." FEMS MICROBIOLOGY LETTERS. 15 JAN 1993, vol. 106, no. 2, 15 January 1993 (1993-01-15), pages 157-164, XP001205246 ISSN: 0378-1097 * abstract; figure 2 *	5,25,26, 34-36	
A	DATABASE EMBL 1 October 2000 (2000-10-01), HEIDELBERG ET AL.: "Amino acid ABC transporter, periplasmic amino acid-binding protein." XP002318061 Database accession no. Q9KKKR3 * the whole document *		TECHNICAL FIELDS SEARCHED (Int.Cl.7)
P,X	DATABASE EMBL 1 June 2001 (2001-06-01), FERRETTI ET AL.: "Hypothetical protein SPy1315." XP002318062 Database accession no. Q99ZA4 * abstract *	5	
P,X	DATABASE EMBL 'Online! 30 March 2001 (2001-03-30), "602541693F1 NIH_MGC_59 Homo sapiens cDNA clone IMAGE:4672631 5', mRNA sequence." XP002318063 retrieved from EBI accession no. EM_PRO:BG495022 Database accession no. BG495022 * abstract *	25,26, 34-36	

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DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	DEAN G E ET AL: "GENE SEQUENCE AND PREDICTED AMINO-ACID SEQUENCE OF THE MOT-A PROTEIN A MEMBRANE-ASSOCIATED PROTEIN REQUIRED FOR FLAGELLAR ROTATION IN ESCHERICHIA-COLI" JOURNAL OF BACTERIOLOGY, vol. 159, no. 3, 1984, pages 991-999, XP009044086 ISSN: 0021-9193 * abstract; figure 2 *	5	
X	DATABASE EMBL 'Online! 6 September 1996 (1996-09-06), "Vibrio parahaemolyticus lateral flagellin LafA (lafA), lateral flagellar FliD (fliD), lateral flagellar FliS (fliS), lateral flagellar FliT-like protein (fliT), lateral flagellar FliK-like protein (fliK), lateral flagellar FliL (fliL), lateral flagellar FliA (fliA), lateral flagellar MotA (motA), an" XP002318064 retrieved from EBI accession no. EM_PRO:VPU52957 Database accession no. VPU52957 * the whole document *	25,26, 34-36	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
P,X	DATABASE EMBL 1 March 2001 (2001-03-01), STOVER ET AL.: "Chemotaxis protein MotA" XP002318065 Database accession no. Q9HUL1 * the whole document *	5	
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DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	DATABASE EMBL 'Online! 18 October 1999 (1999-10-18), "Salmonella typhimurium DNA for MotB protein, partial, MotA protein, FlhC protein, FlhD protein, UspA analogue." XP002318066 retrieved from EBI accession no. EM_PRO:D43640 Database accession no. D43640 * the whole document *	25,26, 34-36	
A	-& YANAGIHARA SHIGEHIRO ET AL: "Structure and transcriptional control of the flagellar master operon of Salmonella typhimurium" GENES AND GENETIC SYSTEMS, vol. 74, no. 3, June 1999 (1999-06), pages 105-111, XP002318057 ISSN: 1341-7568 * abstract *	26	TECHNICAL FIELDS SEARCHED (Int.Cl.7)

X	DATABASE EMBL 1 November 1999 (1999-11-01), STAMM ET AL.: "Flagellar motor protein MotB (flagellar motor protein B)" XP002318067 Database accession no. Q9X5A1 * the whole document *	5	
A	-& STAMM LOLA V ET AL: "Molecular characterization of a flagellar (fla) operon in the oral spirochete Treponema denticola ATCC 35405" FEMS MICROBIOLOGY LETTERS, vol. 179, no. 1, 1 October 1999 (1999-10-01), pages 31-36, XP002318058 ISSN: 0378-1097 * the whole document *	5	

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DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
X	PLATZER J ET AL: "Three genes of a motility operon and their role in flagellar rotary speed variation in Rhizobium meliloti." JOURNAL OF BACTERIOLOGY. OCT 1997, vol. 179, no. 20, October 1997 (1997-10), pages 6391-6399, XP002318059 ISSN: 0021-9193 * abstract; figure 3 *	5	
X	WO 99/58682 A (SMITHKLINE BEECHAM BIOLOGICALS S.A; THONNARD, JOELLE) 18 November 1999 (1999-11-18) * page 31, line 28 - page 38, line 19; claims 1-24; example 5; sequences 1-6 *	5,18,21, 22,25, 26,34-36	
X	DATABASE UniProt 'Online! 15 July 1998 (1998-07-15), "Hypothetical UPF0053 protein sll1254." XP002318068 retrieved from EBI accession no. UNIPROT:Y1254_SYNY3 Database accession no. Y1254_SYNY3 * the whole document *	5	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
X	WO 00/47737 A (SMITHKLINE BEECHAM BIOLOGICALS S.A; RUELLE, JEAN-LOUIS; THONNARD, JOEL) 17 August 2000 (2000-08-17) * abstract; sequences 1-4 *	5	
X	DATABASE EMBL 1 November 1999 (1999-11-01), LEE ET AL: "Hypothetical protein" XP002318069 Database accession no. Q9X3V8 * the whole document *	5	

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EPO FORM 1503 03.82 (P04C10)

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
P,X	DATABASE EMBL 1 October 2001 (2001-10-01), KANEKO ET AL.: "M111662 protein." XP002318070 Database accession no. Q98K30 * the whole document *	5	
X	DATABASE EMBL 1 November 1999 (1999-11-01), LEE ET AL.: "Hypothetical protein" XP002318071 Database accession no. Q9X3V6 * the whole document *	5	
P,X	DATABASE EMBL 1 June 2001 (2001-06-01), NIERMAN ET AL.: "Hypothetical protein CC1604." XP002318072 Database accession no. Q9A7W5 * the whole document *	5	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
X	EP 1 001 025 A (PFIZER PRODUCTS INC) 17 May 2000 (2000-05-17) * sequence 48 *	32	

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EPO FORM 1503 03.82 (P04C10)

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 01 98 3297

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

17-02-2005

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9720050 A	05-06-1997	AU 718333 B2	13-04-2000
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		WO 9958682 A2	18-11-1999
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		ZA 9906648 A	23-04-2001

专利名称(译)	用于治疗劳森氏菌感染的新型治疗组合物		
公开(公告)号	EP1332154A4	公开(公告)日	2005-05-11
申请号	EP2001983297	申请日	2001-11-09
[标]申请(专利权)人(译)	维多利亚农业服务控股公司 辉瑞产品公司		
申请(专利权)人(译)	农业VICTORIA SERVICES PTY LTD 澳洲新鲜猪肉LIMITED PFIZER PRODUCTS INC		
当前申请(专利权)人(译)	农业VICTORIA SERVICES PTY LTD 澳洲新鲜猪肉LIMITED PFIZER PRODUCTS INC		
[标]发明人	ROSEY EVERETT LEE KING KENDALL WAYNE GOOD ROBERT TRYGVE STRUGNELL RICHARD ANTHONY		
发明人	ROSEY, EVERETT, LEE KING, KENDALL, WAYNE GOOD, ROBERT, TRYGVE STRUGNELL, RICHARD, ANTHONY		
IPC分类号	G01N33/53 A61K39/00 A61K39/02 A61P1/00 A61P31/04 C07K14/195 C07K14/205 C07K16/12 C12N1/21 C12N15/09 C12N15/31 C12P21/08 C12Q1/68 G01N33/566 G01N33/569 G01N33/537 C12Q1/04		
CPC分类号	A61K39/00 A61K2039/53 A61P1/00 C07K14/195 C07K14/205		
优先权	2000PR1381 2000-11-10 AU 60/249596 2000-11-17 US		
其他公开文献	EP1332154A1		
外部链接	Espacenet		

摘要(译)

本发明总体上涉及用于治疗和/或预防由细胞内劳森菌或类似或其他相关微生物引起或加剧的动物和鸟类的肠道疾病状况的治疗组合物。 特别地，本发明提供了源自 细胞内劳森菌的新基因，其编码免疫原性多肽，其特别用作在疫苗制剂中赋予针对动物宿主中的 细胞内劳森菌和相关病原体的体液免疫力的抗原，其中所述多肽 选自fhlB，fliR，ntrC，glnH，motA，motB，tlyC，ytfM和ytfN多肽，或任何一种或多种所述多肽的同源物，类似物或衍生物。 本发明还涉及用于治疗和/或预防这种肠道疾病状况的方法，以及用于检测 细胞内劳森菌 或类似或相关微生物的诊断剂和程序。