



### 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:

1-19, 33, 40-42 (completely); 22-32, 34-39, 43 (partially)



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: 1-19, 33, 40-42 (completely); 22-32, 34-39, 43 (partially)

Transgenic animal comprising at least 15 contiguous nucleotides of SEQ ID No.2 including the thymine at position 582 of SEQ ID No.2, transgenic animal comprising a sequence which encodes SEQ ID No.4 and which includes at least a codon for the valine at position 171 of SEQ ID No.4, at least 15 contiguous nucleotides of SEQ ID No.1, transgenic animal having an altered LRP5 gene control sequence, or transgenic mouse having an altered LRP5 gene, embryo is this animal, isolated cell from this animal or its progeny, use of said transgenic animal for studying bone mass, and for studying the effects of HBM on bone and cardiac disorders.

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2. claims: 20, 21 (completely); 22-32, 34-39, 43 (partially)

Transgenic animal comprising an alteration of the gene encoding LRP6, embryo is this animal, isolated cell from this animal or its progeny, use of said transgenic animal for studying bone mass, and for studying the effects of HBM on bone and cardiac disorders.

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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	WO 98/46743 A (THE WELLCOME TRUST LIMITED AS TRUSTEE TO THE WELLCOME TRUST; MERCK & C) 22 October 1998 (1998-10-22) * abstract * * page 16, line 32 - page 21, line 2 * * page 40, line 5 - line 26 * * page 44, line 22 - page 46, line 28 * * page 80, line 25 - page 82, line 2 * * table 5 * -----	4-12, 14-19, 22-43	A01K67/00 A01K67/027 C12N15/00 G01N33/00
X,P	WO 01/77327 A (GENOME THERAPEUTICS CORPORATION; CARULLI, JOHN, P; LITTLE, RANDALL, D;) 18 October 2001 (2001-10-18) * abstract * * page 1, line 3 - line 15 * * page 9, line 8 - page 10, line 20 * * page 11, line 16 - line 28 * * page 17, line 7 - line 20 * * page 53, line 9 - page 63, line 19 * * page 82, line 27 - page 85, line 31 * * page 91, line 20 - page 102, line 29 * * page 104, line 20 - page 106, line 10 * * figure 3 * ----- -/--	1-19, 22-43	TECHNICAL FIELDS SEARCHED (Int.Cl.7)  A01K C12N G01N
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
Place of search		Date of completion of the search	Examiner
Munich		20 April 2005	Chavanne, F
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 03.02 (P04-C04)



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,P	WO 01/98508 A (DELTAGEN, INC; BRENNAN, THOMAS, J; LEVITEN, MICHAEL, W; KLEIN, ROBERT;) 27 December 2001 (2001-12-27)  * abstract * * page 2, line 22 - page 3, line 5 * * page 5, line 17 - line 24 * * page 6, line 5 - line 35 * * page 8, line 16 - line 22 * * page 8, line 31 - line 34 * * page 11, line 5 - line 11 * * page 13 - page 24 * * page 30 - page 31 * * page 34 - page 38 * * example 3 *	4-12, 14-19, 22-27, 40-42	
L	WO 02/092000 A (GENOME THERAPEUTICS CORPORATION; WYETH; ALLEN, KRISTINA; ANISOWICZ, AN) 21 November 2002 (2002-11-21) * abstract * * page 8, line 15 - page 9, line 7 * * page 10, line 1 - line 7 * * page 11, line 17 - line 28 * * page 13, line 3 - line 9 * * page 31 * * page 37, line 15 - line 30 * * page 39, line 6 - line 21 * * page 46, line 11 - line 25 * * page 49, line 25 - line 30 * * page 111, line 19 - page 117, line 4 * * page 122, line 14 - page 124, line 20 * * page 133, line 17 - page 189, line 15 * * claims 28-47 *  ----- -/--	1-19, 22-43	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
The supplementary search report has been based on the last set of claims valid and available at the start of the search.			
Place of search Munich		Date of completion of the search 20 April 2005	Examiner Chavanne, F
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	

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EPO FORM 1503 03 82 (P04C04)



**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)	
A	<p>GONG Y ET AL: "OSTEOPORORIS-PSEUDOGLIOMA SYNDROME, A DISORDER AFFECTING SKELETAL STRENGTH AND VISION, IS ASSIGNED TO CHROMOSOME REGION 11Q12-13"            AMERICAN JOURNAL OF HUMAN GENETICS, AMERICAN SOCIETY OF HUMAN GENETICS, CHICAGO, IL, US,            vol. 59, no. 1, July 1996 (1996-07), pages 146-151, XP009033503            ISSN: 0002-9297</p> <p style="text-align: center;">-----</p>		<p>TECHNICAL FIELDS SEARCHED (Int.Cl.7)</p>	
<p>The supplementary search report has been based on the last set of claims valid and available at the start of the search.</p>				
Place of search		Date of completion of the search		Examiner
Munich		20 April 2005		Chavanne, F
<p>CATEGORY OF CITED DOCUMENTS</p>				
<p>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</p>		<p>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</p> <p>.....            &amp; : member of the same patent family, corresponding document</p>		

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ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.

EP 02 76 9713

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.

20-04-2005

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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专利名称(译)	骨量调节的转基因动物模型		
公开(公告)号	<a href="#">EP1401269A4</a>	公开(公告)日	2005-09-28
申请号	EP2002769713	申请日	2002-05-13
[标]申请(专利权)人(译)	惠氏公司		
申请(专利权)人(译)	惠氏		
当前申请(专利权)人(译)	惠氏		
[标]发明人	BABIJ PHILIP BEX FREDERICK JAMES III BODINE PETER VAN NEST		
发明人	BABIJ, PHILIP BEX, FREDERICK, JAMES, III BODINE, PETER, VAN NEST		
IPC分类号	A01K67/027 A61K35/00 A61K38/00 A61K39/395 A61K45/00 A61P3/00 A61P19/00 A61P19/10 C07K14/47 C07K14/51 C07K16/18 C12N5/10 C12N15/09 C12N15/12 C12N15/85 C12P21/08 C12Q1/02 C12Q1/68 G01N33/15 G01N33/50 G01N33/53 G01N33/566 A01K67/00 C12N15/00 G01N33/00		
CPC分类号	A01K67/0276 A01K67/0278 A01K2207/15 A01K2217/00 A01K2217/05 A01K2217/075 A01K2227/105 A01K2227/50 A01K2267/02 A01K2267/03 A01K2267/0362 A61K38/00 A61P3/00 A61P3/14 A61P19/00 A61P19/08 A61P19/10 C07K14/51 C07K16/18 C12N15/8509 C12N2800/30 C12N2800/60 C12N2830/00 C12N2830/008 C12N2830/30 C12N2840/105 C12N2840/203 G01N2333/51 G01N2500/00		
优先权	60/290071 2001-05-11 US 60/291311 2001-05-17 US 60/353058 2002-02-01 US 60/361293 2002-03-04 US		
其他公开文献	EP1401269A2		
外部链接	<a href="#">Espacenet</a>		

#### 摘要(译)

本发明涉及用于在动物细胞和转基因动物中表达衍生自HBM，LRP5或LRP6的HBM样多肽的方法和材料。本发明还涉及表达HBM样多肽的转基因动物。本发明提供了核酸，包括编码序列，寡核苷酸引物和探针，蛋白质，克隆载体，表达载体，转化的宿主，开发药物组合物的方法，鉴定与骨骼发育有关的分子的方法以及诊断和治疗与疾病有关的疾病的方法。骨骼发育和脂质调节。在优选的实施方案中，本发明涉及治疗，诊断和预防骨质疏松症的方法。