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(54) Title: CHIMERIC PROTEIN

(57) Abstract: A chimeric protein is disclosed for promoting repair and regeneration of neurons damaged by disease or physical injury wherein the chimeric protein is a combination of a first polypeptide possessing matrix modification activity and a second polypeptide possessing regenerating activity for neural cells.

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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/26214

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>														
IPC(7) : C12P 21/06; C12N 9/00, 9/24, 9/26, 9/50; C07K 1/00; C07H 21/04														
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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 practicable, search terms used) Please See Continuation Sheet														
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>														
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.												
Y	MOON L D.F. et al. Regeneration of CNS axons back to their target following treatment with of adult rat brain chondroitinase ABC. Nat. Neurosci., May 2001, Vol. 4, No. 5, pages 465-466.	1-24												
Y	YICK LW et al. Chondroitinase ABC promotes axonal regeneration of Clarke's neurons after spinal cord injury, Neuroreport, 7 April 2000, Vol. 11, No. 5, pages 1063-1067.	1-24												
Y	YANG EV et al. Expression of Mmp-9 and related matrix metalloproteinase genes during axolotl limb regeneration, Dev. Dyn., 1999, Vol. 216, pages 2-9.	1-24												
Y	YANG EV et al. Developmental regulation of a matrix metalloproteinase during regeneration of axolotl appendages, Dev. Biol., 1994, Vol. 166, pages 696-703.	1-24												
Y	TONA et al. Effect of hyaluronidase on brain extracellular matrix in vivo and optic nerve regeneration., J. Neurosci. Res., October 1993, Vol. 36, pages 191-199.	1-24												
Y	CHEN YS et al. Peripheral nerve regeneration using silicone rubber chambers filled with collagen, laminin and fibronectin. Biomaterials, 2000, Vol. 21, pages 1541-1547.	1-24												
Y	MATSUMOTO K et al. Peripheral nerve regeneration across an 80-mm gap bridged by polyglycolic acid (PGA)-collagen tube filled with laminin-coated collagen fibers: a histological and electrophysiological evaluation of regenerated nerves. Brain Res., June 2000, Vol. 868, pages 315-328.	1-24												
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.														
<table border="0"> <tr> <td>* Special categories of cited documents:</td> <td>"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</td> </tr> <tr> <td>"A" document defining the general state of the art which is not considered to be of particular relevance</td> <td>"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</td> </tr> <tr> <td>"E" earlier application or patent published on or after the international filing date</td> <td>"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</td> </tr> <tr> <td>"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)</td> <td>"&amp;" document member of the same patent family</td> </tr> <tr> <td>"O" document referring to an oral disclosure, use, exhibition or other means</td> <td></td> </tr> <tr> <td>"P" document published prior to the international filing date but later than the priority date claimed</td> <td></td> </tr> </table>			* Special categories of cited documents:	"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	"A" document defining the general state of the art which is not considered to be of particular relevance	"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	"E" earlier application or patent published on or after the international filing date	"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	"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)	"&" document member of the same patent family	"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	
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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.
Y	STERNE GD et al. Neurotrophin-3 delivered locally via fibronectin mats enhances peripheral nerve regeneration, July 1997, Vol. 9, No. 7, pages 1388-1396.	1-24
X	WO 95/13091 A1 (INTERNATIONAL TECHNOLOGY MANAGEMENT ASSOCIATES, LTD.) 18 May 1995 (18.05.1995), see entire document.	1-24
Y	TRIGG DJ et al. Peripheral nerve regeneration: comparison of laminin and acidic fibroblast growth factor, Am. J. Otolaryngol., January-February 1998, Vol. 19, No. 1, pages 29-32.	1-24
Y	IWAI Y et al. Axon patterning requires DN-cadherin, a novel neuronal adhesion receptor in the Drosophila embryonic CNS, Neuron, July 1997, Vol. 19, pages 77-89.	1-24

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**Continuation of B. FIELDS SEARCHED Item 3:**

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