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(71) Applicant: NASTECH PHARMACEUTICAL COM-  
PANY INC. [—/—]; 3450 Monte Villa Parkway, Bothell,  
WA 98021-8906 (US).

(72) Inventor: QUAY, Steven, C.; 23632 Hwy 99, Ste. F PMB  
454, Edmonds, WA 98026-9224 (US).

(74) Agent: LUNN, Paul, G.; Nastech Pharmaceutical Com-  
pany Inc., 3450 Monte Villa Parkway, Bothell, WA 98021-  
8906 (US).

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ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: COMPOSITIONS AND METHODS FOR MODULATING PHYSIOLOGY OF EPITHELIAL JUNCTIONAL ADHE-  
SION MOLECULES FOR ENHANCED MUCOSAL DELIVERY OF THERAPEUTIC COMPOUNDS

**Human JAM-1:** 299 amino acids.

MGTKAQVERKLLCLFILAILLCSLALGSVTVHSSEPEVRIPENNPVKLSCAYSGFSSP  
RVEWKFDQGDTTRLVCYNNKITASYEDRVTLPTGITFKSVTREDTGTYTCMVS  
EEGGNSYGEVKVKLIVLVPPSKPTVNIPSSATIGNRAVLTCSEODGSPSEYTW  
KDGIVMPTNPKSTRAFSNSSYVLNPTTGELVFDPLSASDTGEYSCEARNGYGTPM  
TSNAVRMEAVERNVGVIVAAVLVTLLLGILVFGIWFAYSRGHFDRTKKGTSSKKVI  
YSQPSARSEGEFKQTSSFLV (SEQ ID NO: 887)

(57) Abstract: Compositions and methods are provided that include a biologically active agent and a permeabilizing agent effective to enhance mucosal delivery of the biologically active agent in a mammalian subject. The permeabilizing agent reversibly enhances mucosal epithelial paracellular transport, typically by modulating epithelial junctional structure and/or physiology at a mucosal epithelial surface in the subject. This effect typically involves inhibition by the permeabilizing agent of homotypic or heterotypic binding between epithelial membrane adhesive proteins of neighboring epithelial cells. Target proteins for this blockade of homotypic or heterotypic binding can be selected from various related junctional adhesion molecules (JAMs), occludins, or claudins. The permeabilizing agent is typically a peptide or peptide analog or mimetic, often selected or derived from an extracellular domain of a mammalian JAM, occludin or claudin protein.

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/19994

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 38/00  
US CL : 514/12

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)

U.S. : 514/12, 2; 530/324

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

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	AURRAND-LIONS et al. JAM-2, a Novel Immunoglobulin Superfamily Molecule, Expressed by Endothelial and Lymphatic Cells. Journal Biological Chemistry. 26 January 2001, Vol. 276, No. 4, pages 2733-2741. See entire document.	1-92
Y	US 6,110,747 A (BLASCHUK et al.) 29 August 2000 (29.08.2001), see abstract.	1
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A		2-92
X	US 6,248,864 B1 (BLASCHUK et al.) 19 June 2001 (19.06.2001), see abstract, and	1
---	columns 57-58.	-----
A		2-92

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"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
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"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)	"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
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450  
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Facsimile No. (703)305-3230

Authorized officer

B. Dell'Chism

Telephone No. (703) 308-0196

## INTERNATIONAL SEARCH REPORT

PCT/US03/19994

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

STN BIOSIS SCISEARCH MEDLINE WEST

search terms: JAM-1, JAM-2, JAM-3, immunoglobulin, endothelial, occludin, adhesion, cell, permeability, module