## MANUS

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| FORM PTO-1595 (modified) RECORDATION FORM (Rev. 6-93) |   | CO      | VER SHEET                   |   |  |  |  |
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| омв   | No. 0651-0011(exp. 4/94) PATENTS  | 10      | NLY                         | 1011  | 84161                                      |  |  |
| To th   | he Honorable Commissioner of Patents and Trademarks: Please rec   | ord t   | he attached orig            | nal documents or co                               | py thereof.                                |  |  |
| and<br>Addi   | Name of conveying party(ies): ko AKIYAMA, Naoki NAGAHARA, Megumi KITANO, Masafumi NAKAO itional name(s) of conveying party(ies) attached? No  |         | Name: TAKE                  | dress of receiving p                              |  |  |  |
| 3.  | Nature of conveyance:   |         | Internal Addres             | SS:   |  |  |  |
| <u>xx</u><br>   | Assignment Merger Security Agreement Change of Name Other   |         | Street Address City: Osaka, | s: <u>1-1, Doshomach</u><br>Country: <u>Japan</u> | i 4-chome, Chuo-ku<br>Zip: <u>540-8645</u> |  |  |
|   | Execution Date: Aug. 26, 1999 and Aug. 27, 1999   | Ado     | ditional name(s)            | & address(es) atta                                | ched? <u>No.</u>                           |  |  |
| 4.  | Application number(s) or patent number(s):  Title: Gastrointestinal Mucosa-Adherent Pharmaceutical Composition  If this document is being filed together with a new application, the execution date of the application is: Aug. 26, 1999  and Aug. 27, 1999 |         |                             |   |  |  |  |
| A. P  | Patent Application No.(s)   | B.      | Patent No.(s)               |   |  |  |  |
|   | 09/380935<br>Additional numbe   | ers att | ached? No                   |   |  |  |  |
| 5.  | Name and address of party to whom correspondence concerning document should be mailed:  | 6. T    | Total number of             | applications and p                                | atents involved: <u>1</u>                  |  |  |
|   | Name: Philippe Y. Riesen  Takeda Chemical Industries, Ltd.  Intellectual Property Department  | 7.      | Total fee (37               | C.F.R. §3.41)                                     | \$40.00                                    |  |  |
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|   | DO NOT USE  | E THIS  | S SPACE                     |   |  |  |  |
| 9.  | Statement and signature.  To the best of my knowledge and belief, the foregoing information document.  Philippe Y. Riesen (No. 35,657)  Name of the Person signing  Signature  pages including cover  |         |                             | September 6,                                      | 1999                                       |  |  |
|   | 40.00 CB  |         |                             |   |  |  |  |

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PATENT REEL: 010335 FRAME: 0635

## **ASSIGNMENT**

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor hereby sells and assigns, to TAKEDA CHEMICAL INDUSTRIES LTD., a corporation of Japan, 1–1, Doshomachi 4–chome, Chuo–ku, Osaka, Japan (hereinafter ASSIGNEE) all right, title and interest for the United States, its territories and possessions in and to the following invention and U.S. application filed thereon, and the entire right, title and interest in and to any and all Letters Patents which may be granted therefor in the United States, to be held and enjoyed by said ASSIGNEE, its successors, legal representatives and assigns to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by the undersigned had this Assignment not been made.

Title of Invention: Gastrointestinal Mucosa-Adherent Pharmaceutical Composition

United States Patent Application:

| [X | X] | executed concurrently | herewith |
|----|----|-----------------------|----------|
| [  | ]  | executed on           |          |
| [  | ]  | Serial No.            | Filed    |

Each of the undersigned acknowledges that this sale and assignment includes any and all divisions or continuations of said United States Patent application, and any and all Letters Patent of the United States which may issue on any such applications, including any and all reissues or extensions thereof.

Each of the undersigned hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all such Letters Patent to said ASSIGNEE, its successors or assigns in accordance herewith:

Each of the undersigned warrants and covenants that he has the full and unencumbered right to sell and assign the interests herein sold and assigned and that he has not executed and will not execute any document or instrument in conflict herewith;

Each of the undersigned further covenants and agrees he will communicate to said ASSIGNEE, its successors, legal representatives or assigns all information known to him relating to said invention or patent application and that he will execute and deliver any papers, make all rightful oaths, assist in and testify in any related proceedings including interferences or lawsuits concerning this application or continuation, division or reissue thereof, and perform all other lawful acts deemed necessary or desirable by said ASSIGNEE, its successors, legal representatives or assigns to obtain a grant of a valid United States Patent on said invention;

PATENT REEL: 010335 FRAME: 0636

Each of the undersigned hereby grants ASSIGNEE and its legal representatives, the power to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment and specifically, the power to insert in the space provided above, the filing date and application number of the application when known.

In witness hereof, executed by the undersigned on the date(s) opposite the undersigned names.

| NAMES AND SIGNATURES OF INVENTORS  |                      |         |                       |  |  |  |  |
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RECORDED: 09/10/1999

<sup>\*</sup>Notice for Witnesses! Please indicate which inventor(s) you are signing for by writing the corresponding numbers after "For:"