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Form PTO-1595 (Rev. 03/01)  OMB No. 0651-0027 (exp. 5/31/2002)  Tab settings ⇔ ⇔ ▼ , 102018	U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office				
	S98 ( Please record the attached original documents or copy thereof.				
Name of conveying party(ies):     Tatsuya ITO, Tomomi IKEMOTO,     Kiminori TOMIMATSU  Additional name(s) of conveying party(ies) attached? □ Yes ☑ No	2. Name and address of receiving party(ies)  Name: Takeda Chemical Industries Ltd.  Internal Address:  Intellectual Property Department				
3. Nature of conveyance:					
■ Assignment ■ Merger □ Security Agreement □ Change of Name	Street Address: 1-1, Doshomachi 4-chome				
	Chuo-ku				
Other	City: Osaka State: Japan Zip: 540-864				
Execution Date:	Additional name(s) & address(es) attached? ☐ Yes 🗷 No				
4. Application number(s) or patent number(s):					
If this document is being filed together with a new appli	cation, the execution date of the application is:				
A. Patent Application No.(s) UEDUVIJE 00000031 500799 10019987 40.00 CH	B. Patent No.(s)				
5. Name and address of party to whom correspondence	ached? Pres No				
concerning document should be mailed:  Name:Mark Chao, PhD, JD	7. Total fee (37 CFR 3.41)\$\$\\$40.00				
Internal Address:					
Takeda Pharmaceuticals North America, Inc.	Authorized to be charged to deposit account				
Intellectual Property Department	8. Deposit account number:				
Street Address: Suite 500	500799				
475 Half Day Road					
City: Lincolnshire State: Illinois Zip: 60069	(Attach duplicate copy of this page if paying by deposit account)				
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9. Statement and signature.  To the best of my knowledge and belief, the foregoing is a true copy of the original document.  Mark Chao, PhD, JD Reg. No. 37,293	1/h/01				
Name of Person Signing	Signature Date				

Total number of pages including cover sheet, attachments, and documents: L Mail documents to be recorded with required cover sheet information to: Commissioner of Patents & Trademarks, Box Assignments

## **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: PROCESS FOR THE PREPARATION OF 2, 3-DIHYDROTHIEPINE DERIVATIVES

United States Patent Application:

[ ]	executed concurrently herewith					
[x]	executed on	October	22,	2001		
[ ]	Serial No.	F	iled			

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

PATENT REEL: 012504 FRAME: 0770 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;

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						
1.Name: Tatsuya ITO	Signature: Tatsaya Itc	Date: Oct. 22, 2001				
2.Name: Tomomi IKEMOTO	Signature: Tomomi Ikamoto	Date: Oct. 22, 2001				
3.Name: Kiminori TOMIMATSU	Signature: Kiminon Jaminatan	Date: Oct. 22, 2001				
4.Name:	Signature:	Date:				
5.Name:	Signature:	Date:				
6.Name:	Signature:	Date:				
NAMES AND SIGNATURES OF WITNESSES*						
Name/Tsuyoshi KAWABE	Signature:	Date:				
For: 1	Tsuyoshi Kawabe	Oct. 22, 2001				
Name/Atsuko NISHIGUCHI	Signature:	Date:				
For: 2 and 3	Atsuko Nishiguchi	Oct. 22, 2001				
Name/	Signature:	Date:				
For:						
Name/	Signature:	Date:				
For:		}				
Name/	Signature:	Date:				
For:						
Name/	Signature:	Date:				
For:						

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

**RECORDED: 11/07/2001**