PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------------------|----------------|
| Mr. Enrico Anthony Antonini | 02/07/2003 |

RECEIVING PARTY DATA

| Name: | Mallinckrodt Inc. |
|-----------------|------------------------------------|
| Street Address: | 675 McDonnell Blvd., P.O. Box 5840 |
| City: | St. Louis |
| State/Country: | MISSOURI |
| Postal Code: | 63134 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------|-----------|
| PCT Number: | US0304498 |

CORRESPONDENCE DATA

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NAME OF SUBMITTER: Tammy A. Torres

Total Attachments: 2

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PATENT

500002449 **REEL: 014844 FRAME: 0693**

ASSIGNMENT

WHEREAS, I, Enrico Anthony ANTONINI, 810 St. Louis Street, Edwardsville, in the state of Illinois, 62025,USA, has invented a new and improved METHOD AND SYSTEM FOR SEPARATION AND PURIFICATION OF AT LEAST ONE NARCOTIC ALKALOID USING REVERSE PHASE PREPARATIVE CHROMATOGRAPHY, identified as Case No. 1580.P US, and described in a provisional patent application number 60/360321 filed in the United States Patent and Trademark Office.

WHEREAS, Mallinckrodt Inc. of St. Louis, Missouri, a corporation of the State of Delaware, is desirous of acquiring the entire right, title and interest in and to said invention or inventions and any and all patents to be obtained therefor;

NOW, THEREFORE, for good and valuable consideration, we do hereby sell, assign and transfer unto said Mallinckrodt Inc., its successors and assigns, the entire right, title and interest in and to said invention or inventions, as described in the aforesaid application, in any form or embodiment thereof, and in and to the aforesaid application; and in and to any applications filed in any foreign country based thereon, including the right to file said foreign applications under the provisions of the International Convention; also any improvements on said invention or inventions now or hereafter made by me during the period of my employment; also the entire right, title and interest in and to any and all patents or reissues or extensions thereof to be obtained in this or any foreign country upon said invention, inventions, or improvements and any divisional, continuation, continuation-in-part or substitute applications which may be filed upon said invention, inventions, or improvements in this or any foreign country; and I hereby authorize and request the issuing authority to issue any and all patents on said application or applications to said Mallinckrodt Inc., as assignee of the entire interest.

I further agree, without any payment by Mallinckrodt Inc. other than expenses incurred by the undersigned, to communicate to said Mallinckrodt Inc., its representatives or agents, any fact relating to said inventions, inventions or improvements, including evidence for interference purposes or for other legal proceedings, whenever requested; testify in any interference or other legal proceedings, whenever requested; and execute and deliver, on request, all lawful papers required to make any of the foregoing provisions effective.

PATENT REEL: 014844 FRAME: 0694

RECORDED: 07/14/2004

My Commission Expires 5/22/2004

PATENT REEL: 014844 FRAME: 0695