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Additional name(s) of conveying party(les) attached? Yes X	No Street Address: Novo Alié
Execution Date(s)January 27, 2009	1,1313.413
Security Agreement Change of Name	City: 2880 Bagsvaerd
Joint Research Agreement	State:
Government Interest Assignment	Country: DENMARK Zip:
Executive Order 9424, Confirmatory License	
Other	Additional name(s) & address(es) attached? Yes X No
11/982,444 10/411,012 10/552,896 Additional numbers	s attached? XYes No
5. Name and address to whom correspondence concerning document should be mailed:	6, Total number of applications and patents involved: 91
Name: Jeffry S. Mann, Ph.D.	7. Total fee (37 CFR 1.21(h) & 3.41) \$3.640
Internal Address: Morgan, Lewis & Bocklus, LLP	
	Authorized to be charged to deposit account
Street Address: One Market, Spear Street Tower	Enclosed
B14714	None required (government interest not affecting title)
City: San Francisco	8. Payment Information
State:CA Zip:94105	নত7 <i>ল47 ট্রা</i> ফেট সভার নিছে সংগ্রেইকটারত । নের নিয় । ১৯ ৭ ১০০ ১
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Fax Number: 415.442.1001	Deposit Account Number _50-0310
Ernail Address: <u>Imannemorganlewis.com</u>	Authorized User Name Jeffry S. Mann, Ph.D.
9. Signature:	February 23, 2009
Signature	Date
Jeffry S. Mann, Ph.D. Name of Person \$[gning	Total number of pages including cover sheet, attachments, and documents:

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PATENT

REEL: 022441 FRAME: 0937

Additional application number(s) or patent number(s): (Continued from Page 1, Item 4)

A. Patent Application No.(s)

B. Patent No.(s)

11/657,441 10/287,994 11/183,205 10/411,026 10/410,962 11/652,467 10/411,049 10/410,930 10/410,897 10/410,997 11/645,839 10/411,044 10/410,980 12/101,389 10/411,043 10/410,913 11/714,874 10/411,037 11/584,743 10/410,945 10/530,972 11/701,949 10/556,094 09/855,320 10/497,283 10/497,284 10/549,528 10/565,331 10/549,445 11/033,365 10/585,385 11/843,588 10/997,405 11/144,223 10/579,621 11/981,483 11/982,273 10/576,506 12/184,956 11/166,404 10/579,620 11/794,560 10/581,538 10/586,166 11/794,555 11/792,610 11/632,005

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11/665,908 12/092,563 PCT/US06/43048 11/396,215 PCT/US06/12013 11/440,839 11/914,104 11/402,105 11/910,958 11/915,239 11/580,669 PCT/US06/32649 12/152,587 11/781,885 11/781,888 11/781,896 11/781,900 11/781,902 PCT/US07/74139 11/866,969 11/934,700 PCT/US07/80353 PCT/US07/83538 11/867,553 PCT/US07/80471 PCT/US08/65825 PCT/US09/30503 PCT/US08/66749 61/032,006 61/043,354 61/058,869 61/033,616 61/082,472 11/404,266 11/656,643 11/644,014 12/064,012 08/102,385

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PATENT

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NOVO

Attorney Docket No.: 40853-01-5000

ASSIGNMENT OF PATENT APPLICATIONS

WHEREAS, Neose Technologies, Inc. of 102 Rock Road, Horsham, Pennsylvania, 19044, United States, hereinafter referred to as "Assignor," is the owner of the invention described and set forth in the below-identified patent application:

Application No.: 10/492,261; Filed: April 9, 2004 (5050-US); Application No.: 11/982,444; Filed: October 31, 2007 (5050-US1); Application No.: 10/411,012; Filed: April 9, 2003 (5051-US); Application No.: 10/552,896; Filed: June 8, 2006 (5051-US1); Application No.: 11/657,441; Filed: January 24, 2007 (5051-US2); Application No.: 10/287,994; Filed: November 5, 2002 (5052-US); Application No.: 11/183,205; Filed: July 15, 2005 (5052-US1); Application No.: 10/411,026; Filed: April 9, 2003 (5053-US); Application No.: 10/410,962; Filed: April 9, 2003 (5054-US); Application No.: 11/652,467; Filed: January 11, 2007 (5054-US1) Application No.: 10/411,049; Filed: April 9, 2003 (5055-US); Application No.: 10/410,930; Filed: April 9, 2003 (5056-US); Application No.: 10/410,897; Filed: April 9, 2003 (5058-US); Application No.: 10/410,997; Filed: April 9, 2003 (5059-US); Application No.: 11/645,839; Filed: December 26, 2006 (5059-US01); Application No.: 10/411,044; Filed: April 9, 2003 (5064-US); Application No.: 10/410,980; Filed: April 9, 2003 (5066-US); Application No.: 12/101,389; Filed: April 11, 2008 (5066-US1); Application No.: 10/411,043; Filed: April 9, 2003 (5075-US); Application No.: 10/410,913; Filed: April 9, 2003 (5081-US); Application No.: 11/714,874; Filed: March 5, 2007 (5081-US1);

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Application No.: 10/411,037; Filed: April 9, 2003 (5082-US);
Application No.: 11/584,743; Filed: October 19, 2006 (5082-US1);
Application No.: 10/410,945; Filed: April 9, 2003 (5083-US);
Application No.: 10/530,972; Filed: December 5, 2005 (5083-US1);
Application No.: 11/701,949; Filed: February 2, 2007 (5083-US3);
Application No.: 10/556,094; Filed: April 16, 2007 (5101-US);
Application No.: 09/855,320; Filed: May 14, 2001 (5108-US);
Application No.: 10/497,283; Filed: November 5, 2004; (5112-US);
Application No.: 10/497,284; Filed: May 28, 2004 (5115-US);
Application No.: 10/549,528; Filed: September 19, 2005 (5126-US);
Application No.: 10/565,331; Filed: September 11, 2006 (5128-US);
Application No.: 10/549,445; Filed: July 31, 2006 (5133-US);
Application No.: 11/033,365; Filed: January 10, 2005 (5138-US);
Application No.: 10/585,385; Filed: July 6, 2006 (5138-US1);
Application No.: 11/843,588; Filed: August 22, 2007 (5138-US2);
Application No.: 10/997,405; Filed: November 24, 2004 (5142-US);
Application No.: 11/144,223; Filed: June 2, 2005 (5142-US1);
Application No.: 10/579,621; Filed: February 21, 2007 (5142-US2);
Application No.: 11/981,483; Filed: October 31, 2007 (5142-US3);
Application No.: 11/982,273; Filed: October 31, 2007 (5142-US4);
Application No.: 10/576,506; Filed: June 3, 2006 (5144-US1);
Application No.: 12/184,956; Filed: August 1, 2008 (5144-US2);
Application No.: 11/166,404; Filed: November 2, 2005 (5145-US);
Application No.: 10/579,620; Filed: April 19, 2007 (5145-US1);
Application No.: 11/794,560; Filed: June 29, 2007 (5145-US2);
Application No.: 10/581,538; Filed: April 12, 2007 (5146-US);
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Application No.: 10/586,166; Filed: July 23, 2008 (5147-US);
Application No.: 11/794,555; Filed: June 29, 2007 (5150-US);
Application No.: 11/792,610; Filed: June 7, 2007 (5153-US);
Application No.: 11/632,005; Filed: April 14, 2008 (5156-US);
Application No.: 11/659,942; Filed: May 5, 2008 (5161-US);
Application No.: 11/665,908; Filed: November 26, 2007 (5163-US);
Application No.: 12/092,563; Filed: May 2, 2008 (5164-US);
Application No.: PCT/US06/43048; Filed: November 3, 2006 (5164-WO);
Application No.: 11/396,215; Filed: March 30, 2006 (5168-US);
Application No.: PCT/US06/12013; Filed: March 30, 2006 (5168-WO);
Application No.: 11/440,839; Filed: May 25, 2006 (5170-US);
Application No.: 11/914,104; Filed: June 20, 2008 (5170-US1);
Application No.: 11/402,105; Filed: April 10, 2006 (5171-US);
Application No.: 11/910,958; Filed: October 8, 2007 (5171-US1);
Application No.: 11/915,239; Filed: May 21, 2008 (5173-US);
Application No.: 11/580,669; Filed: October 13, 2006 (5175-US);
Application No.: PCT/US06/32649; Filed: August 21, 2006 (5175-WO);
Application No.: 12/152,587; Filed: May 14, 2008 (5179-US);
Application No.: 11/781,885; Filed; July 23, 2007 (5181-US);
Application No.: 11/781,888; Filed: July 23, 2007 (5181-US1);
Application No.: 11/781,896; Filed: July 23, 2007 (5181-US2);
Application No.: 11/781,900; Filed: July 23, 2007 (5181-US3);
Application No.: 11/781,902; Filed: July 23, 2007 (5181-US4);
Application No.: PCT/US07/74139; Filed: July 23, 2007 (5181-WO);
Application No.: 11/866,969; Filed: October 3, 2007 (5183-US);
Application No.: 11/934,700; Filed: November 2, 2007 (5183-US1);
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Application No.: PCT/US07/80353; Filed: October 3, 2007 (5183-WO);

Application No.: PCT/US07/83538; Filed: November 2, 2007 (5183-WO01);

Application No.: 11/867,553; Filed: October 4, 2007 (5184-US);

Application No.: PCT/US07/80471; Filed: October 4, 2007 (5184-WO);

Application No.: PCT/US2008/065825; Filed: June 4, 2008 (5185-WO);

Application No.: PCT/US2009/030503; Filed: January 8, 2009 (5587-WO);

Application No.: PCT/US2008/066749; Filed: June 12, 2008 (5189-WO);

Application No.: 61/032,006; Filed: February 27, 2008 (5191-P6);

Application No.: 61/043,354; Filed: April 8, 2008 (5191-P7);

Application No.: 61/058,869; Filed: June 4, 2008 (5191-P8);

Application No.: 61/033,616; Filed: March 4, 2008 (5194-PR);

Application No.: 61/082,472; Filed; July 21, 2008 (5195-PR).

Application No.: 11/404,266; Filed: April 12, 2006 (5552-US);

Application No.: 11/656,643; Filed: January 23, 2007 (5558-US);

Application No.: 11/644,014; Filed: December 21, 2006 (5559-US);

Application No.: 12/064,012; Filed: February 15, 2008 (5575-US);

Application No.: 08/102,385; Filed: August 4, 1993 (61818-5033-US02); and

Application No.: 08/446,875; Filed: July 27, 1994 (61818-5033-US03).

WHEREAS, Novo Nordisk A/S, located at Novo Allé, 2880 Bagsvaerd, Denmark, hereinafter referred to as "ASSIGNEE," is desirous of acquiring an interest in the invention and application and in any U.S. Letters Patent and Registrations which may be granted on any patent application claiming priority from the same;

For good and valuable consideration, receipt of which is hereby acknowledged by Assignor, Assignor has assigned, and by these presents does assign to Assignee all right, title and interest in and to the invention and application (including patent, utility model and industrial designs), and in and to any Letters Patent and Registrations which may hereafter be granted on any patent application claiming priority from the same in the United States, and to claim the priority from the application as provided by the Paris Convention. The right, title and interest is to be held and enjoyed by Assignee and Assignee's successors and assigns as fully and exclusively as it would have been held and enjoyed by Assignor had this Assignment not been made, for the full term of any Letters Patent and Registrations which may be

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granted thereon, or of any division, renewal, continuation in whole or in part, substitution, conversion, reissue, prolongation or extension thereof.

Assignor further agrees that Assignor will, without charge to Assignee, but at Assignee's expense, (a) cooperate with Assignee in the prosecution of U.S. Patent applications and foreign counterparts on the invention and any improvements, (b) execute, verify, acknowledge and deliver all such further papers, including applications and instruments of transfer, and (c) perform such other acts as Assignee lawfully may request to obtain or maintain Letters Patent and Registrations for the invention and improvements in any and all countries, and to vest title thereto in Assignee, or Assignee's successors and assigns.

Assignor hereby authorizes and requests Morgan, Lewis & Bockius LLP, One Market, Spear Street Tower, San Francisco, CA 94105, to insert herein above the application number and filing date of said application when known.

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IN TESTIMONY WHEREOF, Assignor has signed his/her name on the date indicated.

NEOSE TECHNOLOGIES, INC. Dated: 1/27/09 ERGIS ELD. Vice President and Chief Executive Officer STATE OF PENNSYLVANIA SŞ. COUNTY OF MONTGOMERY On 1/27/09, before me, Lynne E Conkly personally appeared GEORGE J. VERGIS, Ph.D., personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged to me that he/she executed the same in his/her authorized capacity, and that by his/her signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument. WITNESS my hand and official seal

NOTARIAL BEAL LAMME & COMMIN Notary Public HORSHAM TWP, MONTGOMERY COUNTY My Commission Expires Oct 20, 2010

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RECORDED: 02/23/2009