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<p>1. Name of conveying party(ies): Carol M. Kinoshita, Prashant Mishra, Marianne Borowski and Peter Francis Daniel Additional name(s) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>2. Name and address of receiving party(ies): Shire Human Genetic Therapies, Inc. 700 Main Street Cambridge, MA 02139 Additional names/addressees attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>3. Nature of conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other: Execution Date: 10/31/2000; 11/17/2000; 10/30/2000; 10/23/2000</p>	
<p>4. Application number(s) or patent number(s): If this document is being filed with a new application, the execution date of the application is: A. Patent Application No(s): 11/581,979 B. Patent No(s): Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	
<p>5. Name/address of party to whom correspondence concerning document should be mailed: Fish & Richardson P.C. 225 Franklin Street Boston, MA 02110</p>	<p>6. Total number of applications/patents involved: 1 7. Total fee (37 CFR §3.41): \$40 <input type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Authorized to charge Deposit Account. 8. Deposit Account No.: 06-1050 Please apply any additional charges, or any credits, to our Deposit Account No. 06-1050.</p>
<p>DO NOT USE THIS SPACE</p>	
<p>9. Statement and Signature: <i>To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.</i></p> <p>Natalie A. Lissy, Ph.D. Reg. No. 59,651 Name of Person Signing</p> <p><i>Natalie A. Lissy</i> Signature</p> <p>March 15, 2007 Date</p>	
<p>Total number of pages including coversheet, attachments and document: 6</p>	

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CERTIFICATE OF TRANSMISSION BY FACSIMILE

I hereby certify that this correspondence is being transmitted by facsimile to the Patent and Trademark Office on the date indicated below.

3/15/2007 *Andrea Donovan* **Andrea Donovan**
 Date of Transmission Signature Typed Name of Person Signing Certificate

ASSIGNMENT

For valuable consideration, we, CAROL M. KINOSHITA of Bedford, Massachusetts, PRASHSANT MISHRA of Troy, Michigan, MARIANNE BOROWSKI of Winthrop, Massachusetts, PETER FRANCIS DANIEL of Natick, Massachusetts, hereby assign to: TRANSKARYOTIC THERAPIES, INC., a Massachusetts corporation having a place of business at:

195 Albany Street
Cambridge, MA 02139; and

its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the inventions and improvements which are subject of an application for United States Patent signed by us, entitled HIGH MANNANOSE PROTEINS AND METHODS OF MAKING HIGH MANNANOSE PROTEINS, filed August 18, 2000, and assigned U.S. Serial Number 09/641,471, and we authorize and request the attorneys appointed in said application to hereafter complete this assignment by inserting above the filing date and serial number of said application when known; this assignment including said application, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and we authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and we agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment.

IN WITNESS WHEREOF, I hereto set my hand and seal at Cambridge, MA
 this 31st day of October, 2000
Carol M. Kinoshita L.S.
 CAROL M. KINOSHITA

State of Massachusetts :
 : ss.
 County of Middlesex :

Before me this 31st day of October, 2000, personally
 appeared CAROL M. KINOSHITA known to me to be the person whose name is subscribed to
 the foregoing Assignment and acknowledged that he executed the same as his free act and deed
 for the purposes therein contained.

Ronald A. Ruberman
 Notary Public
 My Commission Expires: 11/15/2000

[Notary's Seal Here]

IN WITNESS WHEREOF, I hereto set my hand and seal at Cambridge, MA,
this 17th day of November, 2000

Prashant Mishra L.S.
PRASHANT MISHRA

State of Massachusetts :

: ss.

County of Middlesex :

Before me this 17th day of November, 2001, personally
appeared PRASHSANT MISHRA known to me to be the person whose name is subscribed to
the foregoing Assignment and acknowledged that he executed the same as his free act and deed
for the purposes therein contained.

Russell A. Belbern
Notary Public

My Commission Expires: 11/15/2002

[Notary's Seal Here]

IN WITNESS WHEREOF, I hereto set my hand and seal at Cambridge, MA,
 this 30th day of October, 2000
Marianne Borowski 30 October 2000 L.S.
 MARIANNE BOROWSKI

State of Massachusetts :

: ss.

County of Middlesex :

Before me this 30th day of October, 2000, personally
 appeared MARIANNE BOROWSKI known to me to be the person whose name is subscribed to
 the foregoing Assignment and acknowledged that he executed the same as his free act and deed
 for the purposes therein contained.

Ramona Rubenman
 Notary Public

My Commission Expires: 11/15/2002

[Notary's Seal Here]

IN WITNESS WHEREOF, I hereto set my hand and seal at Cambridge, Massachusetts
 this 23rd day of October, 2000
Peter Francis Daniel L.S.
 PETER FRANCIS DANIEL

State of Massachusetts :
 : ss.
 County of Middlesex :

Before me this 23rd day of October, 2000, personally
 appeared PETER FRANCIS DANIEL known to me to be the person whose name is subscribed
 to the foregoing Assignment and acknowledged that he executed the same as his free act and
 deed for the purposes therein contained.

Russell Rubenow
 Notary Public
 My Commission Expires: 11/15/2002

[Notary's Seal Here]

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