

PATENT ASSIGNMENT

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
|----------------------------|----------------------------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| Unigene Laboratories, Inc. | 04/25/2013 |
| RECEIVING PARTY DATA | |
| Name: | Enteris BioPharma, Inc. |
| Street Address: | 227 W. Monroe Street, Suite 3900 |
| City: | Chicago |
| State/Country: | ILLINOIS |
| Postal Code: | 60606 |
| PROPERTY NUMBERS Total: 24 | |
| Property Type | Number |
| Patent Number: | 7445911 |
| Patent Number: | 8163871 |
| Patent Number: | 6103495 |
| Patent Number: | 6210925 |
| Patent Number: | 6627348 |
| Patent Number: | 6373250 |
| Patent Number: | 7968311 |
| Patent Number: | 8216822 |
| Patent Number: | 8227241 |
| Patent Number: | 5789234 |
| Patent Number: | 6086918 |
| Patent Number: | 6673574 |
| Patent Number: | 7316819 |
| Patent Number: | 8093207 |
| Patent Number: | 8377863 |

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| Application Number: | 13544228 |
| Application Number: | 11474159 |
| Application Number: | 13283055 |
| Application Number: | 13487784 |
| Application Number: | 13487856 |
| Application Number: | 12732081 |
| Application Number: | 61730799 |
| Application Number: | 61772927 |
| Application Number: | 61782701 |

CORRESPONDENCE DATA

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|-------------------------|-------------------|
| ATTORNEY DOCKET NUMBER: | 341307-00001 |
| NAME OF SUBMITTER: | Becky A. Williams |
| Signature: | /baw/ |
| Date: | 04/26/2013 |

Total Attachments: 9

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PATENT ASSIGNMENT

THIS PATENT ASSIGNMENT is made this 25th day of April, 2013, by and between Unigene Laboratories, Inc., a Delaware corporation ("**Assignor**"), in favor of Enteris BioPharma, Inc. ("**Assignee**").

WHEREAS, Assignor wishes to sell, transfer and assign, and Assignee wishes to assume and purchase all of Assignor's right, title and interest in and to the patents and patent applications listed on Schedule A attached hereto (collectively, "**Patents**").

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor has sold, assigned, transferred and set over, and does hereby sell, assign, transfer and set over, unto the said Assignee all of Assignor's right, title and interest in, to and under the inventions set forth in the Patents, the Patents and all divisionals, continuations, re-examinations, renewals, provisionals, continuations in part and reissues thereof, and all Letters Patent of the United States and countries foreign to the United States which may be granted thereon and all divisionals, continuations, re-examinations, renewals, provisionals, continuations in part and reissues thereof (and including, without limitation, all proceeds thereof and the rights to sue for past, present and future infringements), and all applications for Letters Patent which may hereafter be filed for said inventions and Patents in any country or countries foreign to the United States, and all Letters Patent which may be granted for said inventions and Patents in any country or countries foreign to the United States, and requests the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to record the Assignee as the owner of all such Patents and issue all Letters Patent for said Patents to the said Assignee, as assignee of the Patents, for the sole use of the Assignee, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

Assignor further agrees without further consideration to execute such further assignments and other lawful documents as the Assignee may from time to time reasonably request to effect fully this Assignment and to permit the Assignee to be duly recorded as the registered owner of the Patents in the countries in which such Patents are currently registered and all other rights hereby conveyed.

[Signature Page Follows]

IN WITNESS WHEREOF, the undersigned has caused this Assignment to be executed and delivered as of the date first written above.

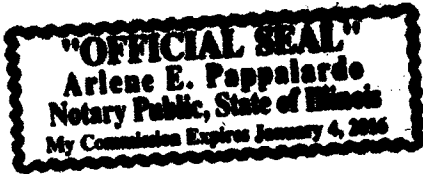
UNIGENE LABORATORIES, INC.

By: Victory Park Management, its attorney-in-fact

By: *Matthew Ray*

Name: Matthew Ray

Title: Manager



Arlene E. Pappalardo
Notary Public

My Commission Expires *1/4/2016*

SCHEDULE A

Issued U.S. Patents

| <u>Patent Name</u> | <u>Country</u> | <u>Issue Date</u> | <u>Patent Number</u> |
|---|----------------|-------------------|----------------------|
| Enzymatic Reactions in the Presence of Keto Acids (AKA: KETO ACIDS) | United States | 11/04/08 | 7,445,911 |
| Enzymatic Reactions in the Presence of Keto Acids (AKA: KETO ACIDS) | United States | 4/24/12 | 8,163,871 |
| Direct Expression of Peptides into Culture Media (AKA: DIRECT EXP-I) | United States | 8/15/00 | 6,103,495 |
| Direct Expression of Peptides into Culture Media (AKA: DIRECT EXP-I) | United States | 4/3/01 | 6,210,925 |
| Direct Expression of Peptides into Culture Media (AKA: DIRECT EXP-I) | United States | 9/30/03 | 6,627,348 |
| Direct Expression of Peptides into Culture Media (AKA: DIRECT EXP-I) | United States | 5/18/04 | 6,737,250 |
| Direct Expression of Peptides into Culture Media (AKA: DIRECT EXP-I) | United States | 6/28/11 | 7,968,311 |
| Bacterial Host Cell for the Direct Expression of Peptides (AKA: HOST) | United States | 7/10/12 | 8,216,822 |
| Bacterial Host Cell for the Direct Expression of Peptides (AKA: HOST) | United States | 7/24/12 | 8,227,241 |
| Expression Systems for Amidating Enzyme (AKA: PAM '89) | United States | 8/4/98 | 5,789,234 |
| Oral Peptide Pharmaceutical Products (AKA: ORAL PEP-I) | United States | 7/11/00 | 6,086,918 |
| Oral Delivery of Peptides Using Enzyme-Cleavable Membrane Translocators (AKA: ORAL-PEP-TRANS) | United States | 1/6/04 | 6,673,574 |
| Oral Peptide Pharmaceutical Dosage Form and Method of Production | United States | 1/8/08 | 7,316,819 |

| <u>Patent Name</u> | <u>Country</u> | <u>Issue Date</u> | <u>Patent Number</u> |
|---|------------------|-------------------|----------------------|
| (AKA: ORAL-PEP-PFIZER) | | | |
| Fast-Acting Oral Peptide Pharmaceutical Products (AKA: FAST ACTING) | United States | 1/10/12 | 8,093,207 |
| Peptide Pharmaceutical for Oral Delivery (AKA: COATED ACID) | United States | 2/19/13 | 8,377,863 |

U.S. Patent Applications

| <u>Name</u> | <u>Country</u> | <u>Filing Date</u> | <u>Application Number</u> |
|--|------------------|--------------------|---------------------------|
| Bacterial Host Cell for the Direct Expression of Peptides (AKA: HOST) | United States | 7/9/12 | 13/544,228 |
| Cell Lines for Expressing Enzyme Useful in the Preparation of Amidated Products (AKA: M CLONE) | United States | 6/23/06 | 11/474,159 |
| Peptide Pharmaceutical for Oral Delivery (AKA: COATED ACID) | United States | 10/27/11 | 13/283,055 |
| Peptide Pharmaceutical for Oral Delivery (AKA: COATED ACID) | United States | 6/4/12 | 13/487,784 |
| Peptide Pharmaceutical for Oral Delivery (AKA: COATED ACID) | United States | 6/4/12 | 13/487,856 |
| Peptide Pharmaceutical for Nasal Delivery (AKA: NAS PEP) | United States | 3/25/10 | 12/732,081 |
| Use of Histidine to Enhance to Solubility of Proteins (AKA: HISTIDINE) | United States | 11/28/12 | 61/730,799 |
| Pharmaceuticals for Oral Delivery (AKA: CHELATING AGENT) | United States | 3/5/13 | 61/772,927 |
| Pharmaceuticals for Oral Delivery (AKA: CYCLODEXTRIN) | United States | 3/14/13 | 61/782,701 |

Foreign Issued Patents

| <u>Patent Name</u> | <u>Jurisdiction</u> | <u>Issue Date</u> | <u>Patent Number</u> |
|--|---------------------|-------------------|----------------------|
| Peptide Pharmaceutical for Oral Delivery (AKA: COATED ACID) | Australia | 1/19/12 | 2008260615 |
| Peptide Pharmaceutical for Oral Delivery (AKA: COATED ACID) | Canada | 11/27/12 | 2,689,358 |
| Direct Expression of Peptides into Culture Media (AKA: DIRECT EXP-I) | Australia | 4/4/02 | 742270 |
| Direct Expression of Peptides into Culture Media (AKA: DIRECT EXP-I) | Australia | 3/30/06 | 781978 |
| Direct Expression of Peptides into Culture Media (AKA: DIRECT EXP-I) | Australia | 8/14/08 | 2005201901 |
| Direct Expression of Peptides into Culture Media (AKA: DIRECT EXP-I) | Canada | 10/4/11 | 2,285,658 |
| Direct Expression of Peptides into Culture Media (AKA: DIRECT EXP-I) | Japan | 1/20/12 | 4907751 |
| Direct Expression of Peptides into Culture Media (AKA: DIRECT EXP-I) | Russia | 12/10/03 | 2218407 |
| Direct Expression of Peptides into Culture Media (AKA: DIRECT EXP-I) | Europe | 10/13/10 | EP1005526 |
| Direct Expression of Peptides into Culture Media (AKA: DIRECT EXP-I) | Europe | 8/31/11 | EP09006784.4 |
| Fast-Acting Oral Peptide Pharmaceutical Products (AKA: FAST ACTING) | Australia | 2/14/10 | 2006326580 |
| Fast-Acting Oral Peptide Pharmaceutical Products (AKA: FAST ACTING) | Canada | 5/8/12 | 2,631,841 |
| Fast-Acting Oral Peptide Pharmaceutical Products (AKA: FAST ACTING) | China | 4/18/12 | ZL 2006 8 0046022.5 |
| Bacterial Host Cell for the Direct | Canada | 1/29/13 | 2557295 |

| <u>Patent Name</u> | <u>Jurisdiction</u> | <u>Issue Date</u> | <u>Patent Number</u> |
|--|---------------------|-------------------|----------------------|
| Expression of Peptides (AKA: HOST) | | | |
| Bacterial Host Cell for the Direct Expression of Peptides (AKA: HOST) | China | 7/4/12 | ZL 200580007801.X |
| Enzymatic Reactions in the Presence of Keto Acids (AKA: KETO ACIDS) | Australia | 9/23/10 | 2005309749 |
| Enzymatic Reactions in the Presence of Keto Acids (AKA: KETO ACIDS) | China | 11/16/11 | ZL200580040163.1 |
| Enzymatic Reactions in the Presence of Keto Acids (AKA: KETO ACIDS) | Japan | 12/22/11 | 4891256 |
| Cell Lines for Expressing Enzyme Useful in the Preparation of Amidated Products (AKA: M CLONE) | Australia | 11/24/11 | 2006261909 |
| Cell Lines for Expressing Enzyme Useful in the Preparation of Amidated Products (AKA: M CLONE) | Japan | 11/4/11 | 4856177 |
| Oral Delivery of Peptides (AKA: ORAL AMIDATED) | Australia | 11/12/09 | 2004206949 |
| Oral Delivery of Peptides (AKA: ORAL AMIDATED) | China | 7/8/09 | ZL200480002372 |
| Oral Peptide Pharmaceutical Products (AKA: ORAL PEP-I) | Canada | 4/9/02 | 2249744 |
| Oral Peptide Pharmaceutical Products (AKA: ORAL PEP-I) | China | 4/20/05 | ZL97193029.5 |
| Oral Peptide Pharmaceutical Products (AKA: ORAL PEP-I) | Israel | 3/11/07 | 125,894 |
| Oral Peptide Pharmaceutical Products (AKA: ORAL PEP-I) | Japan | 4/30/04 | 3549542 |
| Oral Peptide Pharmaceutical Products (AKA: ORAL PEP-I) | Korea | 6/22/05 | 0498646 |
| Oral Peptide Pharmaceutical Products (AKA: ORAL PEP-I) | New Zealand | 9/7/00 | 331576 |
| Oral Peptide Pharmaceutical Products (AKA: ORAL PEP-I) | Norway | 10/9/06 | 322443 |
| Oral Peptide Pharmaceutical Products (AKA: ORAL PEP-I) | Russia | 2/20/03 | 2198677 |
| Oral Peptide Pharmaceutical Products | Europe | 12/15/04 | EP0929270 |

| <u>Patent Name</u> | <u>Jurisdiction</u> | <u>Issue Date</u> | <u>Patent Number</u> |
|---|---------------------|-------------------|----------------------|
| (AKA: ORAL PEP-I) | | | |
| Oral Delivery of Peptides Using Enzyme-Cleavable Membrane Translocators (AKA: ORAL-PEP-TRANS) | Australia | 8/30/07 | 2002227060 |
| Oral Delivery of Peptides Using Enzyme-Cleavable Membrane Translocators (AKA: ORAL-PEP-TRANS) | Canada | 9/28/10 | 2,430,366 |
| Oral Delivery of Peptides Using Enzyme-Cleavable Membrane Translocators (AKA: ORAL-PEP-TRANS) | Japan | 3/19/10 | 4476544 |
| Oral Peptide Pharmaceutical Dosage Form and Method of Production (AKA: ORAL-PEP-PFIZER) | Canada | 5/26/09 | 2,440,578 |
| Oral Peptide Pharmaceutical Dosage Form and Method of Production (AKA: ORAL-PEP-PFIZER) | New Zealand | 12/8/05 | 527844 |
| Expression Systems for Amidating Enzyme | Canada | 6/27/00 | 1,341,037 |
| Expression Systems for Amidating Enzyme | Korea | 1/23/98 | 136611 |

Foreign Patent Applications

| <u>Name</u> | <u>Jurisdiction</u> | <u>Application Number</u> |
|--|---------------------|---------------------------|
| Peptide Pharmaceutical for Oral Delivery (AKA: COATED ACID) | China | 200880018288.8 |
| Peptide Pharmaceutical for Oral Delivery (AKA: COATED ACID) | Europe | 08767936.1 |
| Peptide Pharmaceutical for Oral Delivery (AKA: COATED ACID) | Japan | 2010510341 |
| Direct Expression of Peptides into Culture Media (AKA: DIRECT EXP-I) | Japan | 2011-245398 |
| Fast-Acting Oral Peptide Pharmaceutical Products (AKA: FAST ACTING) | Europe | 06839273.7 |

| <u>Name</u> | <u>Jurisdiction</u> | <u>Application Number</u> |
|--|---------------------|---------------------------|
| Fast-Acting Oral Peptide Pharmaceutical Products (AKA: FAST ACTING) | Japan | 544567/2008 |
| Bacterial Host Cell for the Direct Expression of Peptides (AKA: HOST) | China | 201110107199.4 |
| Bacterial Host Cell for the Direct Expression of Peptides (AKA: HOST) | Europe | 05734021.8 |
| Bacterial Host Cell for the Direct Expression of Peptides (AKA: HOST) | Europe | 09156191.0 |
| Bacterial Host Cell for the Direct Expression of Peptides (AKA: HOST) | Japan | 5029792007 |
| Bacterial Host Cell for the Direct Expression of Peptides (AKA: HOST) | Japan | 16525/2010 |
| Enzymatic Reactions in the Presence of Keto Acids (AKA: KETO ACIDS) | Canada | 2,586,128 |
| Enzymatic Reactions in the Presence of Keto Acids (AKA: KETO ACIDS) | Europe | 05824481.5 |
| Cell Lines for Expressing Enzyme Useful in the Preparation of Amidated Products (AKA: M CLONE) | Canada | 2,613,471 |
| Cell Lines for Expressing Enzyme Useful in the Preparation of Amidated Products (AKA: M CLONE) | China | 200680030902.3 |
| Cell Lines for Expressing Enzyme Useful in the Preparation of Amidated Products (AKA: M CLONE) | Japan | 094071/2011 |
| Cell Lines for Expressing Enzyme Useful in the Preparation of Amidated Products (AKA: M CLONE) | Japan | 201445/2011 |
| Cell Lines for Expressing Enzyme Useful in the Preparation of Amidated Products (AKA: M CLONE) | Europe | 06785535.3 |
| Peptide Pharmaceutical for Nasal Delivery (AKA: NAS PEP) | Australia | 2010232756 |

| <u>Name</u> | <u>Jurisdiction</u> | <u>Application Number</u> |
|---|---------------------|---------------------------|
| Peptide Pharmaceutical for Nasal Delivery (AKA: NAS PEP) | Canada | 2,754,593 |
| Peptide Pharmaceutical for Nasal Delivery (AKA: NAS PEP) | China | 201080015150.X |
| Peptide Pharmaceutical for Nasal Delivery (AKA: NAS PEP) | Europe | 10759290.9 |
| Peptide Pharmaceutical for Nasal Delivery (AKA: NAS PEP) | Japan | TBD |
| Peptide Pharmaceutical for Nasal Delivery (AKA: NAS PEP) | Korea | 2011-7023101 |
| Oral Delivery of Peptides (AKA: ORAL AMIDATED) | Europe | 04704114.0 |
| Oral Delivery of Peptides Using Enzyme-Cleavable Membrane Translocators (AKA: ORAL-PEP-TRANS) | Europe | 019960210.0 |
| Oral Peptide Pharmaceutical Dosage Form and Method of Production (AKA: ORAL-PEP-PFIZER) | Japan | 2010-127116 |