TRADEMARK ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

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

CONVEYING PARTY DATA

| Name | Formerly | Execution Date | Entity Type |
|----------------------|----------|----------------|-----------------------|
| Mannkind Corporation | | 07/01/2013 | CORPORATION: DELAWARE |

RECEIVING PARTY DATA

| Name: | Deerfield Private Design Fund II, L.P. | | |
|-----------------|---------------------------------------------|--|--|
| Street Address: | 780 Third Avenue, 37th Floor | | |
| City: | New York | | |
| State/Country: | NEW YORK | | |
| Postal Code: | 10017 | | |
| Entity Type: | LIMITED PARTNERSHIP: BRITISH VIRGIN ISLANDS | | |

| Name: | Deerfield Private Design International II, L.P. | |
|-----------------|-------------------------------------------------|--|
| Street Address: | 780 Third Avenue, 37th Floor | |
| City: | New York | |
| State/Country: | NEW YORK | |
| Postal Code: | 10017 | |
| Entity Type: | LIMITED PARTNERSHIP: DELAWARE | |

| Name: | Horizon Sante FLML SARL | | | |
|-----------------|---------------------------------------------|--|--|--|
| Street Address: | 780 Third Avenue, 37th Floor | | | |
| City: | New York | | | |
| State/Country: | NEW YORK | | | |
| Postal Code: | 10017 | | | |
| Entity Type: | Private Limited Liability Corp.: LUXEMBOURG | | | |

PROPERTY NUMBERS Total: 24

| Property Type | Number | Word Mark |
|----------------------|---------|------------|
| Registration Number: | 3686097 | |
| Registration Number: | 3797553 | x |
| | | TDADEMADIA |

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| Registration Number: | 3411049 | x |
|----------------------|----------|------------------------------------------|
| Registration Number: | 3565822 | AFRESA |
| Registration Number: | 3675719 | AFRESA |
| Registration Number: | 3858037 | AFREZZA |
| Registration Number: | 3815780 | BLUHALE |
| Registration Number: | 3915028 | BLUHALE |
| Registration Number: | 4159235 | CRICKET |
| Registration Number: | 4132297 | DREAMBOAT |
| Registration Number: | 3411048 | MANNKIND |
| Registration Number: | 3794961 | MANNKIND |
| Registration Number: | 2925209 | MEDTONE |
| Registration Number: | 4283417 | OUR FOCUS IS PATIENTS, OUR PASSION IS IN |
| Registration Number: | 4110338 | OUR FOCUS IS PATIENTS, OUR PASSION IS IN |
| Registration Number: | 2646204 | TECHNOSPHERE |
| Serial Number: | 77955545 | AFZ |
| Serial Number: | 85545332 | COFFEE KICK |
| Serial Number: | 85545314 | COFFEE KIK |
| Serial Number: | 85169782 | CRICKET |
| Serial Number: | 85628505 | TECHNOSPHERE |
| Serial Number: | 77141470 | VARZEFA |
| Serial Number: | 85535835 | WINE BLAST |
| Serial Number: | 85535844 | WINE BLAST |

CORRESPONDENCE DATA

Fax Number: 3129021061

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

via US Mail.

Phone: 312.577.8034

Email: oscar.ruiz@kattenlaw.com

Correspondent Name: Oscar Ruiz c/o Katten Muchin Rosenman

Address Line 1: 525 West Monroe Street
Address Line 4: Chicago, ILLINOIS 60661

| ATTORNEY DOCKET NUMBER: | 333285-71 |
|-------------------------|----------------------|
| NAME OF SUBMITTER: | Oscar Ruiz |
| Signature: | /Oscar Ruiz/ |
| Date: | 07/03/2013 TRADEMARK |

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TRADEMARK REEL: 005063 FRAME: 0281

TRADEMARK SECURITY AGREEMENT

THIS TRADEMARK SECURITY AGREEMENT, dated as of July 1, 2013, is by MANNKIND CORPORATION, a Delaware corporation (the "Grantor"), in favor of DEERFIELD PRIVATE DESIGN FUND II, L.P., DEERFIELD PRIVATE DESIGN INTERNATIONAL II, L.P. and HORIZON SANTÉ FLML SARL (collectively, the "Grantees"). Capitalized terms used but not otherwise defined in this Trademark Security Agreement shall have the meanings assigned to such terms in the Security Agreement (as hereinafter defined).

RECITALS

WHEREAS, Grantor owns the trademark registrations, and trademark applications listed on Schedule 1 annexed hereto; and

WHEREAS, pursuant to the terms of a Guaranty and Security Agreement dated as of even date herewith (as the same may be amended, restated, supplemented or otherwise modified from time to time, the "Security Agreement"), by and among Grantor, Grantees, and the other Persons party thereto as "Grantors" thereunder, Grantor has granted to Grantees for the benefit of itself and the other Secured Parties a security interest in substantially all the assets of Grantor including all right, title and interest of Grantor in, to and under all now owned and hereafter acquired trademarks, trademark registrations and trademark applications (excluding any "intent to use" trademark applications for which a statement of use or amendment to allege use has not been filed with the U.S. Patent and Trademark Office (but only until such statement or amendment is accepted by the U.S. Patent and Trademark Office), and all proceeds thereof, to secure the payment of the Secured Obligations;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Grantor does hereby grant to Grantee a continuing security interest in all of Grantor's right, title and interest in, to and under the following (all of the following items or types of property being herein collectively referred to as the "Trademark Collateral"), whether presently existing or hereafter created or acquired:

- (1) each trademark registration and trademark application owned by Grantor, including, without limitation, the United States trademark registrations and United States trademark applications referred to in **Schedule 1** annexed hereto;
- (2) all goodwill of the business connected with the use of, and symbolized by, each such trademark; and
- (3) all products and proceeds of the foregoing, including, without limitation, any claim by Grantor against third parties for past, present or future infringement, misappropriation, dilution, violation or impairment of any trademark registration owned by Grantor including, without limitation, the United States trademark registrations referred to in **Schedule 1** annexed hereto and the trademark registrations issued with

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respect to the United States trademark applications referred to in Schedule 1 annexed hereto.

This security interest is granted in conjunction with the security interests granted to Grantees pursuant to the Security Agreement and is not intended to increase the rights of Grantees or the obligations of Grantor beyond the rights and obligations contained in the Security Agreement. Grantor hereby acknowledges and affirms that the rights and remedies of Grantees with respect to the security interest in the Trademark Collateral made and granted hereby are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated by reference herein as if fully set forth herein. In the event of any conflict between any provision of this Trademark Security Agreement and the Security Agreement, the Security Agreement shall govern.

[Remainder of page intentionally left blank; signature pages follow.]

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IN WITNESS WHEREOF, Grantor has caused this Trademark Security Agreement to be duly executed by its duly authorized officer as of the date first written above.

MANNKIND CORPORATION,

a Delaware corporation

By: Matthew J. Pfeffer

Title: Corporate Vice President and Chief

Financial Officer

Trademark Security Agreement

| Acknowledged: |
|------------------------------------------------------------------------------------------|
| DEERFIELD PRIVATE DESIGN INTERNATIONAL II, L.P. , a Delaware limited partnership |
| By: Deerfield Mgmt., L.P., General Partner |
| By: J.E. Flynn Capital LLC, General Partner By: Name: James E. Flynn Title: President |
| DEERFIELD PRIVATE DESIGN FUND II, L.P., a British Virgin Islands limited partnership |
| By: Deerfield Mgmt., L.P., General Partner |
| By: J.E. Elynn Omital I.L.C, General Partner By: Name: James E. Flynn Title: President |
| HORIZON SANTÉ FLML, SÀRL, a Luxembourgh Socitété à Responsibilité Limitée |
| By: Name: Alexis Cazé |
| Title: Manager A |

By: _____Name:

Title: Manager B

Trademark Security Agreement

| Acknowledged: |
|--------------------------------------------------------------------------------------|
| DEERFIELD PRIVATE DESIGN INTERNATIONAL II, L.P., a Delaware limited partnership |
| By: Deerfield Mgmt., L.P., General Partner |
| By: J.E. Flynn Capital LLC, General Partner |
| By: Name: James E. Flynn Title: President |
| DEERFIELD PRIVATE DESIGN FUND II, L.P., a British Virgin Islands limited partnership |
| By: Deerfield Mgmt., L.P., General Partner |
| By: J.E. Flynn Capital LLC, General Partner |
| By: Name: James E. Flynn Title: President |
| HORIZON SANTÉ FLML, SARL, a Luxembourgh Socitété à Responsibilité Limitée |
| By: Name: Alexis Cazé Title: Manager A |
| By: Name: Rokfoel Gerardy Title: Manager B |

Trademark Security Agreement

Schedule 1 to Trademark Security Agreement

U.S. TRADEMARK REGISTRATIONS

| | | | Applic. No./ | Reg. No./ | Class/Goods/Services |
|----------|-----|----------------------|--------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mark | USA | Status Registered | File Date 77/977193 09-29-2008 | Reg. Date 3,686,097 09-22-09 | Class 5 – Pharmaceutical preparations for the treatment of metabolic and endocrine diseases, namely, diabetes; pharmaceutical preparations containing insulin Class 10 – Medical devices, namely, inhaler systems comprising inhalers and cartridges for administration of pharmaceuticals; inhalers; cartridges; all provided empty |
| | USA | Registered | 77/979308 01-29-2008 | 3797553 06-01-2010 | Class 5 - Pharmaceutical preparations, namely, pharmaceutical preparations for the treatment of diabetes, cancer, endocrine diseases and disorders, metabolic diseases and disorders and disorders. Class 10- Medical devices, namely, devices for the administration of insulin, inhaler systems comprising inhalers and cartridges for administration of pharmaceuticals, and inhalers, and cartridges for use with inhalers, all provided empty; medical devices in the nature of inhalers used to measure patient inhalation effort and to train patients in personal inhaler use, medical devices in the nature of inhalers with features for measuring respiratory effort and facilitating the training of patients in use of inhalers with features for the measurement of respiratory patterns of patients, medical devices included as a component of inhaler systems for medical use, namely, patient monitors for monitoring and measuring respiration, apparatus for diagnosing or treating respiratory conditions, medical devices included as a component of inhaler systems for medical use, namely, devices used to indicate dosing of medication, medical devices included as a component of inhaler systems for medical use, namely, devices used to indicate dosing of medication, medical devices included as a component of inhaler systems for medical use, namely, devices used to transmit and receive data regarding inhalation, respiration, or dosage |
| X | USA | Registered | 78/979849 08-09-2005 | 3411049 04-08-2008 | Class 5 – Pharmaceutical preparations for the treatment of cancer and diabetes |

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| Mark | Country | Status | Applic. No./ File Date | Reg. No./ Reg. Date | Class/Goods/Services |
|---------|---------|------------|---------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AFRESA | USA | Registered | 77/976359 03-27-2007 | 3565822 01-20-2009 | Class 5 – Pharmaceutical preparations for the treatment of metabolic and endocrine diseases and disorders, namely, diabetes |
| AFRESA | USA | Registered | 77/630270 12-10-2008 | 3,675,719 09-01-09 | Class 10- medical devices, namely, inhaler systems comprised of inhalers and cartridges for administration of pharmaceuticals, inhalers, cartridges; all provided empty |
| AFREZZA | USA | Registered | 77/808079 08-19-09 | 3,858,037 10-05-2010 | Class 5 – Pharmaceutical preparations, namely, pharmaceutical preparations for the treatment of diabetes, endocrine diseases and disorders, metabolic diseases and disorders; pharmaceutical preparations containing insulin Class 10- medical devices, namely, inhalers, cartridges, and inhaler systems comprising inhalers and cartridges for administration of pharmaceuticals, all provided empty; medical devices, namely, instruments and apparatus provided empty used for the inhalation of pharmaceuticals |
| BLUHALE | USA | Registered | 77/979354 07-29-2008 | 3,815,780 07-06-2010 | Class 10 – Medical devices, namely, inhalers provided empty used to measure patient inhalation effort and to train patients in personal inhaler use with features for measuring respiratory effort and facilitating the training of patients in use of inhalers and to transmit and receive data regarding inhalation, respiration, or dosage |
| BLUHALE | USA | Registered | 77/848336 10-14-09 | 3,915,028 02-01-2011 | Class 10- Medical devices in the nature of inhalers used to measure patient inhalation effort and to train patients in personal inhaler use, medical devices in the nature of inhalers with features for measuring respiratory effort and facilitating the training of patients in use of inhalers, medical devices in the nature of inhalers with features for the measurement of respiratory patterns of patients, medical devices included as a component of inhaler systems for medical use, namely, patient monitors for monitoring and measuring respiration, medical devices included as a component of inhaler systems for medical use, namely, devices used to indicate dosing of medication, medical devices included as a component of inhaler systems for medical use, namely, devices used to transmit and receive data regarding inhalation, respiration, or dosage |
| CRICKET | USA | Registered | 85/976577 11-04-2010 | 4,159,235 06-12-2012 | Class 42 – Scientific and medical research and development in the fields of pharmaceuticals, and medical devices and medical technology used in connection with the delivery of pharmaceuticals via inhalation; Product design and development for others for drug delivery systems, and medical devices and medical technology used in connection with the delivery of pharmaceuticals via inhalation Class 45 - Licensing to others of technology and intellectual property in connection with drug formulations and medical devices used in connection with the delivery of |

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| Mark | Country | Status | Applic. No./ File Date | Reg. No./ Reg. Date | Class/Goods/Services |
|-----------------------------------------------------------|---------|------------|---------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DREAMBOAT | USA | Registered | 77/909341 01-11-2010 | 4132297 04-24-2012 | pharmaceuticals via inhalation Class 42- Scientific and medical research and development in the field of medical devices, including, inhalers and drug delivery systems; product design and development for others for medical devices, medical technology, and drug delivery systems Class 45- Licensing to others of technology and intellectual property in connection with medical devices |
| MANNKIND | USA | Registered | 78/979848 05-16-2005 | 3411048 04-08-2008 | Class 5 - Pharmaceutical preparations for the treatment of cancer and diabetes |
| MANNKIND | USA | Registered | 77/979267 01-29-2008 | 3,794,961 05-25-2010 | Class 5 - Pharmaceutical preparations, namely, pharmaceutical preparations for the treatment of diabetes, cancer, endocrine diseases and disorders, metabolic diseases and disorders and neoplastic diseases and disorders Class 10 - Medical devices, namely, devices for the administration of insulin, inhaler systems comprising inhalers and cartridges for administration of pharmaceuticals, and inhalers, and cartridges for use with inhalers, all provided empty; medical devices in the nature of inhalers used to measure patient inhalation effort and to train patients in personal inhaler use, medical devices in the nature of inhalers with features for measuring respiratory effort and facilitating the training of patients in use of inhalers, medical devices in the nature of inhalers with features for the measurement of respiratory patterns of patients, medical devices included as a component of inhaler systems for medical use, namely, patient monitors for monitoring and measuring respiration, apparatus for diagnosing or treating respiratory conditions, medical devices included as a component of inhaler systems for medical use, namely, devices used to indicate dosing of medication, medical devices used to transmit and receive data regarding inhalation, respiration, or dosage |
| MEDTONE | USA | Registered | 78/353136 01-16-2004 | 2,925,209 02-08-2005 | Class 10- Medical devices, namely, dry powder inhalers |
| OUR FOCUS IS PATIENTS, OUR PASSION IS INNOVATION | USA | Registered | 85/162,975 10-27-2010 | 4,283,417 01-29-2013 | Class 5-Pharmaceutical preparations, namely, pharmaceutical preparations for the treatment of diabetes, endocrine diseases and disorders, hormonal diseases and disorders, metabolic diseases and disorders; pharmaceutical preparations containing insulin Class 10- Medical devices, namely, inhalers provided empty; medical devices, namely, cartridges for use with inhalers, provided empty; medical devices, namely, inhaler systems comprising inhalers and cartridges for administration of pharmaceuticals, provided empty; medical devices, namely, |

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| Mark | Country | Status | Applic. No./ File Date | Reg. No./ Reg. Date | Class/Goods/Services |
|--------------------------------------------------|---------|------------|---------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | | instruments and apparatus provided empty used for the inhalation of pharmaceuticals, namely, inhalers, cartridges and inhaler systems comprising inhalers and cartridges |
| OUR FOCUS IS PATIENTS, OUR PASSION IS INNOVATION | USA | Registered | 85/976170 10-27-2010 | 4,110,338 03-06-2012 | Class 42- Scientific and medical research and development in the fields of medical devices and pharmaceuticals, namely, inhalers and drug delivery systems, drug formulations and pharmaceutical preparations; product design and development for others for medical devices, medical technology, and drug delivery systems Class 45- Licensing to others of technology and intellectual property in connection with pharmaceuticals and medical devices |
| TECHNOSPHERE | USA | Registered | 75/729807 06-16-1999 | 2646204 11-05-2002 | Class 5- Chemical preparations sold as a component of pharmaceuticals, that consist of diketopiperazine derivatives which are pH-driven self-assembling, self-disassembling microspheres, that are used to facilitate administration of pharmaceuticals |

U.S. TRADEMARK APPLICATIONS

| Mark | Country | Status | Applic. No./ File Date | Reg. No./ Reg. Date | Class/Goods/Services |
|-------------|---------|---------|---------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AFZ | USA | Allowed | 77/955,545 03-10-2010 | | Class 5- Pharmaceutical preparations, namely, pharmaceutical preparations for the treatment of diabetes, endocrine diseases and disorders, metabolic diseases and disorders; Pharmaceutical preparations containing insulin Class 10- Medical devices, namely, inhalers cartridges, and inhaler systems comprising inhalers and cartridges for administration of pharmaceuticals, all provided empty; Medical devices, namely, instruments and apparatus provided empty used for the inhalation of pharmaceuticals |
| COFFEE KICK | USA | Allowed | 85/545,332 02-16-2012 | | Class 21: Inhalers sold empty for use with coffee flavored powders or cartridges containing coffee flavored powders, and not for medical or therapeutic use Class 30: Coffee flavored powders intended for consumption via inhalation; Inhalation apparatus containing coffee flavored powders not for medical or therapeutic use; Inhalers containing coffee flavored powders not for medical or therapeutic use |
| COFFEE KIK | USA | Allowed | 85/545,314 02-16-2012 | | Class 21: Inhalers sold empty for use with coffee flavored powders or cartridges containing coffee flavored powders, and not for medical or therapeutic use Class 30: Coffee flavored powders intended for consumption via inhalation; Inhalation apparatus containing coffee flavored powders not for medical or therapeutic use; Inhalers containing coffee flavored |

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TRADEMARK REEL: 005063 FRAME: 0290

| Mark | Country | Status | Applic. No./ File Date | Reg. No./ Reg. Date | Class/Goods/Services |
|--------------|-----------------|-----------|---------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| main | January Country | | | | powders not for medical or therapeutic use |
| CRICKET | USA | Allowed | 85/169782 11-04-2010 | | Class 5 -Pharmaceutical preparations, namely, an inhaler drug delivery system comprised of an inhaler filled with pharmaceutical preparations for the administration by inhalation of a wide variety of therapeutic agents formulated as dry powders |
| TECHNOSPHERE | USA | Published | 85/628,505 05-17-2012 | | Class 5- Pharmaceutical preparations, namely, a drug delivery system comprising diketopiperazine derivative particles |
| VARZEFA | USA | Allowed | 77/141470 03-27-2007 | | Class 5 - Pharmaceutical preparations, namely, pharmaceutical preparations for the treatment of allergy, Alzheimer's disease, asthma, autoimmune diseases and disorders, cancer, cardiovascular diseases and disorders, central nervous system and neurological diseases and disorders, diabetes, endocrine diseases and disorders, erectile and sexual dysfunction and disorders, gastrointestinal diseases and disorders, gynecological and fertility diseases and disorders, hemolytic diseases and disorders, hypertension, infectious diseases, immunological, bacterial, viral and fungal diseases and disorders, inflammatory diseases and disorders, metabolic diseases and disorders, metabolic diseases and disorders, metabolic diseases and disorders, obesity, ophthalmic and eye diseases and disorders, osteoporosis, pain, Parkinson's disease, psychiatric diseases and disorders, respiratory diseases and disorders, smoking and substance addictions and related diseases and disorders, troke, urological disorders, weight and appetite control |
| WINE BLAST | USA | Allowed | 85/535835 02-07-2012 | | Class 30: Wine flavored powders intended for consumption via inhalation; wine flavored powders contained in inhalation apparatus not for medical or therapeutic use; wine flavored powders contained in inhalers not for medical or therapeutic use |
| WINE BLAST | USA | Allowed | 85/535844 02-07-2012 | | Class 21: Inhalers sold empty for use with wine flavored powders or cartridges containing wine flavored powders, and not for medical or therapeutic use |

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