

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT6455652

|                                                                                                                                                                                                 |                               |                       |
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| <b>SUBMISSION TYPE:</b>                                                                                                                                                                         | NEW ASSIGNMENT                |                       |
| <b>NATURE OF CONVEYANCE:</b>                                                                                                                                                                    | ASSIGNMENT                    |                       |
| <b>CONVEYING PARTY DATA</b>                                                                                                                                                                     |                               |                       |
|                                                                                                                                                                                                 | <b>Name</b>                   | <b>Execution Date</b> |
|                                                                                                                                                                                                 | ACTELION PHARMACEUTICALS LTD. | 05/09/2017            |
| <b>RECEIVING PARTY DATA</b>                                                                                                                                                                     |                               |                       |
| <b>Name:</b>                                                                                                                                                                                    | IDORSIA PHARMACEUTICALS LTD.  |                       |
| <b>Street Address:</b>                                                                                                                                                                          | HEGENHEIMERMATTWEG 91         |                       |
| <b>City:</b>                                                                                                                                                                                    | ALLSCHWIL                     |                       |
| <b>State/Country:</b>                                                                                                                                                                           | SWITZERLAND                   |                       |
| <b>Postal Code:</b>                                                                                                                                                                             | 4123                          |                       |
| <b>PROPERTY NUMBERS Total: 1</b>                                                                                                                                                                |                               |                       |
|                                                                                                                                                                                                 | <b>Property Type</b>          | <b>Number</b>         |
|                                                                                                                                                                                                 | Application Number:           | 16405797              |
| <b>CORRESPONDENCE DATA</b>                                                                                                                                                                      |                               |                       |
| <b>Fax Number:</b>                                                                                                                                                                              | (973)912-5236                 |                       |
| <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i> |                               |                       |
| <b>Phone:</b>                                                                                                                                                                                   | 973-912-5232                  |                       |
| <b>Email:</b>                                                                                                                                                                                   | file@hoxpat.com               |                       |
| <b>Correspondent Name:</b>                                                                                                                                                                      | HOXIE & ASSOCIATES LLC        |                       |
| <b>Address Line 1:</b>                                                                                                                                                                          | 75 MAIN STREET                |                       |
| <b>Address Line 2:</b>                                                                                                                                                                          | SUITE 203                     |                       |
| <b>Address Line 4:</b>                                                                                                                                                                          | MILLBURN, NEW JERSEY 07041    |                       |
| <b>ATTORNEY DOCKET NUMBER:</b>                                                                                                                                                                  | IDP-39-USC2                   |                       |
| <b>NAME OF SUBMITTER:</b>                                                                                                                                                                       | MICHAEL J. TSIMARAS           |                       |
| <b>SIGNATURE:</b>                                                                                                                                                                               | /Michael J. Tsimaras/         |                       |
| <b>DATE SIGNED:</b>                                                                                                                                                                             | 12/17/2020                    |                       |
| <b>Total Attachments: 4</b>                                                                                                                                                                     |                               |                       |
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| source=IDP-39-USC2 - Assignment - AC to IDP - Confirmatory#page2.tif                                                                                                                            |                               |                       |
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UNITED STATES OF AMERICA

ASSIGNMENT OF PATENT

U.S. Patent Nos.: As mentioned in the attached Schedule A

For good and valuable consideration in hand paid, the receipt and sufficiency whereof are hereby acknowledged, **Actelion Pharmaceuticals Ltd**, a stock corporation organized under the laws Switzerland, having an address at Gewerbestrasse 16, CH-4123 Allschwil, Switzerland (Assignor), hereby sells, assigns, transfers and sets over to **Idorsia Pharmaceuticals Ltd**, a stock corporation organized under the laws of Switzerland, having an address at Heggenheimermattweg 91, CH-4123 Allschwil, Switzerland (Assignee) and to the successors and assigns of Assignee, the entire right, title and interest in the invention or improvements of the undersigned disclosed in U.S. Patent Nos.: in the attached Schedule A; THEREOF, and in said patents and any and all other applications, both United States and foreign, which the undersigned may have filed and/or may file, either solely or jointly with others, on said inventions or improvements in any United States or foreign patent application claiming priority from, or claiming the same or improved invention as, any or all of the applications upon which said U.S. Patents issued, and in any and all Letters Patent or industrial models of the United States and foreign countries which may be obtained on any of said applications and in any reissue or extension of such patents, for the full term or terms for which said Patent, Patents or Industrial Design are or may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by Assignor had this assignment and sale not been made; together with all claims for damages by reason of past infringement of any or all of said Patents with the right to sue for and collect the same.

Assignor warrants itself to be the owner of the entire right, title and interest in said invention or improvements and to have the right to make this assignment, and further warrants that there are no outstanding prior assignments, licenses, or other encumbrances on the interests herein assigned. Assignor hereby covenants that no other assignment, sale, agreement or encumbrance will be made or entered into which would conflict with this sale and assignment.

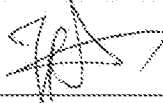
Assignor further covenants that Assignee will, upon its request and at the expense of Assignee, be provided promptly with all pertinent facts and documents relating to said inventions and said Letters Patents and legal equivalents as may be known and accessible to Assignor and will testify or cause appropriate persons to testify as to the same in any interference, litigation or proceeding related thereto and will promptly execute or have executed, to the best of its ability, and deliver to Assignee or its legal representatives any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce any and all of said applications, said inventions and said letters patent and foreign equivalents thereof which may be necessary or desirable to carry out the purposes thereof.

This assignment is made in accordance with the terms of the Demerger Agreement concluded and executed by both parties as of 26<sup>th</sup> day of January, 2017.

**Actelion Pharmaceuticals Ltd**

09.05 2017

Date

  
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By: **Raluca Judele**, Authorized Signatory  
(Assignor)

**UNITED STATES OF AMERICA  
SCHEDULE A**

| Country       | Application No. | Application Date | Registration No. | Registration Date |
|---------------|-----------------|------------------|------------------|-------------------|
| United States | 12/090,816      | 20-Oct-2006      | 8,067,419        | 29-Nov-2011       |
| United States | 13/519,938      | 04-Jan-2011      | 8,889,688        | 18-Nov-2014       |
| United States | 14/777,459      | 14-Mar-2014      | 9637473          | 2-May-17          |
| United States | 14/410,426      | 21-Jun-2013      | 9,428,456        | 30-Aug-2016       |
| United States | 14/892,959      | 28-May-2014      |                  |                   |
| United States | 10/598,777      | 07-Mar-2005      | 7,714,132        | 11-May-2010       |
| United States | 14/412,877      | 04-Jul-2013      | 9,169,270        | 27-Oct-2015       |
| United States | 15/125,018      | 16-Mar-2015      |                  |                   |
| United States | 15/127,361      | 17-Mar-2015      |                  |                   |
| United States | 11/722,095      | 22-Dec-2005      | 8,039,474        | 18-Oct-2011       |
| United States | 12/376,932      | 02-Aug-2007      | 8,143,304        | 27-Mar-2012       |
| United States | 13/637,005      | 21-Mar-2011      | 8,697,869        | 15-Apr-2014       |
| United States | 13/808,857      | 04-Jul-2011      | 8,575,158        | 05-Nov-2013       |
| United States | 14/111,889      | 13-Apr-2012      | 9,096,595        | 04-Aug-2015       |
| United States | 14/367,823      | 20-Dec-2012      | 9,255,090        | 09-Feb-2016       |
| United States | 15/316,100      | 02-Jun-2015      |                  |                   |
| United States | 15/510,980      | 14-Sep-2015      |                  |                   |
| United States | 14/376,307      | 01-Feb-2013      | 9,266,876        | 23-Feb-2016       |
| United States | 14/906,882      | 21-Jul-2014      |                  |                   |
| United States | 15/128,846      | 23-Mar-2015      |                  |                   |
| United States | 12/673,413      | 15-Aug-2008      | 8,324,232        | 04-Dec-2012       |
| United States | 15/118,046      | 13-Feb-2015      |                  |                   |
| United States | 12/808,137      | 12-Dec-2008      | 8,288,419        | 16-Oct-2012       |
| United States | 14/401,769      | 15-May-2013      | 9,139,524        | 22-Sep-2015       |
| United States | 14/401,774      | 15-May-2013      | 9,284,288        | 15-Mar-2016       |
| United States | 14/911,000      | 08-Aug-2014      |                  |                   |
| United States | 14/757,491      | 24-Jun-2014      |                  |                   |
| United States | 14/905,768      | 17-Jul-2014      | 9,533,964        | 03-Jan-2017       |
| United States | 12/809,545      | 17-Dec-2008      | 8,536,209        | 17-Sep-2013       |
| United States | 13/321,372      | 17-May-2010      | 8,563,714        | 22-Oct-2013       |
| United States | 13/376,966      | 07-Jun-2010      | 8,580,831        | 12-Nov-2013       |
| United States | 13/992,156      | 06-Dec-2011      | 9,346,793        | 24-May-2016       |
| United States | 13/988,204      | 16-Nov-2011      | 9,187,435        | 17-Nov-2015       |
| United States | 13/992,143      | 06-Dec-2011      | 8,846,733        | 30-Sep-2014       |
| United States | 13/876,447      | 23-Sep-2011      | 9,057,726        | 16-Jun-2015       |
| United States | 13/499,896      | 01-Oct-2010      | 8,709,734        | 29-Apr-2014       |
| United States | 15/021,649      | 12-Sep-2014      |                  |                   |
| United States | 15/106,790      | 18-Dec-2014      |                  |                   |
| United States | 15/123,184      | 03-Mar-2015      |                  |                   |

**UNITED STATES OF AMERICA**

| <b>Country</b> | <b>Application No.</b> | <b>Application Date</b> | <b>Registration No.</b> | <b>Registration Date</b> |
|----------------|------------------------|-------------------------|-------------------------|--------------------------|
| United States  | 15/311,758             | 13-May-2015             |                         |                          |
| United States  | 12/990,927             | 04-May-2009             | 8,889,714               | 18-Nov-2014              |
| United States  | 10/522,208             | 17-Jul-2003             | 7,985,760               | 26-Jul-2011              |
| United States  | 10/522,207             | 17-Jul-2003             | 7,994,198               | 09-Aug-2011              |
| United States  | 10/560,383             | 09-Jun-2004             | 8,022,219               | 20-Sep-2011              |
| United States  | 10/560,385             | 09-Jun-2004             | 8,071,780               | 06-Dec-2011              |
| United States  | 10/239,693             | 12-Mar-2001             | 6,703,392               | 09-Mar-2004              |
| United States  | 12/681,802             | 09-Oct-2008             | 9,532,985               | 03-Jan-2017              |
| United States  | 12/497,023             | 02-Jul-2009             | 8,247,560               | 21-Aug-2012              |
| United States  | 12/810,176             | 23-Dec-2008             | 8,314,238               | 20-Nov-2012              |
| United States  | 13/319,780             | 11-May-2010             | 8,329,706               | 11-Dec-2012              |
| United States  | 13/818,647             | 23-Aug-2011             | 8,895,606               | 25-Nov-2014              |
| United States  | 14/530,532             | 23-Aug-2011             | 9,000,029               | 07-Apr-2015              |
| United States  | 14/639,934             | 23-Aug-2011             | 9,211,279               | 15-Dec-2015              |
| United States  | 13/884,741             | 09-Nov-2011             | 9,242,970               | 26-Jan-2016              |
| United States  | 14/000,172             | 17-Feb-2012             | 9,303,023               | 05-Apr-2016              |
| United States  | 14/357,159             | 07-Nov-2012             | 9,150,566               | 06-Oct-2015              |
| United States  | 14/434,997             | 09-Oct-2013             | 9,493,446               | 15-Nov-2016              |
| United States  | 14/405,649             | 03-Jun-2013             |                         |                          |
| United States  | 14/775,474             | 11-Mar-2014             | 9,403,813               | 02-Aug-2016              |
| United States  | 15/101,871             | 03-Dec-2014             |                         |                          |
| United States  | 15/101,832             | 02-Dec-2014             |                         |                          |
| United States  | 15/101,768             | 02-Dec-2014             |                         |                          |
| United States  | 10/598,449             | 23-Feb-2005             | 7,763,638               | 27-Jul-2010              |
| United States  | 14/234,250             | 20-Jul-2012             | 9,221,832               | 29-Dec-2015              |
| United States  | 14/373,338             | 18-Jan-2013             | 9,409,917               | 09-Aug-2016              |
| United States  | 14/651,922             | 11-Dec-2013             |                         |                          |
| United States  | 14/653,363             | 17-Dec-2013             | 9,556,117               | 31-Jan-2017              |
| United States  | 14/762,692             | 21-Jan-2014             | 9,388,197               | 12-Jul-2016              |
| United States  | 14/762,717             | 21-Jan-2014             | 9,388,198               | 12-Jul-2016              |
| United States  | 14/894,114             | 30-May-2013             |                         |                          |
| United States  | 15/006,285             | 26-Jan-2016             |                         |                          |
| United States  | 11/912,545             | 27-Apr-2006             | 8,048,881               | 01-Nov-2011              |
| United States  | 12/445,352             | 12-Oct-2007             | 8,093,250               | 10-Jan-2012              |
| United States  | 12/447,039             | 24-Oct-2007             | 8,044,055               | 25-Oct-2011              |
| United States  | 12/745,358             | 28-Nov-2008             | 8,518,912               | 27-Aug-2013              |
| United States  | 12/936,661             | 09-Apr-2009             | 8,058,263               | 15-Nov-2011              |
| United States  | 12/936,664             | 09-Apr-2009             | 8,466,156               | 18-Jun-2013              |
| United States  | 13/263,089             | 07-Apr-2010             | 8,288,385               | 16-Oct-2012              |
| United States  | 13/265,493             | 21-Apr-2010             | 8,664,203               | 04-Mar-2014              |
| United States  | 12/310,801             | 06-Sep-2007             | 8,580,824               | 12-Nov-2013              |

**PATENT**

**REEL: 052404 FRAME: 0562**

**UNITED STATES OF AMERICA**

| <b>Country</b> | <b>Application No.</b> | <b>Application Date</b> | <b>Registration No.</b> | <b>Registration Date</b> |
|----------------|------------------------|-------------------------|-------------------------|--------------------------|
| United States  | 12/920,656             | 25-Feb-2009             | 8,575,200               | 05-Nov-2013              |
| United States  | 13/383,619             | 15-Jul-2010             | 8,658,675               | 25-Feb-2014              |
| United States  | 13/980,764             | 18-Jan-2012             | 9,133,179               | 15-Sep-2015              |
| United States  | 14/777,444             | 14-Mar-2014             | 9617250                 | 11-Apr-17                |
| United States  | 11/909,429             | 20-Mar-2006             | 7,723,378               | 25-May-2010              |
| United States  | 12/749,180             | 29-Mar-2010             | 8,039,644               | 18-Oct-2011              |
| United States  | 12/597,817             | 25-Apr-2008             | 8,202,885               | 19-Jun-2012              |
| United States  | 13/125,443             | 21-Oct-2009             | 8,492,555               | 23-Jul-2013              |
| United States  | 13/880,520             | 19-Oct-2011             | 9,296,673               | 29-Mar-2016              |
| United States  | 13/880,486             | 19-Oct-2011             | 8,816,118               | 26-Aug-2014              |
| United States  | 12/520,580             | 21-Dec-2007             | 8,044,044               | 25-Oct-2011              |
| United States  | 12/595,711             | 10-Apr-2008             | 8,114,867               | 14-Feb-2012              |
| United States  | 12/595,720             | 11-Apr-2008             | 8,217,029               | 10-Jul-2012              |
| United States  | 12/664,828             | 13-Jun-2008             | 8,193,179               | 05-Jun-2012              |
| United States  | 12/809,555             | 17-Dec-2008             | 9,505,750               | 29-Nov-2016              |
| United States  | 12/918,749             | 19-Feb-2009             | 8,349,828               | 08-Jan-2013              |
| United States  | 12/918,779             | 20-Feb-2009             | 8,349,826               | 08-Jan-2013              |
| United States  | 12/996,360             | 02-Jun-2009             | 8,349,829               | 08-Jan-2013              |
| United States  | 13/123,218             | 06-Oct-2009             | 8,618,092               | 31-Dec-2013              |
| United States  | 14/096,419             | 06-Oct-2009             | 9,346,804               | 24-May-2016              |
| United States  | 15/135,352             | 06-Oct-2009             |                         |                          |
| United States  | 13/123,708             | 09-Oct-2009             | 8,507,478               | 13-Aug-2013              |
| United States  | 13/139,179             | 11-Dec-2009             | 8,211,890               | 03-Jul-2012              |
| United States  | 13/263,922             | 08-Apr-2010             | 8,415,375               | 09-Apr-2013              |
| United States  | 14/356,896             | 07-Nov-2012             | 9,079,922               | 14-Jul-2015              |
| United States  | 14/784,602             | 15-Apr-2014             | 9,527,867               | 27-Dec-2016              |
| United States  | 14/888,581             | 30-Apr-2014             | 9,540,399               | 10-Jan-2017              |
| United States  | 15/516,290             | 14-Oct-2015             |                         |                          |
| United States  | 12/279,329             | 14-Feb-2007             | 7,820,655               | 26-Oct-2010              |

**PATENT**

**RECORDED: 02/13/2020**

**REEL: 052404 FRAME: 0563**