

**APPENDIX 8-B FOR NEW LICENSEES IN INDIA**

**FIRST AMENDMENT  
TO  
LICENSE AGREEMENT**

This FIRST AMENDMENT TO LICENSE AGREEMENT (this “**Amendment**”) is made as of **9<sup>th</sup> April, 2018** (the “**Amendment Effective Date**”) by and among **Gilead Sciences, Inc.** a Delaware corporation having its principal place of business at 333 Lakeside Drive, Foster City, California 94404, USA (“**Gilead**”), the **Medicines Patent Pool**, a non-profit foundation registered under the laws of Switzerland, and having a principal place of business at Rue de Varembé 7, 1202 Geneva, Switzerland (“**MPP**”), and **Arene Lifesciences Limited** a company registered under the laws of India, and having a registered office at S.R.CHAMBERS, # 3-58, Ramachandrapuram, Sangareddy Dist, Telangana, India. (“**Licensee**”).

**RECITALS**

**WHEREAS**, Gilead, MPP, and Licensee entered into that certain License Agreement effective as of 9<sup>th</sup> April, 2018 (the “**Agreement**”), pursuant to which MPP granted Licensee certain licenses with respect to Gilead’s proprietary pharmaceutical agents tenofovir alafenamide, tenofovir disoproxil fumarate, elvitegravir, and cobicistat for treatment of HIV and HBV in developing world countries; and

**WHEREAS**, Gilead, MPP, and Licensee wish to amend the Agreement to add certain licenses with respect to Gilead’s proprietary pharmaceutical agent bicittegravir for treatment of HIV in developing world countries, in accordance with the terms and conditions of this Amendment, all as more fully described below.

**NOW, THEREFORE**, Gilead, MPP, and Licensee agree as follows:

1. Definitions.

- a. The definitions of the below terms are hereby deleted from Section 1 of the Agreement and replaced as follows:

“**Active Pharmaceutical Ingredient**” or “**API**” shall mean one or more of the following active pharmaceutical ingredients: tenofovir alafenamide (“**TAF**”), tenofovir disoproxil fumarate (“**TDF**”), elvitegravir (“**EVG**”), cobicistat (“**COBI**”), and bicittegravir (“**BIC**”).

“**Combination Products**” shall mean COBI Combination Products, EVG Combination Products, TDF Combination Products, TAF Combination Products, BIC Combination Products, and Quad Products.

“**Patents**” shall mean (a) the patents and patent applications set forth in Appendix 2 hereto and (b) any other patents or patent applications (and resulting patents therefrom) that are in the Territory and owned or controlled by Gilead and its Affiliates during the term of this Agreement including to the extent falling within clause (b) of this definition (i) those patents and patent applications exclusively licensed by Gilead from Japan Tobacco pursuant to the Japan Tobacco Agreement and (ii) those patents and

3. Product License. Section 2.2 of the Agreement is hereby deleted in its entirety and replaced with the following:

“Product License. Subject to the terms and conditions of this Agreement, MPP hereby grants to Licensee a royalty-bearing, non-exclusive, non-sublicensable (other than a sublicense to an Affiliate in accordance with Section 2.3 below), non-transferable license under the Licensed Technology solely to make Product in India and sell, have sold, offer for sale, export from India and import (i) TAF Product, TAF Combination Product, TDF Product and TDF Combination Products in the Field in the TDF-TAF Territory, (ii) EVG Product, EVG Combination Products and the Quad Products in the Field in the EVG-Quad Territory, (iii) COBI Products and COBI Combination Products in the Field and in the COBI Territory, and (iv) BIC Product and BIC Combination Products in the Field and in the BIC Territory; provided that in each case such Products shall be made only from Licensed API. For clarity, (a) the licenses granted in this Section 2.2 do not include, expressly or by implication, a license under any Gilead intellectual property right to manufacture, sell or distribute any product containing active pharmaceutical ingredients owned or controlled by Gilead other than Products containing TAF, TDF, EVG, COBI, and BIC, and (b) notwithstanding the foregoing, the licenses granted under this Section 2.2 shall not extend to any active pharmaceutical ingredient included within a Product other than TAF, TDF, EVG, COBI, and BIC.”

4. Affiliates. Section 2.3 of the Agreement is hereby deleted in its entirety and replaced with the following:

“Affiliates. Licensee may grant sublicenses under the licenses granted in Section 2.1 or Section 2.2 to its Affiliates located in India upon prior written notice to Gilead and MPP. Upon Gilead’s or MPP’s request, Licensee shall provide Gilead and/or MPP (as applicable) with the written copies of the applicable sublicense agreement with such Affiliate(s). Further upon Gilead’s or MPP’s request, Licensee shall name Gilead and/or MPP (as applicable) as a third party beneficiary in any such sublicense agreement, in which case Licensee shall consent and hereby does consent to Gilead’s and/or MPP’s (as applicable) enforcement of such sublicense agreement to the extent relating to the obligations that Licensee is required hereunder to impose on its Affiliates. Licensee shall ensure that any such Affiliate complies with all the terms of this Agreement as if they were a party to this Agreement, and Licensee will be liable for the activities of such Affiliates as if such activities were performed by Licensee.”

5. Product Sales.

- a. Section 2.5(b) of the Agreement is hereby amended to delete the first paragraph of such Section which is hereby replaced with the following:

*“Subject to Sections 10.3(c) and 10.3(d) of the Agreement, Licensee agrees that it will not sell, offer for sale, or assist third parties (including Affiliates) in selling Product except for the sale and offer for sale of (A) TAF Product, TAF Combination, TDF Product and TDF Combination Product for use in the Field in and in the countries of the TDF-TAF Territory, (B) COBI Product and COBI Combination Product for use in the Field and in the countries of the COBI Territory, (C) EVG Product, EVG Combination Product and Quad Product for use in the Field and in the countries of the EVG-Quad Territory, and (D) BIC Product and BIC Combination Product for use in the Field and in the countries of the BIC Territory.”*

- b. Section 2.5(b)(ii) is hereby deleted in its entirety and replaced with the following:

“Licensee agrees that it will not administer BIC to humans, or sell Products containing BIC until Gilead has obtained marketing approval for a Product containing BIC from the FDA.”

6. Limitations on Product Combinations. Licensee will be allowed to manufacture and sell BIC in combination with other active pharmaceutical ingredients in the BIC Territory, provided in each case (A) Licensee has the legal right to manufacture and sell such other active pharmaceutical ingredients in the applicable country in the BIC Territory, and (B) such manufacture and sale is in accordance with the licenses granted herein.
7. Gilead Distributors. Section 2.5(d)(i) of the Agreement is hereby deleted in its entirety and replaced with the following:

“Licensee may elect to sell finished Product in the Territory to any Gilead Distributor, provided, however, that (A) Licensee may only sell and offer for sale TAF Product, TAF Combination Product, TDF Product and TDF Combination Product to Gilead Distributors to sell in the TDF-TAF Territory, and may not sell or offer for sale TAF Product, TAF Combination Product, TDF Product or TDF Combination Product outside the TDF-TAF Territory, and may not import TAF Product or TAF Combination Product into any country outside the TDF-TAF Territory, (B) Licensee may only sell and offer for sale COBI Product and COBI Combination Product to Gilead Distributors to sell in the COBI Territory, and may not sell or offer for sale COBI Product or COBI Combination Product outside the COBI Territory, and may not import COBI Product or COBI Combination Product into any country outside the COBI Territory, (C) Licensee may only sell and offer for sale EVG Product, EVG Combination Product and Quad Product to Gilead Distributors to sell in the EVG-Quad Territory, and may not sell or offer for sale EVG Product, EVG Combination Product or Quad Product outside the EVG-Quad Territory, and may not import EVG Product, EVG Combination Product or Quad Product into any country outside the EVG-Quad Territory, (D) Licensee may only sell and offer for sale BIC Product and BIC Combination Product to Gilead Distributors to sell in the BIC Territory, and may not sell or offer for sale BIC Product or BIC Combination Product outside the BIC Territory, and may not import BIC Product or BIC Combination Product into any country outside the BIC Territory, and (E) Licensee shall only sell to such Gilead Distributor those Products that are bioequivalent to the branded products Gilead has granted such Gilead Distributor the right to sell in such country of the applicable Territory. Licensee shall only allow such Gilead Distributor to sell such Product in the countries within the country of the applicable Territory for which such Gilead Distributor has the right to sell branded Gilead product. For example, Licensee shall not sell to a Gilead Distributor (X) a Product containing TDF, emtricitabine (FTC) and efavirenz in a particular country in the TDF-TAF Territory, unless Gilead has granted such distributor the right to sell a branded product containing TDF, FTC and efavirenz in such country in the TDF-TAF Territory, or (Y) a Product containing both TDF and 3TC or both TAF and 3TC.”

8. Third Party Reseller Agreements. Section 2.5(e) of the Agreement is hereby deleted in its entirety and replaced with the following:

“Gilead/MPP Approval of Third Party Reseller Agreements. Licensee shall not enter into any agreements with Third Party Resellers on terms inconsistent with this Agreement without obtaining Gilead’s prior written approval. If Licensee enters into an agreement with any Third

Party Reseller, then Licensee shall notify Gilead and MPP in writing, and shall certify that its arrangement with such Third Party Reseller is consistent with the terms and conditions of this Agreement. Upon Gilead's or MPP's request, Licensee shall provide Gilead and/or MPP (as applicable) with written copies of all agreements executed between Licensee and Third Party Resellers. Further upon Gilead's or MPP's request, Licensee shall name Gilead and/or MPP (as applicable) as a third party beneficiary in any such agreements, in which case Licensee shall consent and hereby does consent to Gilead's and/or MPP's (as applicable) enforcement of such agreements to the extent relating to the obligations that Licensee is required hereunder to impose upon Third Party Resellers. Gilead and/or MPP shall have the right to review all such agreements to verify consistency with the terms and conditions of this Agreement. In the event that any inconsistency is found which had not been specifically discussed and agreed with Gilead, then Gilead and/or MPP shall have the right to require Licensee to terminate such agreement. To the extent any such agreements relate to EVG, EVG Product, EVG Combination Product, or Quad Product, Gilead shall also have the right to share such agreements with Japan Tobacco."

9. Termination of Third Party Agreement by Gilead. Section 2.5(g) of the Agreement is hereby deleted in its entirety and replaced with the following:

"Termination of Third Party Agreements by Gilead. Gilead may terminate the right of Licensee to sell Product to any Third Party Reseller pursuant to this Section 2.5, if Gilead believes in good faith that the Third Party Reseller is not acting in a way that is consistent with Licensee's covenants under this Agreement, or if Licensee does not terminate Licensee's agreement with such Third Party Reseller under the circumstances described in Section 2.5(e) or Section 2.5(f)."

10. No Other Licenses. Section 2.6(d)(ii) of the Agreement is hereby deleted in its entirety and replaced with the following:

"Except as expressly set forth in this Agreement, MPP does not grant any license under any of Gilead's intellectual property rights (including, without limitation, patents or rights to any proprietary compounds or drug substances other than API) to Licensee."

11. Sourcing of API from API Suppliers. The last sentence of Section 3.1 of the Agreement is hereby deleted in its entirety and replaced with the following:

"In the event that any inconsistency is found which had not been specifically discussed and agreed with Gilead, each of Gilead and MPP shall have the right to require Licensee to terminate such agreement with such Gilead Supplier or Licensed API Supplier, and upon notice from Gilead and/or MPP to such effect, Licensee shall immediately terminate such agreement."

12. Royalty. As consideration for the licenses granted in Section 2 of the Agreement, as amended by Sections 2 and 3 of this Amendment, Licensee shall pay Gilead the following royalties on Net Sales of BIC Product and BIC Combination Product in the Territory for the duration of the Royalty Term:

- a. 5% of BIC Product Net Sales in the BIC Territory.



- b. 5% of the portion of BIC Combination Product Net Sales attributable to the BIC component of such BIC Combination Product in the BIC Territory, as determined in accordance with Section 4.2 of the Agreement.
- c. To the extent any TAF Combination Product, TDF Combination Product, EVG Combination Product, and/or COBI Combination Product contains BIC, then in addition to royalties due from Licensee to Gilead for each other royalty bearing API in such Combination Product as set forth in Section 4.1(c), (f) and (h) of the Agreement, respectively, Licensee will pay Gilead 5% of the portion of such Combination Products Net Sales attributable to the BIC component of such Combination Product in the Territory applicable to such Combination Product, as determined in accordance with Section 4.2 of the Agreement.
13. Quarterly Reports. In each Quarterly Report, Licensee shall provide Gilead with the following information (in addition to the information described in Section 4.3 of the Agreement): (i) any Drug Controller General of India export permits obtained by the Licensee for Product, including the quantity of Product exported, the final destination of the Product and the recipient of the Product; and (ii) any Central Drugs Standard Control Organization (CDSCO) No Objection Certificates (NOC) obtained by third parties for Product for which Licensee provided assistance, including the quantity of Product exported, the final destination of the Product and the recipient of the Product.
14. Cooperation. If any party becomes aware of a suspected occurrence of any prohibited activity described in Section 7.2(a)(i)-(viii), such party will notify the other parties promptly, and following such notification, the parties will confer. Gilead (except in the case of Patents relating to EVG, EVG Product, EVG Combination Product or TAF Quad that are subject to the Japan Tobacco Agreement and controlled by Japan Tobacco) will have the right, but not the obligation, to bring an infringement or other action at its own expense, in its own name, and entirely under its own direction and control. Licensee will reasonably assist Gilead (or, where applicable, Japan Tobacco) in such actions or proceedings if so requested, and will lend its name to such actions or proceedings if required by law in order for Gilead (or Japan Tobacco) to bring such an action, which obligations shall survive the expiration or termination of the Agreement.
15. Technology Transfer. Promptly following the later of the Amendment Effective Date and Gilead's receipt of marketing approval from the FDA for a Product containing BIC, Gilead shall make available a one-time technology transfer of know-how owned or controlled by Gilead relating to the manufacture of BIC and such FDA-approved Product containing BIC, as applicable, to the extent, and in the manner specified in Appendix 3 attached hereto. Except as expressly provided in this Section 7, Gilead shall have no further obligation to transfer any other know-how under this Amendment.
16. Manufacturing Requirements Minimum Standards. Section 6.2(a) of the Agreement is hereby deleted in its entirety and replaced with the following:

"Minimum Standards.

- (i) Licensee agrees that it shall manufacture API and Product in a manner consistent with (i) the applicable Indian manufacturing standards; (ii) either World Health Organization ("WHO") pre-qualification standards, standards of the European Medicines Agency ("EMA"),

or United States Food and Drug Administration (“**FDA**”) tentative approval standards (“**Minimum Quality Standards**”); and (iii) on a country-by-country basis, any applicable national, regional or local standards as may be required by the specific country where Product is sold.

(ii) As required by MPP, in the event that any of COBI, EVG, TAF or BIC are included in the *WHO Consolidated Guidelines on the use of antiretroviral drugs for treating and preventing HIV infection* (“**WHO Guidelines**”) or in the expression of interest for WHO pre-qualification for active pharmaceutical ingredients, Licensee shall apply for WHO pre-qualification or submit such included API’s Drug Master File (or equivalent) to the FDA no later than by the second anniversary of any such inclusion.

(iii) As required by MPP, in the event that any TAF Product or TAF Combination Product, BIC Product or BIC Combination Product, COBI Product or COBI Combination Product, EVG Product or EVG Combination Product, or the TDF Quad are included in WHO Guidelines or in the expression of interest for WHO pre-qualification of medicines, Licensee shall apply for WHO pre-qualification or FDA conditional approval for each such Product so included no later than by the third anniversary of any such inclusion.”

17. Remedy for Failure. Section 6.2(c) of the Agreement is hereby deleted in its entirety and replaced with the following:

“Remedy for Failure. If Licensee fails at any time to meet the Minimum Quality Standards with respect to the manufacture of API or Product, Gilead and/or MPP may elect, in their sole discretion and notwithstanding Section 10.2 or 10.3 hereof, to suspend the effectiveness of the licenses granted hereunder until such time as Gilead and/or MPP have determined that Licensee has corrected any such failure to Gilead’s and/or MPP’s reasonable satisfaction. During any such suspension, Gilead and/or MPP and Licensee shall coordinate with each other to provide for the supply of API or Product, as appropriate, to ensure that end-user patient requirements are not disrupted as a result of such suspension.”

18. Dose Requirements. All BIC Product and BIC Combination Products manufactured, used or sold by Licensee shall consist of dose concentrations of BIC that have been approved by the FDA. In the case of Products containing BIC, Licensee may manufacture or sell BIC Product, or BIC Combination Product consisting of an Alternate Dosage if such Alternate Dosage has been approved for use in the Field by the appropriate regulatory authority having jurisdiction over such Product.
19. Pediatric Formulations. Licensee will have the right to develop a BIC Product or BIC Combination Product as either a liquid or dispersible tablet formulation for use in pediatric patients less than 12 years of age (such formulation shall be a Pediatric Formulation). If Licensee is granted regulatory approval to market such Pediatric Formulation, then Licensee will use reasonable efforts to make such Pediatric Formulation available throughout the BIC Territory (for purposes of Section 6.2(e) of the Agreement, the BIC Territory shall be Licensee’s Applicable Territory with respect to such Pediatric Formulation).
20. Regulatory Filings and Inspections. To the extent Regulatory Reports relate to EVG, EVG Product, EVG Combination Product, or Quad Product, Gilead will have the right to share such Regulatory Reports with Japan Tobacco, which right shall survive the expiration or termination of the Agreement.

21. Safety Reporting. The following language is hereby added to the Agreement as Section 6.6:

"Safety Reporting.

- a. Licensee is responsible for all single and periodic reporting to all applicable regulatory authorities for the Products manufactured by or on behalf of Licensee under the Agreement.
- b. Licensee is responsible for all pharmacovigilance activities with respect to such Products, including but not limited to all associated signal detection, risk management and product labelling requirements.
- c. In the event Licensee receives an individual case safety report associated with any Gilead proprietary product, Licensee agrees to forward such reports to Gilead at EMail: [SafetyFC@gilead.com](mailto:SafetyFC@gilead.com) Fax: +1-650-522-5477.
- d. Licensee will forward details of any confirmed safety signals or emerging safety issues relating to Products manufactured by or on behalf of Licensee under this Agreement and any supporting documentation to the risk management contact at Gilead: [Neda.Shokrai@gilead.com](mailto:Neda.Shokrai@gilead.com)."

22. Diversion of Product and Technology. Section 7.2 of the Agreement is hereby deleted in its entirety and replaced with the following:

"Diversion of Product and Technology.

- (a) Licensee covenants and agrees that Licensee and its Affiliates shall not, and shall require its Distributors and Third party Resellers not to: (i) divert or allow the diversion of API outside of India, China or South Africa, or to third parties that do not constitute Licensed Product Suppliers, (ii) divert or allow the diversion of TDF Product, TDF Combination Product, TAF Product or TAF Combination Product outside the TDF/TAF Territory, (iii) divert or allow the diversion of COBI Product or COBI Combination Product outside the COBI Territory, (iv) divert or allow the diversion of EVG Product, EVG Combination Product or Quad Product outside the EVG-Quad Territory, (v) divert or allow the diversion of BIC Product or BIC Combination Product outside the BIC Territory, (vi) divert or allow the diversion of Licensed Technology to any third party, except as expressly permitted under this Agreement, (vii) take any action that Gilead determines in good faith to be in furtherance of the activities described in clauses (i) – (vi), or (viii) assist or support, directly or indirectly, any third party in the conduct of the activities described in clauses (i) - (vii). The parties agree that it shall not be a breach of Section 3.1 or this Section 7.2 for Licensee or its Affiliate to file marketing approval applications for any Product in a country outside of the Territory as required by applicable regulatory authorities in such country for the commercialization of such Product in such country, or for Licensee or its Affiliate to provide developmental quantities of API or Product in support of its own marketing approval applications or a third party's application for marketing approval, in each case, as required by applicable regulatory authorities in such country, it being understood that this provision shall not be construed as expressly or implicitly granting Licensee any right or license under any Gilead intellectual property rights beyond the

licenses granted in Section 2 of this Agreement or otherwise providing any authorization by Gilead to do so, and does not constitute a waiver of any rights of Gilead under law that it may have to contest the filing or granting of such marketing approval applications.”

- (b) Damages. In the event (i) any Product is diverted (x) by Licensee or its Affiliate sublicensees, or (y) by another party with the assistance of the Licensee or its Affiliate sublicensees, in each case to any country outside the Territory in any manner described in Section 7.2(a), and (ii) a patent covering such Product has been granted in such country or in the country(ies) outside the Territory in which such Product is manufactured (collectively the circumstance described by clause (i) and (ii), a “**Diversio**n Event”), then in addition to any other remedies Gilead may be entitled to at law or in equity, Gilead shall be entitled to injunctive relief and to receive lost profits associated with the Diversio
- n Event, which such lost profits will be determined by taking into consideration the following factors: (1) the quantity of Product that is the subject of such Diversio
- n Event; (2) the average profit Gilead receives from its sale of such Product in the country(ies) outside the Territory into which such Product was sold or otherwise transferred; and (3) any erosion in Gilead’s market share in such country(ies) outside the Territory as a result of such Diversio
- n Event. This Section 7.2(b) shall survive the expiration or termination of the Agreement with respect to Products sold prior to such expiration or termination.”

23. General Law Compliance. Section 7.3(a) of the Agreement is hereby deleted in its entirety and replaced with the following:

“General Law Compliance. Licensee covenants and agrees that it shall perform all activities under this Agreement in accordance with all applicable laws, rules, and regulations, including, without limitation, with respect to privacy, data protection, recalls, safety and reporting requirements and shall obtain, have and maintain all necessary regulatory approvals (including in India), marketing authorizations, permits and licenses, at Licensee’s expense for the manufacture and sale of API and/or Product and any other Licensee activities contemplated hereby.”

24. FCPA and UK Bribery Act. Section 7.3(b) of the Agreement is hereby deleted in its entirety and replaced with the following:

“FCPA and UK Bribery Act. Licensee covenants and agrees that neither the Licensee, nor any of its affiliates, nor any of their respective directors, officers, employees or agents (all of the foregoing, including affiliates collectively, “**Licensee Representatives**”) has taken any action, directly or indirectly, that would result in a violation by such persons of the Foreign Corrupt Practices Act of 1977, as amended (such act, including the rules and regulations thereunder, the “**FCPA**”), the U.K. Bribery Act of 2010 (“**Bribery Act**”), or any other applicable antibribery or anticorruption laws, rules or regulations (collectively with the FCPA and the Bribery Act, the “**Anticorruption Laws**”). Licensee covenants and agrees that Licensee and Licensee Representatives have conducted and will conduct their businesses in compliance with the Anticorruption Laws. Licensee covenants and agrees that it shall provide to Gilead on the Amendment Effective Date and within thirty (30) days after the beginning of each calendar year thereafter, certification in writing by Licensee of Licensee’s compliance with the Anticorruption Laws.”

25. Gilead Right to Terminate. Section 10.3(b) of the Agreement is hereby deleted in its entirety and replaced with the following:

“(b) Gilead and/or MPP shall have the right to terminate this Agreement, the covenant contained in Section 7.5 and/or one or both of the licenses granted pursuant to Section 2.1 or Section 2.2 (whether or not such event constitutes a right of termination pursuant to Section 10.2), if:

- (i) Gilead determines in good faith that (A) a material quantity of API made or sold by Licensee has been diverted outside of South Africa, China or India, or to third parties that are not Licensed Product Suppliers, (B) a material quantity of Product made and/or sold by Licensee has been diverted to countries outside the Territory (other than with respect to such diversions occurring solely as a result of the circumstances expressly contemplated in Sections 7.3(c), 10.3(c) and 10.3(d) below), or (C) any of the prohibited activities described in Section 7.2(a)(i)-(viii) has occurred;
- (ii) Gilead and/or MPP determines in good faith that, due to material deficiencies in Licensee’s compliance, or repeated failure to comply, with the Minimum Quality Standards, Licensee is unable to reliably and consistently manufacture API or Product in accordance with the Minimum Quality Standards;
- (iii) Gilead determines in good faith that Licensee has obtained material quantities of API from sources outside of India, South Africa or China (subject to the provisions set forth in Sections 7.3(c) and 10.3(c)), or in ways that are inconsistent with the terms and conditions of Section 3; or
- (iv) Gilead’s rights to EVG terminate due to the termination of the Japan Tobacco Agreement, provided, however, that in such event, such termination would only apply on a Product-by-Product basis and only with respect to Products containing EVG that are subject to the sublicense granted by Gilead under the Japan Tobacco Agreement.

Gilead shall give Licensee and MPP written notice of any such event and provide Licensee with a period of thirty (30) days after such notice to demonstrate that the conditions giving rise to Gilead’s determination no longer exist to Gilead’s reasonable satisfaction. If Licensee is unable to do so, this Agreement shall be terminated effective upon the thirtieth (30<sup>th</sup>) day following such notice. In the event that MPP independently exercises its right to terminate this Agreement pursuant to Sections 10.2 or 10.3, MPP shall provide notice to Gilead of such intent to terminate.”

26. Licensee Right to Terminate License on an API Basis. For the avoidance of doubt any termination by Licensee of its license to BIC pursuant to Section 10.5 of the Agreement shall in turn terminate Licensee’s rights and licenses under all Patents that claim BIC (alone or in combination with any other compounds) to manufacture, sell, use, export or import any Product that contains BIC.



27. Appendices. Appendices 1, 2, 3, 4, 5, and 6 of the Agreement are hereby deleted and replaced with new Appendices 1, 2, 3, 4, 5, and 6 attached to this Amendment, respectively. Appendix 7 attached to this Amendment is hereby added to the Agreement as Appendix 7.
28. Miscellaneous. This Amendment embodies the entire understanding of the Parties with respect to the subject matter hereof and supersedes all previous communications, representations or understandings, and agreements, whether oral or written, between the Parties relating to the subject matter hereof. Except as expressly amended by this Amendment, the terms and conditions of the Agreement will remain in full force and effect. This Amendment shall be effective as of the Amendment Effective Date, and may not be modified except by written agreement between the Parties. This Amendment will be governed by and construed under the laws of England, without regard to its choice of law principles, and any dispute that arises hereunder shall be resolved by binding arbitration as set forth in Section 12.7 of the Agreement.

*[signatures appear on following page]*



**APPENDIX 8-B FOR NEW LICENSEES IN INDIA**

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LICENSE AGREEMENT**

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**RECITALS**

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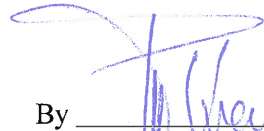
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“**Patents**” shall mean (a) the patents and patent applications set forth in Appendix 2 hereto and (b) any other patents or patent applications (and resulting patents therefrom) that are in the Territory and owned or controlled by Gilead and its Affiliates during the term of this Agreement including to the extent falling within clause (b) of this definition (i) those patents and patent applications exclusively licensed by Gilead from Japan Tobacco pursuant to the Japan Tobacco Agreement and (ii) those patents and

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the Amendment Effective Date.

MPP:

Medicines Patent Pool



By \_\_\_\_\_

Name: Marie - Paule Kiery

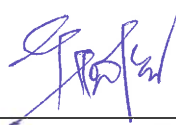
Title: Chair

Governance Board

Medicines Patent Pool  
Rue de Varembe 7  
1202 Geneva  
Switzerland

LICENSEE:

Arene Lifesciences Limited



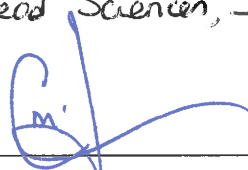
By \_\_\_\_\_

Name: S. Gopi KRISHNAN

Title: DIRECTOR

GILEAD

Gilead Sciences, Inc.



By \_\_\_\_\_

Name:

Title:

Clifford M. Samuel  
Senior Vice President,  
Access Operations & Emerging Markets



**APPENDIX 1**  
Countries in the TDF-TAF Territory

- |                              |                             |                                       |
|------------------------------|-----------------------------|---------------------------------------|
| 1. Afghanistan               | 40. Georgia                 | 79. Papua New Guinea                  |
| 2. Angola                    | 41. Ghana                   | 80. Philippines                       |
| 3. Anguilla                  | 42. Grenada                 | 81. Rwanda                            |
| 4. Antigua and Barbuda       | 43. Guatemala               | 82. Saint Kitts and Nevis             |
| 5. Armenia                   | 44. Guinea                  | 83. Saint Lucia                       |
| 6. Aruba                     | 45. Guinea-Bissau           | 84. Saint Vincent & the<br>Grenadines |
| 7. Bahamas                   | 46. Guyana                  | 85. Samoa                             |
| 8. Bangladesh                | 47. Haiti                   | 86. São Tomé and Príncipe             |
| 9. Barbados                  | 48. Honduras                | 87. Senegal                           |
| 10. Belarus                  | 49. India                   | 88. Seychelles                        |
| 11. Belize                   | 50. Indonesia               | 89. Sierra Leone                      |
| 12. Benin                    | 51. Jamaica                 | 90. Solomon Islands                   |
| 13. Bhutan                   | 52. Kazakhstan              | 91. Somalia                           |
| 14. Bolivia                  | 53. Kenya                   | 92. South Africa                      |
| 15. Botswana                 | 54. Kiribati                | 93. South Sudan                       |
| 16. British Virgin Islands   | 55. Kyrgyzstan              | 94. Sri Lanka                         |
| 17. Burkina Faso             | 56. Lao, People's Dem. Rep. | 95. Sudan                             |
| 18. Burundi                  | 57. Lesotho                 | 96. Surinam                           |
| 19. Cambodia                 | 58. Liberia                 | 97. Swaziland                         |
| 20. Cameroon                 | 59. Madagascar              | 98. Syrian Arab Republic              |
| 21. Cape Verde               | 60. Malawi                  | 99. Tajikistan                        |
| 22. Central African Republic | 61. Malaysia                | 100. Tanzania, U. Rep. of             |
| 23. Chad                     | 62. Maldives                | 101. Thailand                         |
| 24. Comoros                  | 63. Mali                    | 102. Timor-Leste                      |
| 25. Congo, Rep               | 64. Mauritania              | 103. Togo                             |
| 26. Congo, Dem. Rep. of the  | 65. Mauritius               | 104. Tonga                            |
| 27. Côte d'Ivoire            | 66. Moldova, Rep. of        | 105. Trinidad and Tobago              |
| 28. Cuba                     | 67. Mongolia                | 106. Turkmenistan                     |
| 29. Djibouti                 | 68. Montserrat              | 107. Turks and Caicos                 |
| 30. Dominica                 | 69. Mozambique              | 108. Tuvalu                           |
| 31. Dominican Republic       | 70. Myanmar                 | 109. Uganda                           |
| 32. Ecuador                  | 71. Namibia                 | 110. Ukraine                          |
| 33. El Salvador              | 72. Nauru                   | 111. Uzbekistan                       |
| 34. Equatorial Guinea        | 73. Nepal                   | 112. Vanuatu                          |
| 35. Eritrea                  | 74. Nicaragua               | 113. Vietnam                          |
| 36. Ethiopia                 | 75. Niger                   | 114. Yemen                            |
| 37. Fiji Islands             | 76. Nigeria                 | 115. Zambia                           |
| 38. Gabon                    | 77. Pakistan                | 116. Zimbabwe                         |
| 39. Gambia                   | 78. Palau                   |                                       |



## APPENDIX 2

### Patents

#### TDF Patents

##### (221) Title: NUCLEOTIDE ANALOGS

| Country | Status  | Filing Date | Application No. | Patent No. | Issue Date |
|---------|---------|-------------|-----------------|------------|------------|
| India   | Pending | 7/25/1997   | 2076/DEL/1997   |            |            |

##### (230) Title: NUCLEOTIDE ANALOG COMPOSITION AND SYNTHESIS METHOD

| SubCase   | Status  | Filing Date | Application No. | Patent No. | Issue Date |
|-----------|---------|-------------|-----------------|------------|------------|
| India     | Pending | 7/24/1998   | 896/DEL/2002    |            |            |
| India     | Pending | 7/24/1998   | 963/DEL/2002    |            |            |
| India     | Pending | 7/24/1998   | 1362/DEL/2004   |            |            |
| India     | Granted | 7/24/1998   | 2174/DEL/1998   | 190780     | 3/15/2004  |
| Indonesia | Granted | 7/23/1998   | W-991548        | 7658       | 4/11/2002  |

##### (270) Title: COMPOSITIONS AND METHODS FOR COMBINATION ANTIVIRAL THERAPY

| Country                      | Status    | Filing Date | Application No.             | Patent No. | Issue Date |
|------------------------------|-----------|-------------|-----------------------------|------------|------------|
| Armenia                      | Granted   | 1/13/2004   | 200501134                   | 15145      | 6/13/2011  |
| Eurasian Patent Organization | Published | 1/13/2004   | 201100293                   |            |            |
| Eurasian Patent Organization | Granted   | 1/13/2004   | 200501134                   | 15145      | 6/13/2011  |
| Kazakhstan                   | Granted   | 1/13/2004   | 200501134                   | 15145      | 6/13/2011  |
| Kazakhstan                   | Pending   |             | 200501134 (PTE Application) |            |            |
| Kyrgyz Republic              | Granted   | 1/13/2004   | 200501134                   | 15145      | 6/13/2011  |
| Kyrgyz Republic              | Granted   |             | 200501134 (PTE Application) | 15145      | 5/31/2012  |
| Moldova                      | Granted   | 1/13/2004   | 200501134                   | 15145      | 6/13/2011  |
| Tajikistan                   | Granted   | 1/13/2004   | 200501134                   | 15145      | 6/13/2011  |
| Turkmenistan                 | Granted   | 1/13/2004   | 200501134                   | 15145      | 6/13/2011  |
| Turkmenistan                 | Pending   |             | 200501134 (PTE Application) |            |            |

##### (677) Title: A PHARMACEUTICAL COMPOSITION, A METHOD OF PREPARING THEREOF, AND A METHOD OF TREATING VIRAL DISEASES USING SAID COMPOSITION

| Country | Status | Filing Date | Application No. | Patent No. | Issue Date |
|---------|--------|-------------|-----------------|------------|------------|
|---------|--------|-------------|-----------------|------------|------------|

|                                     |           |           |                 |            |           |
|-------------------------------------|-----------|-----------|-----------------|------------|-----------|
| <b>Armenia</b>                      | Granted   | 6/13/2006 | 200800033       | 17764      | 3/29/2013 |
| <b>Eurasian Patent Organization</b> | Published | 6/13/2006 | 201201265       |            |           |
| <b>Eurasian Patent Organization</b> | Granted   | 6/13/2006 | 200800033       | 17764      | 3/29/2013 |
| <b>India</b>                        | Pending   | 6/13/2006 | 9661/DELNP/2007 |            |           |
| <b>Kazakhstan</b>                   | Granted   | 6/13/2006 | 200800033       | 17764      | 3/29/2013 |
| <b>Kyrgyz Republic</b>              | Granted   | 6/13/2006 | 200800033       | 17764      | 3/29/2013 |
| <b>Moldova</b>                      | Granted   | 6/13/2006 | 200800033       | 17764      | 3/29/2013 |
| <b>South Africa</b>                 | Granted   | 6/13/2006 | 2008/00297      | 2008/00297 | 4/28/2010 |
| <b>Tajikistan</b>                   | Granted   | 6/13/2006 | 200800033       | 17764      | 3/29/2013 |
| <b>Turkmenistan</b>                 | Granted   | 6/13/2006 | 200800033       | 17764      | 3/29/2013 |

#### TAF Patents

(249) Title: PRODRUGS OF PHOSPHONATE NUCLEOTIDE ANALOGUES AND METHODS FOR SELECTING AND MAKING SAME

| Country                                                  | Status    | Application No.  | Filing Date | Patent No.      | Issue Date |
|----------------------------------------------------------|-----------|------------------|-------------|-----------------|------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Granted   | 1200300003       | 7/20/2001   | 12393           | 12/29/2003 |
| <b>African Regional Industrial Property Organization</b> | Granted   | 2003/002724      | 7/20/2001   | AP 1466         | 9/22/2005  |
| <b>Anguilla</b>                                          | Granted   | AI/A/2015/00173  | 7/20/2001   | AI/A/2015/00173 | 11/2/2015  |
| <b>Congo, Democratic Republic of</b>                     | Granted   | NP/002/EXT/2016  | 7/20/2001   | 2016/4386       | 11/11/2016 |
| <b>Ethiopia</b>                                          | Granted   | ET/PI/15/184     | 7/20/2001   | 135             | 5/25/2016  |
| <b>Eurasian Patent Organization</b>                      | Granted   | 200300188        | 7/20/2001   | 4926            | 10/28/2004 |
| <b>Falkland Islands (Malvinas)</b>                       | Granted   |                  | 7/20/2001   | 15365           | 8/25/2015  |
| <b>Fiji</b>                                              | Published | 1214             | 7/20/2001   |                 |            |
| <b>Grenada</b>                                           | Granted   | 7 of 2015        | 7/20/2001   | 7 of 2015       | 10/6/2015  |
| <b>Guyana</b>                                            | Published | 1641             | 7/20/2001   |                 |            |
| <b>Haiti</b>                                             | Pending   |                  | 7/20/2001   |                 |            |
| <b>India</b>                                             | Granted   | 9/MUMNP/2003     | 7/20/2001   | 208435          | 7/27/2007  |
| <b>India</b>                                             | Granted   | 00529/MUMNP/2006 | 7/20/2001   | 241597          | 7/14/2010  |
| <b>Indonesia</b>                                         | Granted   | W-00200602129    | 7/20/2001   | IDP0022897      | 2/20/2009  |
| <b>Indonesia</b>                                         | Granted   | W-00200804005    | 7/20/2001   | IDP000040148    | 2/15/2016  |

|                                 |         |              |           |            |            |
|---------------------------------|---------|--------------|-----------|------------|------------|
| <b>Indonesia</b>                | Granted | W00200300261 | 7/20/2001 | IDP0022911 | 2/20/2009  |
| <b>Jamaica</b>                  | Pending | 18/1/5695    | 7/20/2001 |            |            |
| <b>Kiribati</b>                 | Granted | 14/15        | 7/20/2001 | 14/15      | 10/7/2015  |
| <b>Montserrat</b>               | Granted | 1961695.2    | 7/20/2001 | 1301519    | 9/23/2015  |
| <b>Nepal</b>                    | Pending | 669          | 7/20/2001 |            |            |
| <b>Seychelles</b>               | Granted | 1301519      | 7/20/2001 | 1301519    | 5/25/2016  |
| <b>Sierra Leone</b>             | Pending | EP1301519    | 7/20/2001 |            |            |
| <b>Solomon Islands</b>          | Granted | J37/371      | 7/20/2001 | J37/371    | 3/3/2016   |
| <b>South Africa</b>             | Granted | 2002/10271   | 7/20/2001 | 2002/10271 | 12/31/2003 |
| <b>Turks and Caicos Islands</b> | Pending | 10213        | 7/20/2001 |            |            |
| <b>Tuvalu</b>                   | Granted |              | 2/25/2015 | TVP1301519 | 1/6/2016   |
| <b>Vietnam</b>                  | Granted | 1-2002-01193 | 7/20/2001 | 8475       | 5/24/2010  |
| <b>Virgin Islands (British)</b> | Granted | 414/5/2015   | 7/20/2001 | 414/5/2015 | 12/1/2015  |

**(872) Title: TENOFOVIR ALAFENAMIDE HEMIFUMARATE**

| Country                                                  | Status    | Application No.  | Filing Date | Patent No.    | Issue Date |
|----------------------------------------------------------|-----------|------------------|-------------|---------------|------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Granted   | 1201400057       | 8/15/2012   | 17070         | 6/29/2015  |
| <b>African Regional Industrial Property Organization</b> | Granted   | AP/P/2014/007437 | 8/15/2012   | 3639          | 3/31/2016  |
| <b>Bahamas</b>                                           | Granted   | 2441             | 8/15/2012   | 2441          | 6/19/2014  |
| <b>Bolivia</b>                                           | Pending   | SP-0277-2012     | 8/15/2012   |               |            |
| <b>Ecuador</b>                                           | Pending   | SP-14-13206-PCT  | 8/15/2012   |               |            |
| <b>El Salvador</b>                                       | Pending   | E-4659-2014      | 8/15/2012   |               |            |
| <b>Eurasian Patent Organization</b>                      | Published | 201490208        | 8/15/2012   |               |            |
| <b>India</b>                                             | Pending   | 1012/DELNP/2014  | 8/15/2012   |               |            |
| <b>Indonesia</b>                                         | Published | P00201400805     | 8/15/2012   |               |            |
| <b>Moldova</b>                                           | Pending   | A20140011        | 8/15/2012   |               |            |
| <b>Pakistan</b>                                          | Pending   | 539/2012         | 8/15/2012   |               |            |
| <b>Philippines</b>                                       | Granted   | 1-2014-500349    | 8/15/2012   | 1-2014-500349 | 2/29/2016  |
| <b>South Africa</b>                                      | Allowed   | 2014/00582       | 8/15/2012   |               |            |
| <b>Thailand</b>                                          | Pending   | 1401000784       | 8/15/2012   |               |            |
| <b>Vietnam</b>                                           | Pending   | 1-2014-00440     | 8/15/2012   |               |            |

**(877) Title: METHODS FOR PREPARING ANTI-VIRAL NUCLEOTIDE ANALOGS**

| Country                             | Status    | Application No. | Filing Date | Patent No. | Issue Date |
|-------------------------------------|-----------|-----------------|-------------|------------|------------|
| <b>Bahamas</b>                      | Granted   | 2455            | 10/3/2012   | 2455       | 6/24/2014  |
| <b>Bolivia</b>                      | Granted   | SP-0352-2012    | 10/3/2012   | 6385-B     | 11/26/2014 |
| <b>Ecuador</b>                      | Published | IEPI-2014-74    | 10/3/2012   |            |            |
| <b>El Salvador</b>                  | Published | E-4696/2014     | 10/3/2012   |            |            |
| <b>Eurasian Patent Organization</b> | Allowed   | 201490753       | 10/3/2012   |            |            |
| <b>India</b>                        | Published | 2953/DELNP/2014 | 10/3/2012   |            |            |
| <b>Pakistan</b>                     | Pending   | 671/2012        | 10/3/2012   |            |            |

#### **EVG Patents**

**(JF-0136) Title: COMPOUND AND METHOD OF USE**

| Country             | Status  | Application No.  | Filing Date | Patent No.    |            |
|---------------------|---------|------------------|-------------|---------------|------------|
| <b>Bolivia</b>      | Pending | SP-230265        | 11/18/2003  |               |            |
| <b>India</b>        | Granted | 01316/CHENP/2004 | 11/20/2003  | 245833        | 2/3/2011   |
| <b>Indonesia</b>    | Granted | WO00200401542    | 11/20/2003  | P0023507      | 6/1/2009   |
| <b>Nigeria</b>      | Granted | 424/2003         | 11/19/2003  | RP.15779      | 10/20/2004 |
| <b>Philippines</b>  | Granted | 1-2004-500895    | 11/20/2003  | 1-2004-500895 | 8/20/2008  |
| <b>South Africa</b> | Granted | 2004/4537        | 11/20/2003  | 2004/4537     | 8/31/2005  |
| <b>Thailand</b>     | Pending | 301004379        | 11/20/2003  |               |            |
| <b>Vietnam</b>      | Granted | 1-2004-00605     | 11/20/2003  | 1-0011884     | 10/7/2013  |

**(JF-0179) Title: CRYSTALLINE FORM**

| Country             | Status  | Application No. | Filing Date | Patent No.    |            |
|---------------------|---------|-----------------|-------------|---------------|------------|
| <b>Bolivia</b>      | Pending | SP-250121       | 5/19/2005   |               |            |
| <b>India</b>        | Pending | 357/CHENP/2010  | 5/19/2005   |               |            |
| <b>Philippines</b>  | Granted | 1-2006-502297   | 5/19/2005   | 1-2006-502297 | 11/19/2010 |
| <b>South Africa</b> | Granted | 2006/10647      | 5/19/2005   | 2006/10647    | 6/25/2008  |
| <b>Thailand</b>     | Pending | 100718          | 5/19/2005   |               |            |

**(JF-0193) Title: MANUFACTURING PROCESS: ROUTE D AND F**

| Country      | Status  | Application No. | Filing Date | Patent No. | Issue Date |
|--------------|---------|-----------------|-------------|------------|------------|
| <b>India</b> | Granted | 5344/CHENP/2008 | 3/6/2007    | 258895     | 2/13/2014  |
| <b>India</b> | Pending | 532/CHENP/2014  | 3/6/2007    |            |            |

**(JF-0192) Title: MANUFACTURING PROCESS: ROUTE C AND E**

| Country                                                  | Status  | Application No.  | Filing Date | Patent No. | Issue Date |
|----------------------------------------------------------|---------|------------------|-------------|------------|------------|
| <b>African Regional Industrial Property Organization</b> | Granted | AP/P/2008/004621 | 3/6/2007    | 2914       | 5/5/2014   |
| <b>Eurasian Patent Organization</b>                      | Granted | 200870321        | 3/6/2007    | 17861      | 3/29/2013  |
| <b>Indonesia</b>                                         | Pending | W00200802860     | 3/6/2007    | IDP0032077 | 10/22/2012 |
| <b>India</b>                                             | Granted | 5341/CHENP/2008  | 3/6/2007    | 258747     | 2/4/2014   |
| <b>India</b>                                             | Pending | 613/CHENP/2014   | 3/6/2007    |            |            |
| <b>African Intellectual Property Organization (OAPI)</b> | Granted | 1200800317       | 3/6/2007    | 14280      | 3/31/2009  |
| <b>Vietnam</b>                                           | Granted | 1-2008-02431     | 3/6/2007    | 14450      | 8/17/2015  |
| <b>South Africa</b>                                      | Granted | 2008/07547       | 3/6/2007    | 2008/07547 | 11/25/2009 |

(718) Title: METHODS OF IMPROVING THE PHARMACOKINETICS OF HIV INTEGRASE INHIBITORS

| Country                                                  | Status    | Application No.  | Filing Date | Patent No. |           |
|----------------------------------------------------------|-----------|------------------|-------------|------------|-----------|
| <b>Armenia</b>                                           | Granted   | 200801619        | 12/29/2006  | 18544      | 8/30/2013 |
| <b>African Regional Industrial Property Organization</b> | Granted   | AP/P/2008/004522 | 12/29/2006  | AP2702     | 7/31/2013 |
| <b>Eurasian Patent Organization</b>                      | Granted   | 200801619        | 12/29/2006  | 18544      | 8/30/2013 |
| <b>Eurasian Patent Organization</b>                      | Published | 201201496        | 12/29/2006  |            |           |
| <b>Indonesia</b>                                         | Pending   | W00201102461     | 12/29/2006  |            |           |
| <b>Indonesia</b>                                         | Published | W00 2008 02128   | 12/29/2006  |            |           |
| <b>India</b>                                             | Pending   | 6748/DELNP/2015  | 12/29/2006  |            |           |
| <b>India</b>                                             | Pending   | 5576/DELNP/2008  | 12/29/2006  |            |           |
| <b>Kyrgyz Republic</b>                                   | Granted   | 200801619        | 12/29/2006  | 18544      | 8/30/2013 |
| <b>Moldova</b>                                           | Granted   | 200801619        | 12/29/2006  | 18544      | 8/30/2013 |
| <b>African Intellectual Property Organization (OAPI)</b> | Granted   | 1200800239       | 12/29/2006  | 14320      | 6/30/2009 |
| <b>Tajikistan</b>                                        | Granted   | 200801619        | 12/29/2006  | 18544      | 8/30/2013 |
| <b>Turkmenistan</b>                                      | Granted   | 200801619        | 12/29/2006  | 18544      | 8/30/2013 |
| <b>Vietnam</b>                                           | Pending   | 1-2008-01921     | 12/29/2006  |            |           |
| <b>South Africa</b>                                      | Granted   | 2008/06222       | 12/29/2006  | 2008/06222 | 3/25/2009 |

(720) Title: PROCESS AND INTERMEDIATES FOR PREPARING INTEGRASE INHIBITORS

| Country                                           | Status    | Application No.  | Filing Date | Patent Number | Issue Date |
|---------------------------------------------------|-----------|------------------|-------------|---------------|------------|
| Armenia                                           | Granted   | 200900441        | 9/11/2007   | 22099         | 11/30/2015 |
| African Regional Industrial Property Organization | Granted   | AP/P/2009/004831 | 9/11/2007   | AP3004        | 10/16/2014 |
| Eurasian Patent Organization                      | Granted   | 200900441        | 9/11/2007   | 22099         | 11/30/2015 |
| Indonesia                                         | Published | W00200900634     | 9/11/2007   |               |            |
| Kyrgyz Republic                                   | Granted   | 200900441        | 9/11/2007   | 22099         | 11/30/2015 |
| Kazakhstan                                        | Granted   | 200900441        | 9/11/2007   | 22099         | 11/30/2015 |
| Moldova                                           | Granted   | 200900441        | 9/11/2007   | 22099         | 11/30/2015 |
| African Intellectual Property Organization (OAPI) | Granted   | 1200900070       | 9/11/2007   | 14458         | 9/30/2009  |
| Thailand                                          | Published | 701004583        | 9/11/2007   |               |            |
| Tajikistan                                        | Granted   | 200900441        | 9/11/2007   | 22099         | 11/30/2015 |
| Turkmenistan                                      | Granted   | 200900441        | 9/11/2007   | 22099         | 11/30/2015 |
| Vietnam                                           | Granted   | 1-2009-00636     | 9/11/2007   | 11932         | 10/22/2013 |
| Vietnam                                           | Granted   | 1-2012-01354     | 9/11/2007   | 14698         | 10/20/2015 |
| South Africa                                      | Granted   | 2009/01576       | 9/11/2007   | 2009/01576    | 2/24/2010  |

(746) Title: PROCESS AND INTERMEDIATES FOR PREPARING INTEGRASE INHIBITORS

| Country                                           | Status    | Application No.  | Filing Date | Patent Number | Issue Date |
|---------------------------------------------------|-----------|------------------|-------------|---------------|------------|
| African Regional Industrial Property Organization | Granted   | AP/P/2010/005187 | 9/11/2008   | AP 2785       | 10/31/2013 |
| Eurasian Patent Organization                      | Granted   | 201070256        | 9/11/2008   | 19431         | 3/31/2014  |
| Ecuador                                           | Inactive  | SP-10-10081      | 9/11/2008   |               |            |
| Indonesia                                         | Published | W00201000759     | 9/11/2008   |               |            |
| India                                             | Pending   | 1615/DELNP/2010  | 9/11/2008   |               |            |
| African Intellectual Property Organization (OAPI) | Granted   | 1201000093       | 9/11/2008   | 15058         |            |
| Thailand                                          | Published | 801004676        | 9/11/2008   |               |            |
| Vietnam                                           | Granted   | 1-2010-00483     | 9/11/2008   | 10866         | 11/20/2012 |
| South Africa                                      | Granted   | 2010/02066       | 9/11/2008   | 2010/02066    | 12/29/2010 |

(903) Title: PROCESS AND INTERMEDIATES FOR PREPARING INTEGRASE INHIBITORS

| Country                      | Status  | Application No. | Filing Date | Patent No. |
|------------------------------|---------|-----------------|-------------|------------|
| Eurasian Patent Organization | Allowed | 201590018       | 8/1/2013    |            |
| India                        | Pending | 1688/DELNP/2015 | 8/1/2013    |            |

### COBI Patents

(692) Title: MODULATORS OF PHARMACOKINETIC PROPERTIES OF THERAPEUTICS

| Country                                                  | Status    | Application No.  | Filing Date | Patent No.      |
|----------------------------------------------------------|-----------|------------------|-------------|-----------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Granted   | 1200800450       | 9/30/2009   | 14409           |
| <b>African Regional Industrial Property Organization</b> | Granted   | AP/P/2008/004720 | 9/30/2014   | AP2985          |
| <b>Anguilla</b>                                          | Granted   | AI/A/2015/00172  | 11/2/2015   | AI/A/2015/00172 |
| <b>Armenia</b>                                           | Granted   | 200900155        | 11/28/2014  | 20489           |
| <b>Congo, Democratic Republic of</b>                     | Pending   | NP/004/EXT/2016  |             |                 |
| <b>Ethiopia</b>                                          | Granted   | ET/PI/15/185     | 5/25/2016   | 134             |
| <b>Eurasian Patent Organization</b>                      | Allowed   | 201270738        |             |                 |
| <b>Eurasian Patent Organization</b>                      | Granted   | 200900155        | 11/28/2014  | 20489           |
| <b>Fiji</b>                                              | Published | 1217             |             |                 |
| <b>Guyana</b>                                            | Published | 1642             |             |                 |
| <b>Haiti</b>                                             | Pending   |                  |             |                 |
| <b>India</b>                                             | Pending   | 10487/DELNP/2008 |             |                 |
| <b>Indonesia</b>                                         | Granted   | W00200900061     | 8/12/2016   | IDP00042227     |
| <b>Jamaica</b>                                           | Pending   | 18/1/5696        |             |                 |
| <b>Kazakhstan</b>                                        | Granted   | 200900155        | 11/28/2014  | 20489           |
| <b>Kiribati</b>                                          | Granted   | 13/15            | 10/7/2015   | 13/15           |
| <b>Kyrgyz Republic</b>                                   | Granted   | 200900155        | 11/28/2014  | 20489           |
| <b>Moldova</b>                                           | Granted   | 200900155        | 11/28/2014  | 20489           |
| <b>Montserrat</b>                                        | Granted   |                  | 9/23/2015   | 3 of 2015       |
| <b>Nauru</b>                                             | Pending   |                  |             |                 |
| <b>Nepal</b>                                             | Pending   | 894              |             |                 |
| <b>Seychelles</b>                                        | Granted   | 2049506          | 5/25/2016   | 2049506         |
| <b>Sierra Leone</b>                                      | Pending   | EP2049506        |             |                 |
| <b>Solomon Islands</b>                                   | Granted   | J37/370          | 2/10/2016   | J37/370         |
| <b>South Africa</b>                                      | Pending   | 2008/10399       |             |                 |
| <b>Tajikistan</b>                                        | Granted   | 200900155        | 11/28/2014  | 20489           |
| <b>Thailand</b>                                          | Published | 701003404        |             |                 |
| <b>Turkmenistan</b>                                      | Granted   | 200900155        | 11/28/2014  | 20489           |
| <b>Turks and Caicos Islands</b>                          | Pending   | 10214            |             |                 |
| <b>Tuvalu</b>                                            | Granted   |                  | 11/7/2015   | TVP2049506      |
| <b>Vanuatu</b>                                           | Unfiled   |                  |             |                 |
| <b>Vietnam</b>                                           | Pending   | 1-2009-00240     |             |                 |
| <b>Vietnam</b>                                           | Pending   | 1-2012-02702     |             |                 |
| <b>Virgin Islands (British)</b>                          | Granted   | 415/6/2015       | 12/1/2015   | 415/6/2015      |

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(719) Title: MODULATORS OF PHARMACOKINETIC PROPERTIES OF THERAPEUTICS

| Country                                                  | Status  | Application No.  | Filing Date | Patent No.   |
|----------------------------------------------------------|---------|------------------|-------------|--------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Granted | 1200900273       | 6/30/2010   | 14749        |
| <b>African Regional Industrial Property Organization</b> | Granted | AP/P/2009/004964 | 9/16/2014   | AP2986       |
| <b>African Regional Industrial Property Organization</b> | Granted | AP/P/2013/007042 | 11/30/2016  | AP3915       |
| <b>Armenia</b>                                           | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Eurasian Patent Organization</b>                      | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Fiji</b>                                              | Granted |                  |             |              |
| <b>Indonesia</b>                                         | Granted | W00200902299     | 3/18/2015   | IDP000038076 |
| <b>Kazakhstan</b>                                        | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Kyrgyz Republic</b>                                   | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Moldova</b>                                           | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>South Africa</b>                                      | Pending | 2009/05882       |             |              |
| <b>South Africa</b>                                      | Unfiled |                  |             |              |
| <b>Tajikistan</b>                                        | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Thailand</b>                                          | Pending | 801000867        |             |              |
| <b>Turkmenistan</b>                                      | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Vietnam</b>                                           | Pending | 1-2009-01990     |             |              |
| <b>Vietnam</b>                                           | Pending | 1-2012-02696     |             |              |

(757) Title: THE USE OF SOLID CARRIER PARTICLES TO IMPROVE THE PROCESSABILITY OF A PHARMACEUTICAL AGENT

| Country                                                  | Status    | Application No.  | Filing Date | Patent No. |
|----------------------------------------------------------|-----------|------------------|-------------|------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Granted   | 1201000364       | 9/28/2012   | 15589      |
| <b>African Regional Industrial Property Organization</b> | Granted   | AP/P/2010/005429 | 1/30/2015   | 3209       |
| <b>Armenia</b>                                           | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>Belarus</b>                                           | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>Ecuador</b>                                           | Pending   | SP-10-10636      |             |            |
| <b>Eurasian Patent Organization</b>                      | Published | 201591353        |             |            |
| <b>Eurasian Patent Organization</b>                      | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>India</b>                                             | Pending   | 7565/DELNP/2010  |             |            |
| <b>Indonesia</b>                                         | Published | W00201004105     |             |            |
| <b>Kazakhstan</b>                                        | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>Kyrgyz Republic</b>                                   | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>Moldova</b>                                           | Granted   | 201071173        | 3/31/2016   | 22950      |

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|                     |         |              |            |            |
|---------------------|---------|--------------|------------|------------|
| <b>South Africa</b> | Granted | 2010/08007   | 10/26/2011 | 2010/08007 |
| <b>Tajikistan</b>   | Granted | 201071173    | 3/31/2016  | 22950      |
| <b>Turkmenistan</b> | Granted | 201071173    | 3/31/2016  | 22950      |
| <b>Vietnam</b>      | Pending | 1-2010-02929 |            |            |

**(775) Title: METHOD OF PREPARING AN INHIBITOR OF CYTOCHROME P450 MONOOXYGENASE, AND INTERMEDIATES INVOLVED**

| Country                                                  | Status    | Application No.  | Filing Date | Patent No.   |
|----------------------------------------------------------|-----------|------------------|-------------|--------------|
| <b>African Regional Industrial Property Organization</b> | Granted   | AP/P/2011/005864 |             |              |
| <b>African Intellectual Property Organization (OAPI)</b> | Granted   | 1201100311.00    | 4/1/2010    | 15801        |
| <b>Bolivia</b>                                           | Published | SP-0082-2010     | 4/1/2010    |              |
| <b>Eurasian Patent Organization</b>                      | Granted   | 201190179.00     | 4/1/2010    | 22739        |
| <b>Eurasian Patent Organization</b>                      | Published | 201590979.00     | 4/1/2010    |              |
| <b>Ecuador</b>                                           | Pending   | SP-11-11391      | 4/1/2010    |              |
| <b>Indonesia</b>                                         | Granted   | W00201103554     | 4/1/2010    | IDP000041448 |
| <b>India</b>                                             | Pending   | 7323/DELNP/2011  | 4/1/2010    |              |
| <b>Pakistan</b>                                          | Pending   | 262/2010         | 3/31/2010   |              |
| <b>Thailand</b>                                          | Published | 1101002473.00    | 4/1/2010    |              |
| <b>Vietnam</b>                                           | Pending   | 1-2011-02324     | 4/1/2010    |              |
| <b>South Africa</b>                                      | Granted   | 2011/07430       | 4/1/2010    | 2011/07430   |

**(783) Title: TABLETS FOR COMBINATION THERAPY**

| Country                                                  | Status    | Application No. | Filing Date | Patent No.   |
|----------------------------------------------------------|-----------|-----------------|-------------|--------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Pending   | 1201100281      |             |              |
| <b>African Regional Industrial Property Organization</b> | Granted   | AP/P/2011/05857 | 5/6/2015    | AP3250       |
| <b>Armenia</b>                                           | Granted   | 201190125       | 5/29/2015   | 21313        |
| <b>Azerbaijan</b>                                        | Granted   | 201190125       | 5/29/2015   | 21313        |
| <b>Bolivia</b>                                           | Pending   | SP-00292010     |             |              |
| <b>Ecuador</b>                                           | Pending   | SP-11-11307     |             |              |
| <b>Eurasian Patent Organization</b>                      | Published | 201491658       |             |              |
| <b>Eurasian Patent Organization</b>                      | Granted   | 201190125       | 5/29/2015   | 21313        |
| <b>India</b>                                             | Pending   | 5823/DELNP/2011 |             |              |
| <b>Indonesia</b>                                         | Granted   | W00201103098    | 3/30/2016   | IDP000040606 |
| <b>Kazakhstan</b>                                        | Granted   | 201190125       | 5/29/2015   | 21313        |
| <b>Kyrgyz Republic</b>                                   | Granted   | 201190125       | 5/29/2015   | 21313        |

|                     |           |              |           |            |
|---------------------|-----------|--------------|-----------|------------|
| <b>Moldova</b>      | Granted   | 201190125    | 5/29/2015 | 21313      |
| <b>Pakistan</b>     | Allowed   | 94/2010      |           |            |
| <b>Singapore</b>    | Published | 2014007744   |           |            |
| <b>South Africa</b> | Granted   | 2011/06154   | 5/28/2014 | 2011/06154 |
| <b>Tajikistan</b>   | Granted   | 201190125    | 5/29/2015 | 21313      |
| <b>Thailand</b>     | Published | 1101001423   |           |            |
| <b>Turkmenistan</b> | Granted   | 201190125    | 5/29/2015 | 21313      |
| <b>Vietnam</b>      | Pending   | 1-2011-02035 |           |            |

(895) Title: METHODS AND INTERMEDIATES FOR PREPARING PHARMACEUTICAL AGENTS

| Country      | Status    | Application No. | Filing Date | Patent No. |
|--------------|-----------|-----------------|-------------|------------|
| <b>India</b> | Abandoned | 6192/DELNP/2014 |             |            |

#### BIC Patents

(1007) TITLE: POLYCYCLIC-CARBAMOYLPYRIDONE COMPOUNDS AND THEIR PHARMACEUTICAL USE

| Country                                                  | Status    | Application No.  | Filing Date | Patent No. | Issue Date |
|----------------------------------------------------------|-----------|------------------|-------------|------------|------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Pending   | 1201500240       | 12/19/2013  |            |            |
| <b>African Regional Industrial Property Organization</b> | Pending   | AP/P/2015/008510 | 12/19/2013  |            |            |
| <b>Anguilla</b>                                          | Pending   | AI/A/2016/00180  | 12/19/2013  |            |            |
| <b>Bahamas</b>                                           | Pending   | 2551             | 12/19/2013  |            |            |
| <b>Bolivia</b>                                           | Published | SP-00412-2013    | 12/20/2013  |            |            |
| <b>Congo, Democratic Republic of</b>                     | Pending   |                  | 12/19/2013  |            |            |
| <b>Ecuador</b>                                           | Published | IEPI-2015-31224  | 12/19/2013  |            |            |
| <b>El Salvador</b>                                       | Published | E-5002-2015      | 12/19/2013  |            |            |
| <b>Ethiopia</b>                                          | Pending   | ET/PI/16/204     | 12/19/2013  |            |            |
| <b>Eurasian Patent Organization</b>                      | Published | 201591027        | 12/19/2013  |            |            |
| <b>Fiji</b>                                              | Published | 1229             | 12/19/2013  |            |            |
| <b>Grenada</b>                                           | Granted   |                  | 12/19/2013  |            | 7/19/2016  |
| <b>Guyana</b>                                            | Pending   | 1656             | 12/19/2013  |            |            |
| <b>Haiti</b>                                             | Pending   |                  | 12/19/2013  |            |            |
| <b>India</b>                                             | Pending   | 5535/DELNP/2015  | 12/19/2013  |            |            |
| <b>Indonesia</b>                                         | Allowed   | P00201503852     | 12/19/2013  |            |            |

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|                                 |           |                 |            |            |           |
|---------------------------------|-----------|-----------------|------------|------------|-----------|
| <b>Indonesia</b>                | Pending   | P00201607128    | 12/19/2013 |            |           |
| <b>Jamaica</b>                  | Pending   | 18/1/5740       | 12/19/2013 |            |           |
| <b>Kiribati</b>                 | Granted   |                 | 12/19/2013 |            | 9/20/2016 |
| <b>Moldova</b>                  | Pending   | a20150064       | 12/19/2013 |            |           |
| <b>Montserrat</b>               | Granted   |                 | 12/19/2013 | 4 OF 2016  | 5/27/2016 |
| <b>Nepal</b>                    | Pending   | 4               | 12/19/2013 |            |           |
| <b>Pakistan</b>                 | Pending   | 908/2013        | 12/20/2013 |            |           |
| <b>Philippines</b>              | Published | 1-2015-501445   | 12/19/2013 |            |           |
| <b>Philippines</b>              | Pending   | 1-2016-500389   | 12/19/2013 |            |           |
| <b>Seychelles</b>               | Pending   | 2822954         | 12/19/2013 |            |           |
| <b>Sierra Leone</b>             | Pending   |                 | 12/19/2013 |            |           |
| <b>Solomon Islands</b>          | Granted   |                 | 12/19/2013 | J37/379    | 8/5/2016  |
| <b>South Africa</b>             | Pending   | 2015/04914      | 12/19/2013 |            |           |
| <b>South Africa</b>             | Pending   | 2015/07997      | 12/19/2013 |            |           |
| <b>South Korea</b>              | Pending   | 10-2015-7019194 | 12/19/2013 |            |           |
| <b>Thailand</b>                 | Pending   | 1501003563      | 12/19/2013 |            |           |
| <b>Turks and Caicos Islands</b> | Granted   | 10226           | 12/19/2013 | 10226      | 9/7/2016  |
| <b>Tuvalu</b>                   | Granted   | TVP2822954      | 12/19/2013 | TVP2822954 | 8/15/2016 |
| <b>Vietnam</b>                  | Granted   | 1-2015-02321    | 12/19/2013 | 15503      | 5/16/2016 |
| <b>Vietnam</b>                  | Pending   | 1-2015-04199    | 12/19/2013 |            |           |
| <b>Virgin Islands (British)</b> | Granted   | EP2822954       | 12/19/2013 | 427/5/2016 | 9/21/2016 |

(1091) Title: SODIUM (2R,5S,13AR)-7,9-DIOXO-10-((2,4,6-TRIFLUOROBENZYL)CARBAMOYL)-2,3,4,5,7,9,13,13A-OCTAHYDRO-2,5-METHANOPYRIDO[1',2':4,5]PYRAZINO[2,1-B]OXAZEPIN-8-OLATE

| Country                                                  | Status    | Application No.  | Filing Date | Patent No. | Issue Date |
|----------------------------------------------------------|-----------|------------------|-------------|------------|------------|
| <b>African Regional Industrial Property Organization</b> | Pending   | AP/P/2016/009591 | 6/19/2015   |            |            |
| <b>African Intellectual Property Organization (OAPI)</b> | Pending   | 1201600454       | 6/19/2015   |            |            |
| <b>Bolivia</b>                                           | Published | SP 126-2015      | 6/19/2015   |            |            |
| <b>Bahamas</b>                                           | Allowed   | 2701             | 6/18/2015   |            |            |
| <b>Cuba</b>                                              | Pending   | 2016-0187        | 6/19/2015   |            |            |
| <b>Dominican Republic</b>                                | Published | P2016-0327       | 6/19/2015   |            |            |
| <b>Eurasian Patent Organization</b>                      | Pending   | 201692414        | 6/19/2015   |            |            |
| <b>Ecuador</b>                                           | Published | IEPI-2016-95566  | 6/19/2015   |            |            |
| <b>El Salvador</b>                                       | Pending   | 2016005339       | 6/19/2015   |            |            |
| <b>Guatemala</b>                                         | Pending   | A2016-000262     | 6/19/2015   |            |            |

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|                            |         |                   |           |
|----------------------------|---------|-------------------|-----------|
| <b>Indonesia</b>           | Unfiled |                   |           |
| <b>India</b>               | Pending | 201617042937.00   | 6/19/2015 |
| <b>Nigeria</b>             | Pending | NG/PT/C/2016/2106 | 6/19/2015 |
| <b>Philippines</b>         | Pending |                   |           |
| <b>Pakistan</b>            | Pending | 382/2015          | 6/18/2015 |
| <b>Thailand</b>            | Pending |                   |           |
| <b>Trinidad and Tobago</b> | Pending | TT/A/2016/00132   | 6/19/2015 |
| <b>Vietnam</b>             | Pending |                   |           |
| <b>South Africa</b>        | Pending | 2016/08744        | 6/19/2015 |

**(1147) Title: THERAPEUTIC COMPOSITIONS FOR TREATMENT OF HUMAN IMMUNODEFICIENCY VIRUS**

| Country                          | Status     | Application No. | Filing Date | Patent No. | Issue Date |
|----------------------------------|------------|-----------------|-------------|------------|------------|
| <b>Bangladesh</b>                | Pending    | 272/2016        | 11/2/2016   |            |            |
| <b>Bolivia</b>                   | Pending    | SP-0260-2016    | 11/9/2016   |            |            |
| <b>Bahamas</b>                   | Pending    |                 | 11/8/2016   |            |            |
| <b>Pakistan</b>                  | Pending    | 696/2016        | 11/9/2016   |            |            |
| <b>Patent Cooperation Treaty</b> | Entered NP | US2016/060989   | 11/8/2016   |            |            |

**(1062) Title: SYNTHESIS OF POLYCYCLIC-CARBAMOYLPYRIDONE COMPOUNDS**

| Country                             | Status     | Application No. | Filing Date | Patent No. | Issue Date |
|-------------------------------------|------------|-----------------|-------------|------------|------------|
| <b>Bahamas</b>                      | Allowed    | 2702            | 6/18/2015   |            |            |
| <b>Eurasian Patent Organization</b> | Pending    | 201692412       | 6/16/2015   |            |            |
| <b>India</b>                        | Pending    | 201717000457.00 | 6/16/2015   |            |            |
| <b>Patent Cooperation Treaty</b>    | Entered NP | US2015/036017   | 6/16/2015   |            |            |

**TDF-Quad Patents**

**(221) Title: NUCLEOTIDE ANALOGS**

| Country      | Status  | Filing Date | Application No. | Patent No. | Issue Date |
|--------------|---------|-------------|-----------------|------------|------------|
| <b>India</b> | Pending | 7/25/1997   | 2076/DEL/1997   |            |            |

**(230) Title: NUCLEOTIDE ANALOG COMPOSITION AND SYNTHESIS METHOD**

| Country      | Status  | Filing Date | Application No. | Patent No. | Issue Date |
|--------------|---------|-------------|-----------------|------------|------------|
| <b>India</b> | Pending | 7/24/1998   | 896/DEL/2002    |            |            |

|                  |         |           |               |        |           |
|------------------|---------|-----------|---------------|--------|-----------|
| <b>India</b>     | Pending | 7/24/1998 | 963/DEL/2002  |        |           |
| <b>India</b>     | Pending | 7/24/1998 | 1362/DEL/2004 |        |           |
| <b>India</b>     | Granted | 7/24/1998 | 2174/DEL/1998 | 190780 | 3/15/2004 |
| <b>Indonesia</b> | Granted | 7/23/1998 | W-991548      | 7658   | 4/11/2002 |

**(692) Title: DIAMINOALKANE COMPOUNDS (VARIANTS) AND A METHOD OF PREPARING THEREOF (VARIANTS), A PHARMACEUTICAL COMPOSITION AND A THERAPEUTIC AGENT FOR INHIBITING CYTOCHROME-P450-MONOOXYGENASE, METHODS FOR TREATING AN HIV INFECTION AND VIRAL HEPATITS C, A METHOD OF MOD**

| Country                                                  | Status    | Application No.  | Filing Date | Patent No.      | Issue Date |
|----------------------------------------------------------|-----------|------------------|-------------|-----------------|------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Granted   | 1200800450       | 9/30/2009   | 14409           |            |
| <b>African Regional Industrial Property Organization</b> | Granted   | AP/P/2008/004720 | 9/30/2014   | AP2985          |            |
| <b>Anguilla</b>                                          | Granted   | AI/A/2015/00172  | 11/2/2015   | AI/A/2015/00172 |            |
| <b>Armenia</b>                                           | Granted   | 200900155        | 11/28/2014  | 20489           |            |
| <b>Congo, Democratic Republic of</b>                     | Pending   | NP/004/EXT/2016  |             |                 |            |
| <b>Ethiopia</b>                                          | Granted   | ET/PI/15/185     | 5/25/2016   | 134             |            |
| <b>Eurasian Patent Organization</b>                      | Allowed   | 201270738        |             |                 |            |
| <b>Eurasian Patent Organization</b>                      | Granted   | 200900155        | 11/28/2014  | 20489           |            |
| <b>Fiji</b>                                              | Published | 1217             |             |                 |            |
| <b>Guyana</b>                                            | Published | 1642             |             |                 |            |
| <b>Haiti</b>                                             | Pending   |                  |             |                 |            |
| <b>India</b>                                             | Pending   | 10487/DELNP/2008 |             |                 |            |
| <b>Indonesia</b>                                         | Granted   | W00200900061     | 8/12/2016   | IDP00042227     |            |
| <b>Jamaica</b>                                           | Pending   | 18/1/5696        |             |                 |            |
| <b>Kazakhstan</b>                                        | Unfiled   |                  |             |                 |            |
| <b>Kazakhstan</b>                                        | Granted   | 200900155        | 11/28/2014  | 20489           |            |
| <b>Kiribati</b>                                          | Granted   | 13/15            | 10/7/2015   | 13/15           |            |
| <b>Kyrgyz Republic</b>                                   | Granted   | 200900155        | 11/28/2014  | 20489           |            |
| <b>Moldova</b>                                           | Granted   | 200900155        | 11/28/2014  | 20489           |            |
| <b>Montserrat</b>                                        | Granted   |                  | 9/23/2015   | 3 of 2015       |            |
| <b>Nauru</b>                                             | Pending   |                  |             |                 |            |
| <b>Nepal</b>                                             | Pending   | 894              |             |                 |            |

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|                                 |           |              |            |            |
|---------------------------------|-----------|--------------|------------|------------|
| <b>Seychelles</b>               | Granted   | 2049506      | 5/25/2016  | 2049506    |
| <b>Sierra Leone</b>             | Pending   | EP2049506    |            |            |
| <b>Solomon Islands</b>          | Granted   | J37/370      | 2/10/2016  | J37/370    |
| <b>South Africa</b>             | Pending   | 2008/10399   |            |            |
| <b>Tajikistan</b>               | Granted   | 200900155    | 11/28/2014 | 20489      |
| <b>Thailand</b>                 | Published | 701003404    |            |            |
| <b>Turkmenistan</b>             | Granted   | 200900155    | 11/28/2014 | 20489      |
| <b>Turks and Caicos Islands</b> | Pending   | 10214        |            |            |
| <b>Tuvalu</b>                   | Granted   |              | 11/7/2015  | TVP2049506 |
| <b>Vietnam</b>                  | Pending   | 1-2009-00240 |            |            |
| <b>Vietnam</b>                  | Pending   | 1-2012-02702 |            |            |
| <b>Virgin Islands (British)</b> | Granted   | 415/6/2015   | 12/1/2015  | 415/6/2015 |

**(719) Title: MODULATORS OF PHARMACOKINETIC PROPERTIES OF THERAPEUTICS**

| Country                                                  | Status  | Application No.  | Filing Date | Patent No.   |
|----------------------------------------------------------|---------|------------------|-------------|--------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Granted | 1200900273       | 6/30/2010   | 14749        |
| <b>African Regional Industrial Property Organization</b> | Granted | AP/P/2009/004964 | 9/16/2014   | AP2986       |
| <b>African Regional Industrial Property Organization</b> | Granted | AP/P/2013/007042 | 11/30/2016  | AP3915       |
| <b>Armenia</b>                                           | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Eurasian Patent Organization</b>                      | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Fiji</b>                                              | Granted |                  |             |              |
| <b>Indonesia</b>                                         | Granted | W00200902299     | 3/18/2015   | IDP000038076 |
| <b>Kazakhstan</b>                                        | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Kyrgyz Republic</b>                                   | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Moldova</b>                                           | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>South Africa</b>                                      | Pending | 2009/05882       |             |              |
| <b>South Africa</b>                                      | Unfiled |                  |             |              |
| <b>Tajikistan</b>                                        | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Thailand</b>                                          | Pending | 801000867        |             |              |
| <b>Turkmenistan</b>                                      | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Vietnam</b>                                           | Pending | 1-2009-01990     |             |              |
| <b>Vietnam</b>                                           | Pending | 1-2012-02696     |             |              |

**(757) Title: THE USE OF SOLID CARRIER PARTICLES TO IMPROVE THE PROCESSABILITY OF A PHARMACEUTICAL AGENT**



| Country                                                  | Status    | Application No.  | Filing Date | Patent No. |
|----------------------------------------------------------|-----------|------------------|-------------|------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Granted   | 1201000364       | 9/28/2012   | 15589      |
| <b>African Regional Industrial Property Organization</b> | Granted   | AP/P/2010/005429 | 1/30/2015   | 3209       |
| <b>Armenia</b>                                           | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>Belarus</b>                                           | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>Ecuador</b>                                           | Pending   | SP-10-10636      |             |            |
| <b>Eurasian Patent Organization</b>                      | Published | 201591353        |             |            |
| <b>Eurasian Patent Organization</b>                      | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>India</b>                                             | Pending   | 7565/DELNP/2010  |             |            |
| <b>Indonesia</b>                                         | Published | W00201004105     |             |            |
| <b>Kazakhstan</b>                                        | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>Kyrgyz Republic</b>                                   | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>Moldova</b>                                           | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>South Africa</b>                                      | Granted   | 2010/08007       | 10/26/2011  | 2010/08007 |
| <b>Tajikistan</b>                                        | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>Turkmenistan</b>                                      | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>Vietnam</b>                                           | Pending   | 1-2010-02929     |             |            |

(775) Title: METHOD OF PREPARING AN INHIBITOR OF CYTOCHROME P450 MONOOXYGENASE, AND INTERMEDIATES INVOLVED

| Country                                                  | Status    | Application No. | Filing Date | Patent No.   |
|----------------------------------------------------------|-----------|-----------------|-------------|--------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Granted   | 1201100311.00   | 4/1/2010    | 15801        |
| <b>Bolivia</b>                                           | Abandoned | 11-114.749      | 4/1/2010    |              |
| <b>Eurasian Patent Organization</b>                      | Granted   | 201190179.00    | 4/1/2010    | 22739        |
| <b>Eurasian Patent Organization</b>                      | Published | 201590979.00    | 4/1/2010    |              |
| <b>Ecuador</b>                                           | Pending   | SP-11-11391     | 4/1/2010    |              |
| <b>Indonesia</b>                                         | Granted   | W00201103554    | 4/1/2010    | IDP000041448 |
| <b>India</b>                                             | Pending   | 7323/DELNP/2011 | 4/1/2010    |              |
| <b>Pakistan</b>                                          | Pending   | 262/2010        | 3/31/2010   |              |
| <b>Thailand</b>                                          | Published | 1101002473.00   | 4/1/2010    |              |
| <b>Vietnam</b>                                           | Pending   | 1-2011-02324    | 4/1/2010    |              |
| <b>South Africa</b>                                      | Granted   | 2011/07430      | 4/1/2010    | 2011/07430   |

(895) Title: METHODS AND INTERMEDIATES FOR PREPARING PHARMACEUTICAL AGENTS



| Country | Status    | Application No. | Filing Date | Patent No. |
|---------|-----------|-----------------|-------------|------------|
| India   | Abandoned | 6192/DELNP/2014 |             |            |

(EMU-108) Title: Antiviral Activity and Resolution of 2-Hydroxymethyl-5-(5-Fluorocytosin-1-yl)-1,3-Oxathiolane

| Country     | Status  | Application No. | Filing Date | Patent No.   | Issue Date |
|-------------|---------|-----------------|-------------|--------------|------------|
| Philippines | Granted | 1-1992-43955    | 2/20/92     | 1-1992-43955 | 2/20/09    |
| Philippines | Granted | 55191           | 12/27/96    | 1-1996-55191 | 3/9/07     |
| Philippines | Granted | 55192           | 2/20/92     | 55192        | 12/19/08   |
| Philippines | Granted | 55193           | 2/20/92     | 55193        | 12/19/08   |
| Philippines | Granted | 55194           | 2/20/92     | 55194        | 12/19/08   |

(EMU-4000) Title: 1,3-Oxathiolane Nucleoside Analogues

| Country            | Status  | Application No.  | Filing Date | Patent No.      | Issue Date |
|--------------------|---------|------------------|-------------|-----------------|------------|
| Botswana           | Granted | BW/A/1998/00163  | 4/27/98     | BW/P/2002/00042 | 5/22/03    |
| Dominican Republic | Granted | 1793970004607.00 | 7/10/97     | 370             | 7/10/17    |
| Honduras           | Granted | PICA97118        | 8/18/97     | 3775            | 4/25/00    |
| Jamaica            | Granted | 697267           | 7/8/97      | 3615            | 5/25/05    |
| Nicaragua          | Granted | 97.0096          | 12/5/97     | 1134RPI         | 5/17/99    |

(783) Title: TABLETS FOR COMBINATION THERAPY

| Country                                           | Status    | Application No. | Filing Date | Patent No.   |
|---------------------------------------------------|-----------|-----------------|-------------|--------------|
| African Intellectual Property Organization (OAPI) | Pending   | 1201100281      |             |              |
| African Regional Industrial Property Organization | Granted   | AP/P/2011/05857 | 5/6/2015    | AP3250       |
| Armenia                                           | Granted   | 201190125       | 5/29/2015   | 21313        |
| Azerbaijan                                        | Granted   | 201190125       | 5/29/2015   | 21313        |
| Bolivia                                           | Pending   | SP-00292010     |             |              |
| Ecuador                                           | Pending   | SP-11-11307     |             |              |
| Eurasian Patent Organization                      | Published | 201491658       |             |              |
| Eurasian Patent Organization                      | Granted   | 201190125       | 5/29/2015   | 21313        |
| India                                             | Pending   | 5823/DELNP/2011 |             |              |
| Indonesia                                         | Granted   | W00201103098    | 3/30/2016   | IDP000040606 |
| Kazakhstan                                        | Granted   | 201190125       | 5/29/2015   | 21313        |
| Kyrgyz Republic                                   | Granted   | 201190125       | 5/29/2015   | 21313        |
| Moldova                                           | Granted   | 201190125       | 5/29/2015   | 21313        |
| Pakistan                                          | Allowed   | 94/2010         |             |              |

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|                     |           |              |           |            |
|---------------------|-----------|--------------|-----------|------------|
| <b>Singapore</b>    | Published | 2014007744   |           |            |
| <b>South Africa</b> | Granted   | 2011/06154   | 5/28/2014 | 2011/06154 |
| <b>Tajikistan</b>   | Granted   | 201190125    | 5/29/2015 | 21313      |
| <b>Thailand</b>     | Published | 1101001423   |           |            |
| <b>Turkmenistan</b> | Granted   | 201190125    | 5/29/2015 | 21313      |
| <b>Vietnam</b>      | Pending   | 1-2011-02035 |           |            |

#### TAF-Quad Patents

**(249) Title: PRODRUGS OF PHOSPHONATE NUCLEOTIDE ANALOGUES AND METHODS FOR SELECTING AND MAKING SAME**

| Country                                                  | Status    | Application No.  | Filing Date | Patent No.      | Issue Date |
|----------------------------------------------------------|-----------|------------------|-------------|-----------------|------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Granted   | 1200300003       | 7/20/2001   | 12393           | 12/29/2003 |
| <b>African Regional Industrial Property Organization</b> | Granted   | 2003/002724      | 7/20/2001   | AP 1466         | 9/22/2005  |
| <b>Anguilla</b>                                          | Granted   | AI/A/2015/00173  | 7/20/2001   | AI/A/2015/00173 | 11/2/2015  |
| <b>Congo, Democratic Republic of</b>                     | Granted   | NP/002/EXT/2016  | 7/20/2001   | 2016/4386       | 11/11/2016 |
| <b>Ethiopia</b>                                          | Granted   | ET/PI/15/184     | 7/20/2001   | 135             | 5/25/2016  |
| <b>Eurasian Patent Organization</b>                      | Granted   | 200300188        | 7/20/2001   | 4926            | 10/28/2004 |
| <b>Falkland Islands (Malvinas)</b>                       | Granted   |                  | 7/20/2001   | 15365           | 8/25/2015  |
| <b>Fiji</b>                                              | Published | 1214             | 7/20/2001   |                 |            |
| <b>Grenada</b>                                           | Granted   | 7 of 2015        | 7/20/2001   | 7 of 2015       | 10/6/2015  |
| <b>Guyana</b>                                            | Published | 1641             | 7/20/2001   |                 |            |
| <b>Haiti</b>                                             | Pending   |                  | 7/20/2001   |                 |            |
| <b>India</b>                                             | Granted   | 9/MUMNP/2003     | 7/20/2001   | 208435          | 7/27/2007  |
| <b>India</b>                                             | Granted   | 00529/MUMNP/2006 | 7/20/2001   | 241597          | 7/14/2010  |
| <b>Indonesia</b>                                         | Granted   | W-00200602129    | 7/20/2001   | IDP0022897      | 2/20/2009  |
| <b>Indonesia</b>                                         | Granted   | W-00200804005    | 7/20/2001   | IDP000040148    | 2/15/2016  |
| <b>Indonesia</b>                                         | Granted   | W00200300261     | 7/20/2001   | IDP0022911      | 2/20/2009  |
| <b>Jamaica</b>                                           | Pending   | 18/1/5695        | 7/20/2001   |                 |            |
| <b>Kiribati</b>                                          | Granted   | 14/15            | 7/20/2001   | 14/15           | 10/7/2015  |
| <b>Montserrat</b>                                        | Granted   | 1961695.2        | 7/20/2001   | 1301519         | 9/23/2015  |
| <b>Nepal</b>                                             | Pending   | 669              | 7/20/2001   |                 |            |

|                                 |         |              |           |            |            |
|---------------------------------|---------|--------------|-----------|------------|------------|
| <b>Seychelles</b>               | Granted | 1301519      | 7/20/2001 | 1301519    | 5/25/2016  |
| <b>Sierra Leone</b>             | Pending | EP1301519    | 7/20/2001 |            |            |
| <b>Solomon Islands</b>          | Granted | J37/371      | 7/20/2001 | J37/371    | 3/3/2016   |
| <b>South Africa</b>             | Granted | 2002/10271   | 7/20/2001 | 2002/10271 | 12/31/2003 |
| <b>Turks and Caicos Islands</b> | Pending | 10213        | 7/20/2001 |            |            |
| <b>Tuvalu</b>                   | Granted |              | 2/25/2015 | TVP1301519 | 1/6/2016   |
| <b>Vietnam</b>                  | Granted | 1-2002-01193 | 7/20/2001 | 8475       | 5/24/2010  |
| <b>Virgin Islands (British)</b> | Granted | 414/5/2015   | 7/20/2001 | 414/5/2015 | 12/1/2015  |

**(872) Title: TENOFOVIR ALAFENAMIDE HEMIFUMARATE**

| Country                                                  | Status    | Application No.  | Filing Date | Patent No.    | Issue Date |
|----------------------------------------------------------|-----------|------------------|-------------|---------------|------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Granted   | 1201400057       | 8/15/2012   | 17070         | 6/29/2015  |
| <b>African Regional Industrial Property Organization</b> | Granted   | AP/P/2014/007437 | 8/15/2012   | 3639          | 3/31/2016  |
| <b>Bahamas</b>                                           | Granted   | 2441             | 8/15/2012   | 2441          | 6/19/2014  |
| <b>Bolivia</b>                                           | Pending   | SP-0277-2012     | 8/15/2012   |               |            |
| <b>Ecuador</b>                                           | Pending   | SP-14-13206-PCT  | 8/15/2012   |               |            |
| <b>El Salvador</b>                                       | Pending   | E-4659-2014      | 8/15/2012   |               |            |
| <b>Eurasian Patent Organization</b>                      | Published | 201490208        | 8/15/2012   |               |            |
| <b>India</b>                                             | Pending   | 1012/DELNP/2014  | 8/15/2012   |               |            |
| <b>Indonesia</b>                                         | Published | P00201400805     | 8/15/2012   |               |            |
| <b>Moldova</b>                                           | Pending   | A20140011        | 8/15/2012   |               |            |
| <b>Pakistan</b>                                          | Pending   | 539/2012         | 8/15/2012   |               |            |
| <b>Philippines</b>                                       | Granted   | 1-2014-500349    | 8/15/2012   | 1-2014-500349 | 2/29/2016  |
| <b>South Africa</b>                                      | Allowed   | 2014/00582       | 8/15/2012   |               |            |
| <b>Thailand</b>                                          | Pending   | 1401000784       | 8/15/2012   |               |            |
| <b>Vietnam</b>                                           | Pending   | 1-2014-00440     | 8/15/2012   |               |            |

**(877) Title: METHODS FOR PREPARING ANTI-VIRAL NUCLEOTIDE ANALOGS**

| Country            | Status    | Application No. | Filing Date | Patent No. | Issue Date |
|--------------------|-----------|-----------------|-------------|------------|------------|
| <b>Bahamas</b>     | Granted   | 2455            | 10/3/2012   | 2455       | 6/24/2014  |
| <b>Bolivia</b>     | Granted   | SP-0352-2012    | 10/3/2012   | 6385-B     | 11/26/2014 |
| <b>Ecuador</b>     | Published | IEPI-2014-74    | 10/3/2012   |            |            |
| <b>El Salvador</b> | Published | E-4696/2014     | 10/3/2012   |            |            |



|                                     |           |                 |           |
|-------------------------------------|-----------|-----------------|-----------|
| <b>Eurasian Patent Organization</b> | Allowed   | 201490753       | 10/3/2012 |
| <b>India</b>                        | Published | 2953/DELNP/2014 | 10/3/2012 |
| <b>Pakistan</b>                     | Pending   | 671/2012        | 10/3/2012 |

**(692) Title: DIAMINOALKANE COMPOUNDS (VARIANTS) AND A METHOD OF PREPARING THEREOF (VARIANTS), A PHARMACEUTICAL COMPOSITION AND A THERAPEUTIC AGENT FOR INHIBITING CYTOCHROME-P450-MONOOXYGENASE, METHODS FOR TREATING AN HIV INFECTION AND VIRAL HEPATITS C, A METHOD OF MOD**

| Country                                                  | Status    | Application No.  | Filing Date | Patent No.      | Issue Date |
|----------------------------------------------------------|-----------|------------------|-------------|-----------------|------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Granted   | 1200800450       | 9/30/2009   | 14409           |            |
| <b>African Regional Industrial Property Organization</b> | Granted   | AP/P/2008/004720 | 9/30/2014   | AP2985          |            |
| <b>Anguilla</b>                                          | Granted   | AI/A/2015/00172  | 11/2/2015   | AI/A/2015/00172 |            |
| <b>Armenia</b>                                           | Granted   | 200900155        | 11/28/2014  | 20489           |            |
| <b>Congo, Democratic Republic of</b>                     | Pending   | NP/004/EXT/2016  |             |                 |            |
| <b>Ethiopia</b>                                          | Granted   | ET/PI/15/185     | 5/25/2016   | 134             |            |
| <b>Eurasian Patent Organization</b>                      | Allowed   | 201270738        |             |                 |            |
| <b>Eurasian Patent Organization</b>                      | Granted   | 200900155        | 11/28/2014  | 20489           |            |
| <b>Fiji</b>                                              | Published | 1217             |             |                 |            |
| <b>Guyana</b>                                            | Published | 1642             |             |                 |            |
| <b>Haiti</b>                                             | Pending   |                  |             |                 |            |
| <b>India</b>                                             | Pending   | 10487/DELNP/2008 |             |                 |            |
| <b>Indonesia</b>                                         | Granted   | W00200900061     | 8/12/2016   | IDP00042227     |            |
| <b>Jamaica</b>                                           | Pending   | 18/1/5696        |             |                 |            |
| <b>Kazakhstan</b>                                        | Unfiled   |                  |             |                 |            |
| <b>Kazakhstan</b>                                        | Granted   | 200900155        | 11/28/2014  | 20489           |            |
| <b>Kiribati</b>                                          | Granted   | 13/15            | 10/7/2015   | 13/15           |            |
| <b>Kyrgyz Republic</b>                                   | Granted   | 200900155        | 11/28/2014  | 20489           |            |
| <b>Moldova</b>                                           | Granted   | 200900155        | 11/28/2014  | 20489           |            |
| <b>Montserrat</b>                                        | Granted   |                  | 9/23/2015   | 3 of 2015       |            |
| <b>Nauru</b>                                             | Pending   |                  |             |                 |            |
| <b>Nepal</b>                                             | Pending   | 894              |             |                 |            |
| <b>Seychelles</b>                                        | Granted   | 2049506          | 5/25/2016   | 2049506         |            |

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|                                 |           |              |            |            |
|---------------------------------|-----------|--------------|------------|------------|
| <b>Sierra Leone</b>             | Pending   | EP2049506    |            |            |
| <b>Solomon Islands</b>          | Granted   | J37/370      | 2/10/2016  | J37/370    |
| <b>South Africa</b>             | Pending   | 2008/10399   |            |            |
| <b>Tajikistan</b>               | Granted   | 200900155    | 11/28/2014 | 20489      |
| <b>Thailand</b>                 | Published | 701003404    |            |            |
| <b>Turkmenistan</b>             | Granted   | 200900155    | 11/28/2014 | 20489      |
| <b>Turks and Caicos Islands</b> | Pending   | 10214        |            |            |
| <b>Tuvalu</b>                   | Granted   |              | 11/7/2015  | TVP2049506 |
| <b>Vietnam</b>                  | Pending   | 1-2009-00240 |            |            |
| <b>Vietnam</b>                  | Pending   | 1-2012-02702 |            |            |
| <b>Virgin Islands (British)</b> | Granted   | 415/6/2015   | 12/1/2015  | 415/6/2015 |

**(719) Title: MODULATORS OF PHARMACOKINETIC PROPERTIES OF THERAPEUTICS**

| Country                                                  | Status  | Application No.  | Filing Date | Patent No.   |
|----------------------------------------------------------|---------|------------------|-------------|--------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Granted | 1200900273       | 6/30/2010   | 14749        |
| <b>African Regional Industrial Property Organization</b> | Granted | AP/P/2009/004964 | 9/16/2014   | AP2986       |
| <b>African Regional Industrial Property Organization</b> | Granted | AP/P/2013/007042 | 11/30/2016  | AP3915       |
| <b>Armenia</b>                                           | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Eurasian Patent Organization</b>                      | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Fiji</b>                                              | Granted |                  |             |              |
| <b>Indonesia</b>                                         | Granted | W00200902299     | 3/18/2015   | IDP000038076 |
| <b>Kazakhstan</b>                                        | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Kyrgyz Republic</b>                                   | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Moldova</b>                                           | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>South Africa</b>                                      | Pending | 2009/05882       |             |              |
| <b>South Africa</b>                                      | Unfiled |                  |             |              |
| <b>Tajikistan</b>                                        | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Thailand</b>                                          | Pending | 801000867        |             |              |
| <b>Turkmenistan</b>                                      | Granted | 200901155        | 7/30/2014   | 19893        |
| <b>Vietnam</b>                                           | Pending | 1-2009-01990     |             |              |
| <b>Vietnam</b>                                           | Pending | 1-2012-02696     |             |              |

**(757) Title: THE USE OF SOLID CARRIER PARTICLES TO IMPROVE THE PROCESSABILITY OF A PHARMACEUTICAL AGENT**

| Country                                                  | Status    | Application No.  | Filing Date | Patent No. |
|----------------------------------------------------------|-----------|------------------|-------------|------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Granted   | 1201000364       | 9/28/2012   | 15589      |
| <b>African Regional Industrial Property Organization</b> | Granted   | AP/P/2010/005429 | 1/30/2015   | 3209       |
| <b>Armenia</b>                                           | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>Belarus</b>                                           | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>Ecuador</b>                                           | Pending   | SP-10-10636      |             |            |
| <b>Eurasian Patent Organization</b>                      | Published | 201591353        |             |            |
| <b>Eurasian Patent Organization</b>                      | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>India</b>                                             | Pending   | 7565/DELNP/2010  |             |            |
| <b>Indonesia</b>                                         | Published | W00201004105     |             |            |
| <b>Kazakhstan</b>                                        | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>Kyrgyz Republic</b>                                   | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>Moldova</b>                                           | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>South Africa</b>                                      | Granted   | 2010/08007       | 10/26/2011  | 2010/08007 |
| <b>Tajikistan</b>                                        | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>Turkmenistan</b>                                      | Granted   | 201071173        | 3/31/2016   | 22950      |
| <b>Vietnam</b>                                           | Pending   | 1-2010-02929     |             |            |

(775) Title: METHOD OF PREPARING AN INHIBITOR OF CYTOCHROME P450 MONOOXYGENASE, AND INTERMEDIATES INVOLVED

| Country                                                  | Status    | Application No. | Filing Date | Patent No.   |
|----------------------------------------------------------|-----------|-----------------|-------------|--------------|
| <b>African Intellectual Property Organization (OAPI)</b> | Granted   | 1201100311.00   | 4/1/2010    | 15801        |
| <b>Bolivia</b>                                           | Abandoned | 11-114.749      | 4/1/2010    |              |
| <b>Eurasian Patent Organization</b>                      | Granted   | 201190179.00    | 4/1/2010    | 22739        |
| <b>Eurasian Patent Organization</b>                      | Published | 201590979.00    | 4/1/2010    |              |
| <b>Ecuador</b>                                           | Pending   | SP-11-11391     | 4/1/2010    |              |
| <b>Indonesia</b>                                         | Granted   | W00201103554    | 4/1/2010    | IDP000041448 |
| <b>India</b>                                             | Pending   | 7323/DELNP/2011 | 4/1/2010    |              |
| <b>Pakistan</b>                                          | Pending   | 262/2010        | 3/31/2010   |              |
| <b>Thailand</b>                                          | Published | 1101002473.00   | 4/1/2010    |              |
| <b>Vietnam</b>                                           | Pending   | 1-2011-02324    | 4/1/2010    |              |
| <b>South Africa</b>                                      | Granted   | 2011/07430      | 4/1/2010    | 2011/07430   |

(895) Title: METHODS AND INTERMEDIATES FOR PREPARING PHARMACEUTICAL AGENTS

| Country | Status    | Application No. | Filing Date | Patent No. |
|---------|-----------|-----------------|-------------|------------|
| India   | Abandoned | 6192/DELNP/2014 |             |            |

**(899) Title: THERAPEUTIC COMPOUNDS**

| Country                      | Status    | Application No. | Filing Date | Patent No. | Issue Date |
|------------------------------|-----------|-----------------|-------------|------------|------------|
| Eurasian Patent Organization | Published | 201491287       | 2/1/2013    |            |            |
| India                        | Pending   | 7100/DELNP/2014 | 2/1/2013    |            |            |

**(EMU-108) Title: Antiviral Activity and Resolution of 2-Hydroxymethyl-5-(5-Fluorocytosin-1-yl)-1,3-Oxathiolane**

| Country     | Status  | Application No. | Filing Date | Patent No.   | Issue Date |
|-------------|---------|-----------------|-------------|--------------|------------|
| Philippines | Granted | 1-1992-43955    | 2/20/92     | 1-1992-43955 | 2/20/09    |
| Philippines | Granted | 55191           | 12/27/96    | 1-1996-55191 | 3/9/07     |
| Philippines | Granted | 55192           | 2/20/92     | 55192        | 12/19/08   |
| Philippines | Granted | 55193           | 2/20/92     | 55193        | 12/19/08   |
| Philippines | Granted | 55194           | 2/20/92     | 55194        | 12/19/08   |

**(EMU-4000) Title: 1,3-Oxathiolane Nucleoside Analogues**

| Country            | Status  | Application No.  | Filing Date | Patent No.      | Issue Date |
|--------------------|---------|------------------|-------------|-----------------|------------|
| Botswana           | Granted | BW/A/1998/00163  | 4/27/98     | BW/P/2002/00042 | 5/22/03    |
| Dominican Republic | Granted | 1793970004607.00 | 7/10/97     | 370             | 7/10/17    |
| Honduras           | Granted | PICA97118        | 8/18/97     | 3775            | 4/25/00    |
| Jamaica            | Granted | 697267           | 7/8/97      | 3615            | 5/25/05    |
| Nicaragua          | Granted | 97.0096          | 12/5/97     | 1134RPI         | 5/17/99    |

For purposes of this Appendix 2, references to "PCT," "OAPI," "EAPO" and "ARIPO" shall not be construed or interpreted to grant rights to Licensee in any country other than those countries expressly included within the licenses granted to Licensee in Sections 2.1 and 2.2 of this Agreement.

**APPENDIX 3**  
Terms for Technology Transfer

Gilead will make available to Licensee the following information in accordance with Section 5.4 to fully enable Licensee to manufacture FTC, TAF, TDF, EVG, COBI, TDF Product, TAF Product, EVG Product, COBI Product and Quad Product at commercial-scale quantities and in compliance with Gilead's required quality specifications (but only to the extent not previously provided to Licensee under the Original License Agreement or other separate written agreement with Gilead and/or MPP):

1. Manufacturing process descriptions, specifications and methods;
2. Stability data;
3. Analytical method validation; and
4. Discussion of impurities.

Gilead will make available to Licensee the following information in accordance with Section 7 of the First Amendment to this Agreement, to fully enable Licensee to manufacture BIC and such FDA-approved Product containing BIC at commercial-scale quantities and in compliance with Gilead's required quality specifications:

1. Manufacturing process descriptions, specifications and methods;
2. Stability data;
3. Analytical method validation; and
4. Discussion of impurities.



**APPENDIX 4**  
**Emtricitabine Patents**

**(EMU-108) Title: Antiviral Activity and Resolution of 2-Hydroxymethyl-5-(5-Fluorocytosin-1-yl)-1,3-Oxathiolane**

| Country            | Status  | Application No. | Filing Date | Patent No.   | Issue Date |
|--------------------|---------|-----------------|-------------|--------------|------------|
| <b>Philippines</b> | Granted | 1-1992-43955    | 2/20/92     | 1-1992-43955 | 2/20/09    |
| <b>Philippines</b> | Granted | 55191           | 12/27/96    | 1-1996-55191 | 3/9/07     |
| <b>Philippines</b> | Granted | 55192           | 2/20/92     | 55192        | 12/19/08   |
| <b>Philippines</b> | Granted | 55193           | 2/20/92     | 55193        | 12/19/08   |
| <b>Philippines</b> | Granted | 55194           | 2/20/92     | 55194        | 12/19/08   |

**(EMU-4000) Title: 1,3-Oxathiolane Nucleoside Analogues**

| Country                   | Status  | Application No.  | Filing Date | Patent No.      | Issue Date |
|---------------------------|---------|------------------|-------------|-----------------|------------|
| <b>Botswana</b>           | Granted | BW/A/1998/00163  | 4/27/98     | BW/P/2002/00042 | 5/22/03    |
| <b>Dominican Republic</b> | Granted | 1793970004607.00 | 7/10/97     | 370             | 7/10/17    |
| <b>Honduras</b>           | Granted | PICA97118        | 8/18/97     | 3775            | 4/25/00    |
| <b>Jamaica</b>            | Granted | 697267           | 7/8/97      | 3615            | 5/25/05    |
| <b>Nicaragua</b>          | Granted | 97.0096          | 12/5/97     | 1134RPI         | 5/17/99    |

**(270) Title: COMPOSITIONS AND METHODS FOR COMBINATION ANTIVIRAL THERAPY**

| Country                             | Status    | Filing Date | Application No.             | Patent No. | Issue Date |
|-------------------------------------|-----------|-------------|-----------------------------|------------|------------|
| <b>Armenia</b>                      | Granted   | 1/13/2004   | 200501134                   | 15145      | 6/13/2011  |
| <b>Eurasian Patent Organization</b> | Published | 1/13/2004   | 201100293                   |            |            |
| <b>Eurasian Patent Organization</b> | Granted   | 1/13/2004   | 200501134                   | 15145      | 6/13/2011  |
| <b>Kazakhstan</b>                   | Granted   | 1/13/2004   | 200501134                   | 15145      | 6/13/2011  |
| <b>Kazakhstan</b>                   | Pending   |             | 200501134 (PTE Application) |            |            |
| <b>Kyrgyz Republic</b>              | Granted   | 1/13/2004   | 200501134                   | 15145      | 6/13/2011  |
| <b>Kyrgyz Republic</b>              | Granted   |             | 200501134 (PTE Application) | 15145      | 5/31/2012  |
| <b>Moldova</b>                      | Granted   | 1/13/2004   | 200501134                   | 15145      | 6/13/2011  |
| <b>Tajikistan</b>                   | Granted   | 1/13/2004   | 200501134                   | 15145      | 6/13/2011  |
| <b>Turkmenistan</b>                 | Granted   | 1/13/2004   | 200501134                   | 15145      | 6/13/2011  |
| <b>Turkmenistan</b>                 | Pending   |             | 200501134 (PTE Application) |            |            |

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**(677) Title: A PHARMACEUTICAL COMPOSITION, A METHOD OF PREPARING THEREOF, AND A METHOD OF TREATING VIRAL DISEASES USING SAID COMPOSITION**

| Country                      | Status    | Filing Date | Application No. | Patent No. | Issue Date |
|------------------------------|-----------|-------------|-----------------|------------|------------|
| Armenia                      | Granted   | 6/13/2006   | 200800033       | 17764      | 3/29/2013  |
| Eurasian Patent Organization | Published | 6/13/2006   | 201201265       |            |            |
| Eurasian Patent Organization | Granted   | 6/13/2006   | 200800033       | 17764      | 3/29/2013  |
| India                        | Pending   | 6/13/2006   | 9661/DELNP/2007 |            |            |
| Kazakhstan                   | Granted   | 6/13/2006   | 200800033       | 17764      | 3/29/2013  |
| Kyrgyz Republic              | Granted   | 6/13/2006   | 200800033       | 17764      | 3/29/2013  |
| Moldova                      | Granted   | 6/13/2006   | 200800033       | 17764      | 3/29/2013  |
| South Africa                 | Granted   | 6/13/2006   | 2008/00297      | 2008/00297 | 4/28/2010  |
| Tajikistan                   | Granted   | 6/13/2006   | 200800033       | 17764      | 3/29/2013  |
| Turkmenistan                 | Granted   | 6/13/2006   | 200800033       | 17764      | 3/29/2013  |

# **APPENDIX 5** Countries in the COBI Territory

- |                              |                             |                                    |
|------------------------------|-----------------------------|------------------------------------|
| 1. Afghanistan               | 40. Georgia                 | 79. Papua New Guinea               |
| 2. Angola                    | 41. Ghana                   | 80. Philippines                    |
| 3. Anguilla                  | 42. Grenada                 | 81. Rwanda                         |
| 4. Antigua and Barbuda       | 43. Guatemala               | 82. Saint Kitts and Nevis          |
| 5. Armenia                   | 44. Guinea                  | 83. Saint Lucia                    |
| 6. Aruba                     | 45. Guinea-Bissau           | 84. Saint Vincent & the Grenadines |
| 7. Bahamas                   | 46. Guyana                  | 85. Samoa                          |
| 8. Bangladesh                | 47. Haiti                   | 86. São Tomé and Príncipe          |
| 9. Barbados                  | 48. Honduras                | 87. Senegal                        |
| 10. Belarus                  | 49. India                   | 88. Seychelles                     |
| 11. Belize                   | 50. Indonesia               | 89. Sierra Leone                   |
| 12. Benin                    | 51. Jamaica                 | 90. Solomon Islands                |
| 13. Bhutan                   | 52. Kazakhstan              | 91. Somalia                        |
| 14. Bolivia                  | 53. Kenya                   | 92. South Africa                   |
| 15. Botswana                 | 54. Kiribati                | 93. South Sudan                    |
| 16. British Virgin Islands   | 55. Kyrgyzstan              | 94. Sri Lanka                      |
| 17. Burkina Faso             | 56. Lao, People's Dem. Rep. | 95. Sudan                          |
| 18. Burundi                  | 57. Lesotho                 | 96. Surinam                        |
| 19. Cambodia                 | 58. Liberia                 | 97. Swaziland                      |
| 20. Cameroon                 | 59. Madagascar              | 98. Syrian Arab Republic           |
| 21. Cape Verde               | 60. Malawi                  | 99. Tajikistan                     |
| 22. Central African Republic | 61. Malaysia                | 100. Tanzania, U. Rep. of          |
| 23. Chad                     | 62. Maldives                | 101. Thailand                      |
| 24. Comoros                  | 63. Mali                    | 102. Timor-Leste                   |
| 25. Congo, Rep               | 64. Mauritania              | 103. Togo                          |
| 26. Congo, Dem. Rep. of the  | 65. Mauritius               | 104. Tonga                         |
| 27. Côte d'Ivoire            | 66. Moldova, Rep. of        | 105. Trinidad and Tobago           |
| 28. Cuba                     | 67. Mongolia                | 106. Turkmenistan                  |
| 29. Djibouti                 | 68. Montserrat              | 107. Turks and Caicos              |
| 30. Dominica                 | 69. Mozambique              | 108. Tuvalu                        |
| 31. Dominican Republic       | 70. Myanmar                 | 109. Uganda                        |
| 32. Ecuador                  | 71. Namibia                 | 110. Ukraine                       |
| 33. El Salvador              | 72. Nauru                   | 111. Uzbekistan                    |
| 34. Equatorial Guinea        | 73. Nepal                   | 112. Vanuatu                       |
| 35. Eritrea                  | 74. Nicaragua               | 113. Vietnam                       |
| 36. Ethiopia                 | 75. Niger                   | 114. Yemen                         |
| 37. Fiji Islands             | 76. Nigeria                 | 115. Zambia                        |
| 38. Gabon                    | 77. Pakistan                | 116. Zimbabwe                      |
| 39. Gambia                   | 78. Palau                   |                                    |

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**APPENDIX 6**  
Countries in the EVG- Quad Territory

- |                               |                            |                                    |
|-------------------------------|----------------------------|------------------------------------|
| 1. Afghanistan                | 38. Ghana                  | 75. Rwanda                         |
| 2. Angola                     | 39. Grenada                | 76. Saint Kitts and Nevis          |
| 3. Anguilla                   | 40. Guatemala              | 77. Saint Lucia                    |
| 4. Antigua and Barbuda        | 41. Guinea                 | 78. Saint Vincent & the Grenadines |
| 5. Armenia                    | 42. Guinea-Bissau          | 79. Samoa                          |
| 6. Bahamas                    | 43. Guyana                 | 80. São Tomé and Príncipe          |
| 7. Bangladesh                 | 44. Haiti                  | 81. Senegal                        |
| 8. Barbados                   | 45. Honduras               | 82. Seychelles                     |
| 9. Belize                     | 46. India                  | 83. Sierra Leone                   |
| 10. Benin                     | 47. Indonesia              | 84. Solomon Islands                |
| 11. Bhutan                    | 48. Jamaica                | 85. Somalia                        |
| 12. Bolivia                   | 49. Kazakhstan             | 86. South Africa                   |
| 13. Botswana                  | 50. Kenya                  | 87. South Sudan                    |
| 14. British Virgin Islands    | 51. Kiribati               | 88. Sri Lanka                      |
| 15. Burkina Faso              | 52. Kyrgyzstan             | 89. Sudan                          |
| 16. Burundi                   | 53. Lao People's Dem. Rep. | 90. Suriname                       |
| 17. Cambodia                  | 54. Lesotho                | 91. Swaziland                      |
| 18. Cameroon                  | 55. Liberia                | 92. Syrian Arab Republic           |
| 19. Cape Verde                | 56. Madagascar             | 93. Tajikistan                     |
| 20. Central African Republic  | 57. Malawi                 | 94. Tanzania, U. Rep. of           |
| 21. Chad                      | 58. Maldives               | 95. Thailand                       |
| 22. Comoros                   | 59. Mali                   | 96. Timor-Leste                    |
| 23. Congo, Rep                | 60. Mauritania             | 97. Togo                           |
| 24. Congo, Dem. Rep. of the   | 61. Mauritius              | 98. Tonga                          |
| 25. Côte d'Ivoire             | 62. Moldova, Rep. of       | 99. Trinidad and Tobago            |
| 26. Cuba                      | 63. Mongolia               | 100. Turkmenistan                  |
| 27. Djibouti                  | 64. Mozambique             | 101. Turks and Caicos              |
| 28. Dominica                  | 65. Myanmar                | 102. Tuvalu                        |
| 29. Ecuador                   | 66. Namibia                | 103. Uganda                        |
| 30. El Salvador               | 67. Nauru                  | 104. Uzbekistan                    |
| 31. Equatorial Guinea         | 68. Nepal                  | 105. Vanuatu                       |
| 32. Eritrea                   | 69. Nicaragua              | 106. Vietnam                       |
| 33. Ethiopia                  | 70. Niger                  | 107. Yemen                         |
| 34. Fiji Islands, Rep. of the | 71. Nigeria                | 108. Zambia                        |
| 35. Gabon                     | 72. Pakistan               | 109. Zimbabwe                      |
| 36. Gambia                    | 73. Palau                  |                                    |
| 37. Georgia                   | 74. Papua New Guinea       |                                    |



# **APPENDIX 7** Countries in the BIC Territory

- |                              |                                       |                           |
|------------------------------|---------------------------------------|---------------------------|
| 1. Afghanistan               | 48. Honduras                          | 94. Sri Lanka             |
| 2. Angola                    | 49. India                             | 95. Sudan                 |
| 3. Anguilla                  | 50. Indonesia                         | 96. Surinam               |
| 4. Antigua and Barbuda       | 51. Jamaica                           | 97. Swaziland             |
| 5. Armenia                   | 52. Kazakhstan                        | 98. Syrian Arab Republic  |
| 6. Aruba                     | 53. Kenya                             | 99. Tajikistan            |
| 7. Bahamas                   | 54. Kiribati                          | 100. Tanzania, U. Rep. of |
| 8. Bangladesh                | 55. Kyrgyzstan                        | 101. Thailand             |
| 9. Barbados                  | 56. Lao, People's Dem. Rep.           | 102. Timor-Leste          |
| 10. Belize                   | 57. Lesotho                           | 103. Togo                 |
| 11. Belarus                  | 58. Liberia                           | 104. Tonga                |
| 12. Benin                    | 59. Madagascar                        | 105. Trinidad and Tobago  |
| 13. Bhutan                   | 60. Malawi                            | 106. Turkmenistan         |
| 14. Bolivia                  | 61. Malaysia                          | 107. Turks and Caicos     |
| 15. Botswana                 | 62. Maldives                          | 108. Tuvalu               |
| 16. British Virgin Islands   | 63. Mali                              | 109. Uganda               |
| 17. Burkina Faso             | 64. Mauritania                        | 110. Ukraine              |
| 18. Burundi                  | 65. Mauritius                         | 111. Uzbekistan           |
| 19. Cambodia                 | 66. Moldova, Rep. of                  | 112. Vanuatu              |
| 20. Cameroon                 | 67. Mongolia                          | 113. Vietnam              |
| 21. Cape Verde               | 68. Montserrat                        | 114. Yemen                |
| 22. Central African Republic | 69. Mozambique                        | 115. Zambia               |
| 23. Chad                     | 70. Myanmar                           | 116. Zimbabwe             |
| 24. Comoros                  | 71. Namibia                           |                           |
| 25. Congo, Rep               | 72. Nauru                             |                           |
| 26. Congo, Dem. Rep. of the  | 73. Nepal                             |                           |
| 27. Côte d'Ivoire            | 74. Nicaragua                         |                           |
| 28. Cuba                     | 75. Niger                             |                           |
| 29. Djibouti                 | 76. Nigeria                           |                           |
| 30. Dominica                 | 77. Pakistan                          |                           |
| 31. Dominican Republic       | 78. Palau                             |                           |
| 32. Ecuador                  | 79. Papua New Guinea                  |                           |
| 33. El Salvador              | 80. Philippines                       |                           |
| 34. Equatorial Guinea        | 81. Rwanda                            |                           |
| 35. Eritrea                  | 82. Saint Kitts and Nevis             |                           |
| 36. Ethiopia                 | 83. Saint Lucia                       |                           |
| 37. Fiji Islands             | 84. Saint Vincent & the<br>Grenadines |                           |
| 38. Gabon                    | 85. Samoa                             |                           |
| 39. Gambia                   | 86. São Tomé and Príncipe             |                           |
| 40. Georgia                  | 87. Senegal                           |                           |
| 41. Ghana                    | 88. Seychelles                        |                           |
| 42. Grenada                  | 89. Sierra Leone                      |                           |
| 43. Guatemala                | 90. Solomon Islands                   |                           |
| 44. Guinea                   | 91. Somalia                           |                           |
| 45. Guinea-Bissau            | 92. South Africa                      |                           |
| 46. Guyana                   | 93. South Sudan                       |                           |
| 47. Haiti                    |                                       |                           |

