PATENT COOPERATION TREATY

PCT

THIRD PARTY OBSERVATION

(PCT Administrative Instructions Part 8)

Applicant's or agent's file reference 35648-0296WO1	
International application number PCT/US2023/029017	International filing date (day/month/year) 28 Jul 2023 (28/07/2023)
Applicant GILEAD SCIENCES, INC.	

Third party observation submitted by Anonymous	Observation submitted on behalf of
Date of submission(day/month/year) 28 Nov 2025 (28/11/2025)	Language of observation English

Basis and contents of observation

1. The observation is made on the basis of the claims in the international application as filed.
2. The observation comprises:
   References to documents: 7
   Uploaded copies of documents: 9
3. Further explanations:
   Uploaded copies of documents: 1

Citation # 1(Periodical article) (# uploaded documents:2):

Author: Shaik, N., et al.	Title of article: Simulations for Once-Weekly Dosing of Oral Lenacapavir [PESUB23]	Title of Periodical: Journal of the International AIDS Society	Publication Date: 02 Aug 2022 (02/08/2022)
Issue Number of Periodical: Volume 25, Issue S3: e25935	Publisher of Periodical: Wiley, on behalf of International AIDS Society	Place of publication: United States of America	
Page range of article within periodical: 125	ISBN:	ISSN:	
DOI: 10.1002/jia2.25935			
Most relevant passages or drawings: p. 125; also poster at https://presentations.gilead.com/files/6416/5877/1579/Shaik-1_AIDS2022_33x46.8_Final_printready.pdf		Relevant to Claims: 1-86	

Brief explanation of relevance:

In a poster presentation at the AIDS2022 Conference, Shaik, et al. presented the simulations for once-weekly dosing of oral lenacapavir (LEN) (Title) [Poster attached as Citation 1A; https://presentations.gilead.com/files/6416/5877/1579/Shaik-1_AIDS2022_33x46.8_Final_printready.pdf; alternate link in Additional Comments]. As shown below, this same simulation data is set out as Example 1 and in the Drawings of the present Application, WO2025029247 (WO247), which claims weekly oral dosing regimen of LEN (Compound of Formula Ia; Formula Ib where stereochemistry is defined), including the regimen to be followed in case of one or two missed maintenance doses, for the prevention or treatment of HIV.

Shaik, et al. note the advantages of less frequent (such as weekly oral) dosing of long-acting anti-HIV antiretroviral (ARV) regimens which can lead to improved treatment success rates and also help prevent HIV transmission (Introduction, LHC).

They sought to identify dosing regimens of LEN that could be “used in combinations with other antiretroviral agents by simulating various weekly dosing regimens that would rapidly achieve and maintain concentrations of lenacapavir above IQ4” [IQ = inhibitory quotient] (Introduction,

Objective, LHC; p.127 of WO247).

For the simulation, they used a “previously developed 2-compartment LEN PopPK model with first-order absorption and linear elimination ... to simulate various weekly dosing regimens (loading + maintenance doses) that can achieve efficacious LEN concentrations rapidly and be maintained through the dosing interval” (Methods, LHC; p. 127 of WO247). Further, they simulated “various scenarios including 1–3 weeks of missed oral dosing ... to evaluate the forgiveness window” with “the PopPK model incorporating variability and covariate effects” (Methods, LHC; p.127 of WO247).

They report:
1. “LEN QW Dosing Regimen Following Oral Loading”: “Simulations showed that an oral loading dose of 600 mg on Days 1 and 2 followed by oral 300-mg QW doses maintained the lower bound of the 90% CI of mean trough concentration above IQ4 (15.5 ng/mL) through the dosing interval; this regimen reached IQ4 rapidly within 4 hours” (RHC and first figure; p.128 and in Fig.2 of WO247).
2. “Simulations For LEN QW Regimen 1 Missed Dose”: “Simulations suggested that LEN 300 mg QW allows for a 7-day forgiveness window. If 1 oral LEN dose is missed, it should be taken as soon as possible and then normal dosing regimen can be resumed (ie, taking 1 dose on the scheduled day) to maintain mean LEN concentrations above IQ4” (RHC and second figure; p.129 and Fig.3 of WO247).
3. “Simulations for LEN QW Regimen 2 Missed Doses”: “If 2 oral LEN doses are missed, simulations indicated taking 2 doses as soon as possible and then resuming the normal regimen on the scheduled day will result in concentrations above IQ4 and within the safety margin – If taking doses on the scheduled dosing day, only 2 doses should be taken; never take 3 doses on the same day.” (RHC and third figure; p.129 and Fig.4 of WO247)

They conclude that (Conclusions; p.129 of WO247):
a) “The oral LEN QW regimen (600 mg on Days 1 and 2, followed by 300 mg QW) is expected to rapidly achieve and then maintain LEN concentrations above IQ4 for the dosing interval.”
b) “LEN 300 mg QW dosing allows for a 7-day forgiveness window for people with HIV after the last missed dose.”

Shaik, et al. further conclude that “LEN is well suited to be part of a QW oral regimen” (Conclusions).

The present Application, WO247, sets out the same data reported in Shaik, et al. as Example 1 and the composition of the spray dried tablets of LEN as Example 2. Based on these, WO247 claims a method of treating or preventing HIV infection in a patient comprising orally administering LEN or its salt for a first period of time (one or two loading doses), followed by one or more maintenance doses (weekly) and a regimen in case of one or two missed doses (i.e., preferably 300 mg and 600 mg respectively); it claims this regimen – as a monotherapy as well in combination with other ARV agents, for prophylaxis (pre-exposure, post-exposure, event-driven), also as treatment for heavily treatment experienced patients (including those with multi-drug resistant HIV) (Claims 1–86 of WO247).

However, Shaik, et al. already disclose an oral weekly regimen for LEN and the recommended regimen in case of one or two missed oral maintenance doses. While Shaik, et al. disclose this in the context of combination of LEN with other ARV agents, the present Application, WO247, provides only the data reported by Shaik, et al. as an example in support of the claims for this regimen (including as monotherapy and for pre-exposure prophylaxis).

Thus, in light of Shaik, et al. and common general knowledge about LEN, Claims 1 to 86 of the present Application, WO247, lack novelty.

Citation # 2(Other) (# uploaded documents:1):

Identification of Document:	Publication Date:
NCT05052996 version 11	19 Jun 2023 (19/06/2023)

Link to document:
https://clinicaltrials.gov/study/NCT05052996?tab=history&a=11#version-content-panel

DOI:

Most relevant passages or drawings:	Relevant to Claims:
pp. 1, 3, 5–6, 8–9	1-86

Brief explanation of relevance:

NCT05052996 [(NCT'996); version 11 dated 19.06.2023; page numbers are of the pdf generated from the entry for NCT'996 at clinicaltrials.gov], is a Phase 2 clinical trial sponsored by Gilead Sciences, Inc., the Applicant of the present Application WO2025029247 (WO'247), evaluating the safety and efficacy of an oral weekly regimen of islatravir (ISL) in combination with lenacapavir (LEN) in virologically suppressed people with HIV (PWH) at week 24 [pp.1, 3 (Title); p.5 (Brief Summary)].

The study sets out two experimental arms [p.6 (Arms and Interventions)]:
(i) In the ISL+LEN arm, the participants receive LEN oral 600 mg (2 × 300 mg) on Days 1 and 2, and LEN oral 300 mg (1 × 300 mg) on Day 8 and weekly thereafter, in combination with ISL on Days 1, 8 and weekly thereafter which is administered simultenously
(ii) In the B/F/TAF arm, the participants receive bictegravir/emtricitabine/tenofovir alafenamide (B/F /TAF) for at least 48 weeks, after which they switch from B/F/TAF to ISL+LEN, following the same Day 1, Day 2, and Day 8 and weekly dosing regimen given for ISL+LEN arm;
In both the arms, LEN is administered orally in tablet form.

The inclusion criteria for the trial required participants to have received B/F/TAF for ≥24 weeks at screening, while the exclusion criteria excluded individuals with any prior use or exposure to ISL or r LEN [p.8 (Eligibility)].

It may be noted that the exclusion of individuals whose documented historical or screening resistance reports showed nucleoside/nucleotide reverse transcriptase inhibitor (NRTI) or non-nucleoside/nucleotide reverse transcriptase inhibitor (NNRTI) resistance mutations in reverse transcriptase was required only for Cohort 2 [(p.9 (Eligibility)].

The present Application WO'247 claims: (i) methods of treating or preventing HIV infection by orally administering to the patient an initiation dosage of about 500 mg to about 700 mg compound of Formula Ia or Ib (LEN) for a first period of time of 1–2 days, specifically an initiation dosage of about 600 mg (2 × 300 mg) for 2 days, followed by one or more maintenance dosages of about 200 mg to about 400 mg for a second period of time which begins at about 6–8 days after the first oral administration of the initiation dosage, specifically one or more maintenance dosages of about 300 mg once per week; (ii) missed-dose regimens requiring oral administration of about 200 mg to about 700 mg, specifically of 300 mg or 600 mg if 1 or 2 dose/s is missed, during a third period of time and resumption of the weekly maintenance dosage; (iii) method of treating HIV infection in heavily treatment-experienced (HTE) patients previously treated with at least one antiretroviral medication for at least 3, 6, 9, or 12 months; (iv) method of treating patients infected with HIV-1 resistant to one, two, or three or more antiretroviral medications, with specific protease inhibitor (PI), NRTI, NNRTI, and integrase strand transfer inhibitor (INSTI) resistance mutations identified; and (v) administration of LEN as a monotherapy or in combination with one to four additional therapeutic agents, which may be administered simultaneously in a unitary dosage form or sequentially [Claims 1–86].

However, NCT'996 already discloses the same LEN oral dosing regimen on Days 1, 2, 8 and once-weekly thereafter, administered to PWH previously treated with antiretroviral medication, and the use of LEN in combination with additional therapeutic agents.

It may also be noted that WO2020018459 [WO'459; attached at Citation 6], an earlier application by the Applicant of WO'247, discloses the use of LEN [compound of Formula (Ia)] for treating HIV

infection in HTE patients, wherein the HIV infection is an HIV-1 infection characterized by HIV-1 mutant resistance to one, two, three or more antiretroviral medications, and further discloses the same set of HIV-1 mutants resistant to a PI, an NRTI, an NNRTI, or an INSTI as those claimed in WO'247 [Claims 1–9].

Further, (a) Shaik et al., [Citation 1] discloses the simulations for an oral weekly regimen for LEN and the recommended regimen in case of one or two missed maintenance doses, identical to that claimed in WO'247; and (b) NCT04925752 [Citation 3] discloses an oral LEN dosing regimen of 600 mg on Days 1 and 2, followed by SC LEN every 26 weeks as monotherapy for HIV pre-exposure prophylaxis, noting that "participants will receive oral LEN if SC injections are not available", thereby suggesting that oral LEN may also be used for the maintenance dose.

In light of the above, Claims 1 to 86 of the present Application, WO'247, lack novelty (to the extent of overlap) and/or inventive step.

Citation # 3(Other) (# uploaded documents:2):

Identification of Document: NCT04925752 version 30	Publication Date: 03 Jul 2023 (03/07/2023)
Link to document: https://clinicaltrials.gov/study/NCT04925752?tab=history&a=30#version-content-panel	
DOI:	
Most relevant passages or drawings: pp.1, 3–5	Relevant to Claims: 1-86

Brief explanation of relevance:

NCT04925752, i.e., the PURPOSE 2 trial (version 30 dated 03.07.2023; NCT752; page numbers are of the pdf generated from the entry for NCT752 at clinicaltrials.gov) is a Phase 3 clinical trial sponsored by Gilead Sciences, the Applicant of the present Application, WO2025029247 (WO247). NCT752 evaluates the efficacy and safety of subcutaneous (SC) twice-yearly, long-acting lenacapavir (LEN) for HIV pre-exposure prophylaxis (PrEP) in cisgender men, transgender women, etc. and are at risk for HIV infection [pp.1, 3(Title), 5].The goal of the study is to test how well the study drug, LEN, works in preventing the risk of HIV (p.4; Brief Summary).

In this trial, the 2 experimental arms in the Blinded Phase studied the effect of SC LEN every 26 weeks and oral LEN on Days 1 and 2 as compared to the effect of oral emtricitabine/tenofovir disoproxil fumarate (F/TDF) once daily (QD) as PrEP. The 2 arms were as follows (p.4; Arms and Interventions):
1. Blinded Phase: LEN + Placebo-to-match (PTM) F/TDF: SC LEN 927 mg every 26 weeks, oral PTM F/TDF QD and oral LEN 600 mg on Days 1 and 2 (Row 1) [It may be noted that the 1st experimental arm (LEN + placebo), thus, effectively studies the effect of LEN as a single agent].
2. Blinded Phase: Placebo LEN + F/TDF: SC LEN placebo every 26 weeks, oral F/TDF QD and PTM oral LEN on Days 1 and 2 (Row 2)

NCT752 states that "[p]articipants will receive oral LEN if SC injections are not available" (p.4; Arms and Interventions, Row 1).

Further, in the LEN Open-Label Extension (OLE) Phase, that followed the Blinded Phase, the "participants randomized to LEN will continue to receive SC LEN 927 mg every 26 weeks for a total of 2 doses" and the participants randomized to F/TDF (Blinded Phase: Placebo LEN + F/TDF) "will receive SC LEN 927 mg on OLE Day 1, OLE Week 26, and will also receive oral LEN 600 mg on OLE Days 1 and 2" (p.4; Arms and Interventions, Row 3).

Similarly, NCT04994509, i.e., PURPOSE 1 trial (version 25 dated 25.07.2023; NCT509; hereto as Citation 3A; available at https://clinicaltrials.gov/study/NCT04994509?tab=history&a=25) is another Phase 3 clinical trial (by Gilead Sciences) that evaluates the safety and efficacy of SC twice-yearly,

long-acting LEN and daily oral emtricitabine/tenofovir alafenamide (F/TAF) for HIV PrEP in adolescent girls and young women at risk for HIV infection [pp.1, 4 (Title), 6 (Brief Summary)].

The experimental arms in the Blinded Phases and the OLE Phase are similar to that in NCT752, with 2 additional arms wherein the effect of LEN is compared with that of F/TAF [pp.7–8; Arms and Interventions, Rows 1, 3], instead of F/TDF [i.d.; Rows 2, 4]. The experimental arms include:
i) Blinded Phases – both, LEN + PTM F/TAF and LEN + PTM F/TDF: SC LEN every 26 weeks, oral PTM F/TAF or F/TDF QD and oral LEN on Days 1, 2 [pp.7–8; Arms and Interventions, Rows 1, 2].
ii) OLE Phase: similar to that in NCT752; and the participants randomized to F/TAF or F/TDF [in Blinded Phase: Placebo LEN + F/TDF or F/TAF)] will receive SC LEN on OLE Day 1, OLE Week 26, and will also receive oral LEN on OLE Days 1 and 2 [p.8; Arms and Interventions, Row 5].

The present Application WO247 claims method of treating/preventing (PrEP/PEP) HIV comprising (i) weekly dosing regimen for LEN (i.e., Compound Ia/Ib) comprising an oral initiation dosage (oral 600 mg, on Days 1 and 2), followed by maintenance dosage (oral 300 mg once weekly), and if 1 or 2 maintenance dosages are missed then orally administering 300 mg or 600 mg respectively, 1–14 days after the missed dose; (ii) LEN as monotherapy, (iii) event driven administration to heavily-treatment experienced (HTE) patients, infected with MDR HIV mutants, previously treated but failing ARV treatment, etc.; (iv) specific tablet composition comprising LEN Na, etc [Claims 1–86].

However, NCT752 and NCT509 [Citation 3A] trials have studied the effect on LEN (monotherapy) in a dosing regimen comprising an oral lead-in (600 mg on Days 1 and 2) followed by SC LEN every 26 weeks for HIV PrEP. Also, NCT752 notes that participants will receive oral LEN if SC injections are unavailable, thus suggesting that the maintenance dosage of LEN could be also be administered orally.

Further, (a) WO2020018459 [Citation 6] discloses a similar method of treating HIV-1 in HTE patients (including with multidrug-resistant HIV mutants) by administering oral tablets comprising LEN Na
(b) NCT05052996 [Citation 2] discloses a similar oral dosing regimen of LEN, in combination with islatravir, in virologically suppressed PWH
(c) Shaik et al., [Citation 1] discloses the simulations for an oral weekly regimen for LEN and the recommended regimen in case of 1 or 2 missed maintenance doses, identical to that claimed in WO247.

Thus, in light of the above Claims 1–86 of WO247, lack inventive step.

Citation # 4(Periodical article) (# uploaded documents:2):

Author:	Title of article:	Title of Periodical:	Publication Date:
Gupta, S.K., et al.	Lenacapavir administered every 26 weeks or daily in combination with oral daily antiretroviral therapy for initial treatment of HIV: a randomised, open-label, active-controlled, phase 2 trial	The Lancet HIV	Jan 2023 (01/2023)
Issue Number of Periodical:	Publisher of Periodical:	Place of publication:	
Volume 10, Issue 1	Elsevier B.V.	Amsterdam	

Page range of article within periodical:	ISBN:	ISSN:
e15–e23		2352-3018

DOI: 10.1016/S2352-3018(22)00291-0

Most relevant passages or drawings:	Relevant to Claims:
Summary; pp. e15–e17, e20, e22; Fig.1	1-86

Brief explanation of relevance:

Gupta et al. describe the study design of and findings from CALIBRATE clinical trial (NCT04143594; Phase 2) wherein the treatment-naïve (TN) participants with HIV were randomized into 4 arms – groups (G) (Summary; pp. e15; e17 LHC; Fig.1):

(i) G1 and G2: oral lenacapavir (LEN) loading dose (600 mg on Days 1 and 2, 300 mg on Day 8), followed by subcutaneous (SC) LEN every 26 weeks from Day 15, with oral daily (QD) emtricitabine /tenofovir alafenamide (F/TAF) for 28 weeks, followed by switch to SC LEN + oral QD TAF (G1) or bictegravir (BIC; G2);

(ii) G3: oral QD LEN (600 mg on Days 1 and 2, followed by 50 mg daily) with F/TAF;

(iii) G4: QD BIC/F/TAF

They report that (i) virological suppression at week 28 in G1–G4 was 94, 93, 94 and 100 %, respectively; (ii) rates of virological suppression at week 54, in G1–G4, were 90, 85, 85 and 92 %, respectively (pp. e20 RHC; e22 LHC). [Thus, it may be noted that the group with oral LEN showed virological suppression comparable to that with oral LEN followed by SC LEN.]

They also note that:

a) oral loading before SC LEN was necessary to rapidly reach therapeutic concentrations (p.e17 LHC).

b) LEN is highly potent, with a low clearance and slow-release kinetics; LEN is flexible in its route of administration and dosing intervals, allowing oral (daily to weekly) and injectable dosing (Summary; pp. e16; e22)

c) single SC LEN dose given as monotherapy showed potent antiviral activity (p.e22 LHC)

d) when LEN is combined with other antiretroviral (ARV) agents with synchronous dosing schedules, a range of dosing options could be possible for people with HIV (PWH) (p.e22)

e) Oral LEN in an all-oral, once-weekly dual combination regimen (p.e22 LHC) [NCT05052996 (Citation 2 hereto)].

Also, a poster titled “PK, food effect, and safety of oral GS-6207, a novel HIV-1 capsid inhibitor” (Abstract No. 470), presented at Conference on Retroviruses and Opportunistic Infections [March 8–11, 2020] by Begley et al., [referred to as Begley et al., henceforth; Citation 4A; https://www.croiconference.org/wp-content/uploads/sites/2/posters/2020/1430_5_Begley_00470.pdf], presented the single dose pharmacokinetics (PK) of oral GS-6207 (LEN) tablet.

They disclose:

A. The LEN concentration-time profile for single-ascending dose cohorts shows the mean plasma LEN concentration (ng/mL) in the fasted state [Col.3]. [It may be noted that on a visual analysis of the graph, it can be seen that the data point on the trendline for the 300 mg and 900 mg LEN dose is above the 10 ng/mL mark (i.e., around 15 ng/mL) 7 days post the oral LEN dose, and falls thereafter].

B. Oral LEN showed a Tmax at 4–8 hours post-dose and a median t1/2 of about 11–13 days; this is supportive of less frequent dosing [Cols. 3, 4].

C. LEN can meet the needs of heavily treatment-experienced (HTE) people living with multidrug-resistant (MDR) HIV, and reduce daily pill burden through less frequent dosing [Col.1].

D. Data supports ongoing development of oral LEN for use in PWH with SC LEN or as part of an oral combination with other ARVs [Col.3; Conclusion].

The present Application WO2024029247 (WO247) claims method of treating/preventing (PrEP /PEP) HIV comprising (i) oral dosing regimen for LEN (Compound Ia/Ib) - initiation dosage (oral 600 mg, for 2 days), maintenance dosage (oral 300 mg once weekly), and administering 300/600 mg in case of 1 or 2 missed maintenance doses, respectively, 1–14 days after the missed dose; (ii) event driven administration to HTE patients, infected with MDR HIV mutants, previously treated but failing

ARV treatment; (iii) specific tablet composition comprising LEN Na [Claims 1–86].

However, Gupta et al., disclose oral LEN dosing (daily/weekly) and that oral LEN shows virological suppression comparable to that with oral LEN loading followed by SC LEN, although the regimens are studied in combination with other ARVs. Further, Margot et al., [Citation 5] disclose that LEN can be used as monotherapy. Also, Begley et al., had reported the PK of oral LEN (300, 900 mg) with a t1/2 of 11–13 days, which supports a LEN regimen comprising once-weekly oral dosing.

Further,
1. Shaik et al. [Citation 1] disclose the identical oral dosing regimen of LEN and recommended regimen in case of 1 or 2 missed oral maintenance dose as that claimed in WO247;
2. WO2020018459 and WO2021108544 [Citations 6 and 7, respectively] disclose LEN for treating (including MDR HIV, etc.) and/or preventing HIV, identical tablet composition (as in WO247), with event-driven administration, etc.

Thus, in light of the above, Claims 1–86 of WO247 lack inventive step

Citation # 5(Periodical article) (# uploaded documents:2):

Author:	Title of article:	Title of Periodical:	Publication Date:
Nicolas Margot, et al.	Phenotypic resistance to lenacapavir and monotherapy efficacy in a proof-of-concept clinical study	Journal of Antimicrobial Chemotherapy	13 Jan 2022 (13/01/2022)

Issue Number of Periodical:	Publisher of Periodical:	Place of publication:
Volume 77, Issue 4	Oxford University Press	United States

Page range of article within periodical:	ISBN:	ISSN:
989-995		

DOI: 10.1093/jac/dkab503

Most relevant passages or drawings:	Relevant to Claims:
pp. 989, 990, 994, 995; Fig. 1.	1-86

Brief explanation of relevance:

Brief Explanation of Relevance:

Margot et al. describe the design and results of Study GS-US-200-4072 (Study 4072), a Phase 1b clinical study of lenacapavir (LEN)—a first-in-class HIV-1 capsid (CA) inhibitor (including Day 10 resistance analyses) (pp.989, 990) by Gilead Sciences, the Applicant of the present Application, WO2025029247 (WO247).

Margot et al. disclose:
1) In this dose-ranging study, untreated people with HIV-1 (n=39) were randomized to receive subcutaneous (SC) LEN monotherapy at single doses of 20, 50, 150, 450, or 750 mg or a placebo (Abstract; pp. 989990, LHC; 994 LHC).
2) LEN monotherapy produced dose-dependent antiviral effects, with mean maximum declines in HIV-1 RNA of 1.4 (at 20 mg) to 2.3 (at 750 mg) log10 copies/mL by Day 10, and the highest doses showed a rapid decline comparable to that observed with bictegravir, while the placebo arm showed mean maximum reduction of HIV RNA of 0.2 log10 copies/mL decline (p.990, 995; Fig. 1).
3) The emergence of a LEN-associated capsid inhibitor resistance mutation, Q67H, occurred in 2 participants receiving sub-therapeutic low doses (20 or 50 mg), and overall, LEN resistance was rare and observed only at these sub-therapeutic exposures (p.994).
4) Previous studies indicated that “oral loading of lenacapavir followed by a 927 mg subcutaneous

dose was able to maintain therapeutically adequate plasma LEN concentrations for up to 6 months, supporting dosing of LEN every 6 months" (p.990, LHC).
5) "[L]ong-acting LEN has the potential to become an important treatment option for people with HIV, as well as a key option to prevent HIV infection in the setting of pre-exposure prophylaxis (PrEP)" (p.995, LHC).

Also, a periodical article by Link et al., [2020; doi: 10.1038/s41586-020-2443-1; [Citation 5A], also funded by Gilead Sciences, Inc., the Applicant of the present Application WO247 discloses:
A) The discovery and early clinical evaluation of GS-6207 (LEN), designed to bind tightly at a conserved interface between capsid protein monomers [p.1].
B) LEN showed antiviral activity at picomolar concentrations, and high synergy and no cross-resistance with existing ARVs [p.1].
C) LEN showed a predicted rate of hepatic clearance of 0.01 l h^−1 kg^−1, and a median apparent terminal half-life (~38 days) in human PK data [p.4].
D) Increases in exposure to LEN were approximately dose-proportional. Doses ≥100 mg kept drug levels above the protein-adjusted 95% effective concentration for ³ 12 weeks, and doses ≥300 mg did so for over 24 weeks, supporting long-acting dosing [p.4].
E) In a Phase-1 study, in people with untreated HIV-1 (Study 4072), LEN monotherapy with SC dose (450mg) resulted in 2.2 log10 reductions in viral load after day 9 and showed sustained plasma exposure at antiviral active concentrations for > 6 months [p.1].
F) The results demonstrate the potential of LEN as a new long-acting agent to treat or prevent (PrEP) HIV infection [p.1].

The present Application, WO247, claims methods for treating or preventing (PrEP/PEP) HIV infection via oral administration of a compound of Formula Ia or Ib (LEN or LEN Na salt) comprising (i) an initiation phase of about 500–700 mg (600 mg) for 1–2 days (2 days), followed by maintenance doses of 200–400 mg (300 mg) once weekly, (iii) in case of 1 or 2 missed maintenance doses, oral administration of 300 or 600 mg respectively within 1–14 days, (iii) LEN as monotherapy or in combination with other ARVs, (iv) method for treating heavily treatment experienced (HTE) or multidrug resistant (MDR) HIV-1 patient, (v) such method for prophylaxis (pre-, post-, event-driven, etc.), (vi) specific composition for a tablet containing LEN or LEN Na (Claims 1–86).

As shown above, Margot et al. and Link et al. [Citation 5A] already disclose LEN monotherapy for HIV treatment, albeit with SC administration of LEN, and also indicate that it can be used for HIV prevention. However, NCT04925752 [Citation 3] discloses an oral initiation plus SC maintenance (every 26 weeks) LEN dosing regimen as monotherapy for HIV PrEP and note that "participants will receive oral LEN if SC injections are not available", thereby suggesting that oral LEN may also be used for the maintenance dose.

Further:
1. Shaik et al. [Citation 1] disclose the simulation for an oral weekly regimen of LEN and recommended regimen in case of one 1 or 2 missed maintenance doses, identical to that claimed in WO247.
2. WO2020018459 [Citations 6] and WO2021108544 [Citations 7] disclose method of treating HIV (including MDR HIV) and/or preventing HIV (PrEP, post-exposure prophylaxis, event-driven, etc.) with LEN, including tablet compositions thereof, identical to those in WO247.

Thus, in light of the above, Claims 1 to 86 of WO247 lack inventive step.

Citation # 6 (Patent/utility model) (# uploaded documents: 0):

Country code:	Publication number:	Document kind code:
WO	2020/018459	A1

Patent Applicant/Patent Owner:	Title of invention:
Gilead Sciences, Inc.	Capsid inhibitors for the treatment of HIV

Link to document:
https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2020018459

Publication Date:	Filing Date:	Priority Date:
23 Jan 2020 (23/01/2020)	15 Jul 2019 (15/07/2019)	16 Jul 2018 (16/07/2018)

Source of Abstract:	Accession number:	Publication Date of Abstract:	Retrieval Date of Abstract:

Most relevant passages or drawings:	Relevant to Claims:
Abstract; pp.1–8, 11–13, 15–34, 97–114, 117–151, 185; Ex.3S; Table T, Table 15; Claim 1–27, 33, 41, 46–50, 56–87,102–107, Fig.17	1-86

Brief explanation of relevance:

WO2020018459 (WO459), an earlier application by the Applicant of the present Application, WO2025029247 (WO247), discloses methods of treating HIV in heavily treatment-experienced (HTE) patients with multidrug resistant (MDR) HIV by orally administering tablets of compound I(a) (is the same as compound I(b) of WO247) (i.e., lenacapavir; LEN) or its sodium salt (LEN Na), and combination therapy with other antiretrovirals (ARVs) for treating and preventing HIV in persons at risk of infection (Abstract; pp.1–2, 7–8, 9, 29–30, 129-130, Fig.17).

WO459 discloses and/or claims a method of treating HIV infection wherein (Claims 1–27; pp.3–8, 11–13, 15–31, 97–114):

1. LEN or LEN Na salt is administered orally (tablet), etc. (Claims 26–27, 33, 41, 102–107; pp.16, 97, 114)
2. LEN or LEN Na salt is administered once daily, or once every 1, 2, 24, 48 or longer weeks; dosage amount is about 1–1000 mg (e.g., 300, 600 mg); weekly dose of 300 mg; administered orally (one or more tablets), etc. (Claims 46–50; pp.119–129)
3. Tablet is prepared from spray-dried dispersion technology, and comprises [values in percent w /w] 5–45 (e.g., 300 mg) LEN Na, 1–10 copovidone, 0.01–10 poloxamer 407, 5–45 microcrystalline cellulose, 15–70 mannitol, 1–30 croscarmellose sodium, 0.01–10 magnesium stearate; the tablet further comprises an outer film coat (such as Opadry(R)II) which provides 1–8 % weight gain based on the uncoated tablet (Claims 102–107; pp. 10, 100–112, 185; Ex.3S; Table T)
4. Administering Formula I(a) in combination with 1, 2, 3, or 4 additional therapeutic agents - different class of ARVs selected from nucleos(t)ide reverse transcriptase inhibitor (NRTI), non-nucleos(t)ide reverse transcriptase inhibitor (NNRTI), protease inhibitor (PI), integrase strand transfer inhibitor (INSTI), etc., such as bictegravir, etc. administered simultaneously (in a unitary dosage form) or sequentially, etc. (Claims 66–73; pp.129–151; activity in combination with other ARVS: p.189, Table 15).

WO'459 also claims such method, wherein:

5.HIV-1 is characterized by HIV-1 mutant resistance to one/two/three or more antiretroviral (ARV) medications (Claims 2–4, p.3)
6. HIV-1 mutant is resistant to a (i) PI, mutant selected from I50V, I84V/L90M, G48V/V82A/L90M, and G48V/V82S; (ii) NRTI, mutant selected from K65R, MI 84V, and 6TAMs; (iii) NNRTI, mutant selected from K103N, Y181C, Y188L, L100I/K103N, and K103N/Y181C; or an (iv) INSTI, mutant selected from Y143R, E138K/Q148K, G140S/Q148R, E92Q/N155H, N155H/Q148R, and R263K /M50I [Claims 5–9, pp.3, 17, 187–88 (Ex.4B)]
7. The patient is infected with HIV-1 resistant to at least one ARV medication or with MDR HIV-1 which is resistant to at least one ARV medication from each of two/three different ARV classes, i.e. NRTI (e.g., emtricitabine, 3TC, etc), NNRTI (e.g., rilpivirine, etc), PI (e.g., lopinavir, darunavir, etc), INSTI (e.g., cabotegravir, bictegravir, etc) (Claims 10–17, pp.3, 7–8, 18–19, 27)
8. The resistant patient had been previously treated with at least 1 ARV medication for at least 3, 6, 9 or 12 months (Claims 10, 18–22, pp.4, 7, 19-20)
9. The patient (a) has failed a prior HIV treatment regimen; (b) is failing an HIV treatment regimen at the time of beginning administration of LEN or its salt; or (c) failed the prior treatment regimen and LEN administration results in a reduction in HIV viral load; the combination regimen comprises at least one ARV medication from each of two/three different ARV classes (Claims 22–25, 56–65, 74–87)

The present Application, WO247, claims method of treating or preventing HIV (Pre-exposure prophylaxis (PrEP)/ post-exposure prophylaxis (PEP)) with an oral dosing regimen comprising (i) initiation, maintenance dose wherein LEN, or its sodium salt is administered orally (spray dried, film-coated tablet), in specific composition; (ii) in HTE patients with MDR HIV-1, wherein the specific HIV-1 mutants are resistant to multiple drugs of different ARV classes, and failing current ARV regimen; and administration of LEN decreases viral load; (iii) event driven; LEN administered in combination, simultaneously or sequentially with other ARVs, etc [Claims 1–86].

However, (a) WO459 already discloses a similar method of preventing HIV in persons at risk of infection, and treating HIV-1 characterized by the identical MDR HIV-1 mutants (resistant to identical ARVs), in HTE patients, previously treated and failing their current treatment regimen, and show decrease in viral load due to LEN, by administering oral tablet formulation comprising LEN Na, and in combination with other ARVs; (b) WO2021108544 [Citation 7] discloses event-driven administration of LEN for PrEP; (c) Shaik, et. al [Citation 1] discloses the oral initiation and maintenance dosing regimen identical to that claimed in WO247.

Thus, in light of the above, all Claims 1–86 of WO247 lack, inventive step.

Citation # 7 (Patent/utility model) (# uploaded documents: 0):

Country code:	Publication number:	Document kind code:
WO	2021/108544	A1

Patent Applicant/Patent Owner:	Title of invention:
Gilead Sciences, Inc.	Capsid inhibitors for the prevention of HIV

Link to document:
https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2021108544

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Most relevant passages or drawings:	Relevant to Claims:
Abstract; pp. 1–7, 8–40, 50, 113, 115, 125–126, 128–140, 187; Claims 1–6, 15, 21, 25–27, 31–81, 84–92	1-86

Brief explanation of relevance:

WO2021108544 (WO544), an earlier application by the Applicant of the present Application, WO2025029247 (WO247), relates to methods of preventing HIV or reducing the risk of acquiring HIV by administering a therapeutically effective amount of a compound of Formula (Ia) (i.e., lenacapavir; LEN) or its pharmaceutically acceptable sodium salt (LEN Na) (Abstract; pp.1, 36) on a daily or intermittent dosing regimen (e.g., every 4, 28 or 48 weeks), optionally in combination with additional therapeutic agents (pp.1–4, 23–24, 36; Abstract). [It may be noted that Compound Ia of WO544 is identical to Compound Ib claimed in the methods of WO247.]

WO544 discloses and/or claims a method of preventing (pre-exposure prophylaxis, post-exposure prophylaxis, event driven or on-demand) HIV–1 or 2 infection by administering a therapeutically effective amount of LEN Na, wherein: (pp.6, 127; Claims 1, 84–88, 91–92), wherein:
1. LEN Na is administered orally as a tablet once daily, weekly or monthly (prepared by spray-dried dispersion) comprising about 300 mg LEN (pp.28–35, 38, 39, 113, 115; Claims 2–4, 11–12, 14, 25, 27).
2. The tablet comprises 5–45 (particularly 15–25) w/w percent of LEN Na, 1–10 (particularly 3–6) w /w percent of copovidone, 0.01–10 (particularly 0.5–3) w/w percent of poloxamer 407, 5–45 (particularly 18–30) w/w percent of microcrystalline cellulose, 15–70 (particularly 40–50) w/w percent of mannitol, 1–30 (particularly 6–10) w/w percent of croscarmellose sodium and 0.01–10 (particularly 1–3) w/w percent of magnesium stearate (pp.117 –127).
3. Outer film coat of tablet (such as OPADRY(R)II) provides 1–8 percent (particularly 4 percent) weight gain based on the uncoated tablet (pp. 117, 125–126).

4. LEN or its salt administered in a dosage from 10–2000 mg, e.g., 900, 300 mg (pp. 5, 27; Claims 24–28).
5. LEN or its salt administered as a monotherapy (pp. 3, 139; Claim 49).
6. LEN Na is administered with up to three additional agents, either simultaneously as a unitary dosage form or sequentially. Additional agents may include HIV protease, reverse transcriptase, integrase, gp41, CXCR4, gp120, CCR5 or capsid inhibitors and broadly neutralizing antibodies, bispecific antibodies or HIV vaccines (pp.1, 3, ,37, 128–130, 135–140; Claims 31–36).
7. Additional therapeutic agent is selected from tenofovir alafenamide, tenofovir disoproxil, tenofovir alafenamide hemifumarate, bictegravir or pharmaceutically acceptable salt thereof (pp.131–132; Claims 37–48, 80–81).
8. Event-driven administration of LEN for PrEP and/or PEP prophylaxis; PrEP comprises continuous administration, wherein LEN Na is administered before exposure to HIV at about 14, 10, 7, 5 days or 72 to 1 hour prior to exposure, during the period of exposure (once every 2 months or months) and/or 1 hour to 14 days after the final exposure to HIV (pp.6–22; Claims 51–78).

The present application, WO247, claims methods for treating or preventing (PrEP/PEP) HIV infection via oral administration of a compound of Formula Ia or Ib (LEN or LEN Na salt) comprising (i) an initiation phase of about 500–700 mg (600 mg) for 1–2 days (2 days), followed by maintenance doses of 200–400 mg (300 mg) once weekly. (iii) in case of 1 or 2 missed maintenance doses, oral administration of 300 or 600 mg respectively within 1–14 days, (iii) LEN as monotherapy or in combination with other ARVs. (iv) method for treating heavily treatment experienced (HTE) or multidrug resistant (MDR) HIV-1 patient, (v) such method for prophylaxis (pre-, post-, event-driven, etc.), (vi) specific composition for a tablet containing LEN or LEN Na (Claims 1–86).

However, WO544 already discloses (a) methods for preventing (including as PrEP or PEP) HIV infection or reducing the risk of acquiring HIV by administering LEN Na orally as a tablet; wherein the composition of the film-coated tablet (prepared by spray-dried dispersion) comprising LEN Na and other excipients, is identical to that claimed in WO247. (b) administration of additional therapeutic agents simultaneously as a unitary dosage form or sequentially. (c) administration may be event-driven for PrEP and/or PEP, with LEN given continuously or at defined time points before (at about 14, 10, 7, 5 days or 72 to 1 hour before), during and/or after HIV exposure.

Further,
1. Shaik et al. [Citation 1] discloses the identical weekly oral LEN dosing regimen and the recommended regimen in case missed doses, as claimed in WO247.
2. WO2020018459 [Citation 7] discloses LEN for treatment of HIV in HTE patients and those with MDR HIV.
3. Margot et al. and Link et al. [Citation 5 and 5A respectively] disclose LEN monotherapy, albeit using SC dosing.

Thus, in light of the above, Claims 1 to 86 of WO247 lack inventive step.

ADDITIONAL COMMENTS FOR WO 2025/029247

I. INTRODUCTION

The present Application, WO 2025/029247 (WO'247), filed by Gilead Sciences, Inc. (Gilead), claims an oral dosing regimen for lenacapavir for treating or preventing HIV infection, comprising an initiation dosage, and one or more maintenance dosage(s), and a schedule in case of missed maintenance dosage(s).

WO'247 claims method of treating or preventing HIV infection, wherein:

i) The method comprises oral administration of a compound of Formula Ia (i.e., lenacapavir) as a monotherapy comprising (Claims 1–27):
   a) initiation oral dosage of 500–700 mg (particularly 600 mg) lenacapavir for 2 days;
   b) one or more oral maintenance dosages, each of 200–400 mg (particularly 300 mg) lenacapavir, once per week;
   c) if the patient misses 1 or 2 maintenance doses, the method further comprises orally administering 300 or 600 mg lenacapavir, respectively, within 1–14 days of the missed dose, and thereafter resuming administration of the one or more maintenance dosages within about 1–7 days;

   wherein the method comprises (i.1) administering lenacapavir as a monotherapy (Claims 1, 22 and dependent claims; Claim 38); (i.2) Pre-exposure prophylaxis (PrEP)

ii) Lenacapavir is administered as sodium salt, as a film-coated tablet with the specific composition (Claims 28–37)

iii) The method comprises event-driven administration of lenacapavir (Claims 39–49)

iv) The patient (Claims 50, 59–76):

a) is heavily treatment experienced (HTE);

a.1) The HIV infection is characterized by HIV-1 mutant resistance to 1, 2, 3 or more antiretroviral medications - protease inhibitor (PI), nucleoside or nucleotide reverse transcriptase inhibitor (NRTI), non-nucleoside or non-nucleotide reverse transcriptase inhibitor (NNRTI), or integrase strand transfer inhibitor (INSTI) (Claims 51–58)

b) is infected with HIV-1, resistant to at least one antiretroviral medication, or multidrug resistant HIV-1;

c) had been previously treated with antiretroviral medication for at least 3, 6, 9 or 12 months;

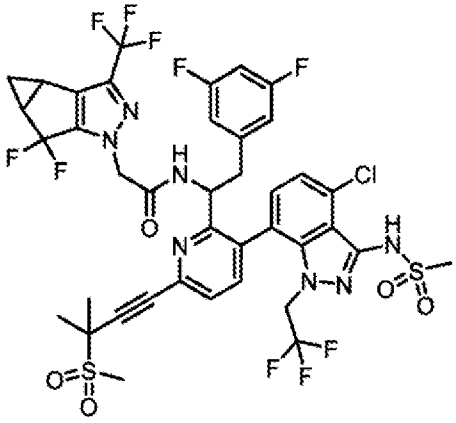
d) failed a prior HIV treatment regimen comprising at least one antiretroviral medication;

e) is failing a prior HIV treatment regimen comprising at least one antiretroviral medication at the time of beginning administration of lenacapavir, and administration of lenacapavir results in a decrease in viral load;

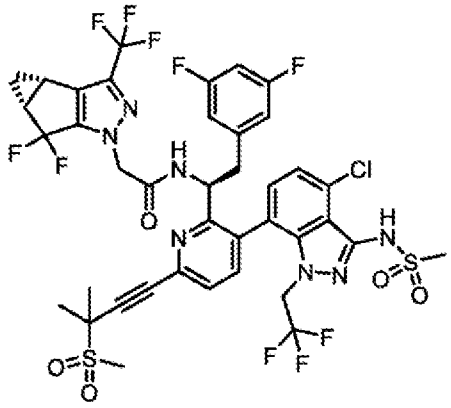
v) Method further comprises administering 1, 2, 3 or 4 additional therapeutic agents to the patient; combined in a unitary dosage form for simultaneous administration; or administered sequentially (Claims 77–84)

vi) The method wherein Compound of Formula Ia, or pharmaceutically acceptable salt thereof, is a compound of Formula Ib or its sodium salt (Claims 85–86)

It may be noted that, Compound of Formula Ia and Ib both represent lenacapavir, the only difference in these two structural formulae is that Formula Ib defines the stereochemistry, whereas Formula Ia does not define the stereochemistry.



Ia



Ib

The Additional Comments are being filed along with the accompanying Third-Party Observation (TPO) to highlight that (i) multiple applications have been filed by the Applicant of the present Application, WO'247, claiming several dosing regimens for lenacapavir, (ii) similarity between the claims of the prior art document referred to in the TPO, the present Application, WO'247, and the other applications filed by Gilead claiming lenacapavir dosing and, (iii) lack of novelty and / or inventive step, and (iv) lack of sufficiency of disclosure.

II. Multiplicity of Applications filed for Dosing Regimen of Lenacapavir

Gilead, the Applicant of the present Application, WO'247, has filed several applications relating to lenacapavir, particularly claiming the compositions, solid forms, combinations and dosing regimens of lenacapavir.

At least three applications have been filed claiming various dosing regimens of lenacapavir for treatment or prevention of HIV. They are:

WO2024220624[1] (WO'624; priority date: 19.04.2023; publication date: 24.10.2024) (for which a TPO has been filed)

WO2025029247[2] (WO'247; priority/ filing date: 28.07.2023; publication date: 06.02.2025) (the present Application, with the accompanying TPO)

WO2025042394[3] (WO'394; priority/ filing date: 23.08.2023; publication date: 27.02.2025) (for which TPO has been filed)

WO'624 and WO'394 relate to a similar dosing regimen comprising initiation dosage (comprising oral and subcutaneous administration) and maintenance dosage (comprising subcutaneous administration). WO'624 claims an oral bridging strategy in case of a missed subcutaneous maintenance dose. WO'394 claims restarting the initiation dosage if the more than 28 weeks elapsed after the last maintenance dosage, and further provides for an alternative oral regimen in case of a missed oral initiation dosage.

It may be noted that the documents relating to regulatory approval by the United States Food and Drug Administration (i.e., the Sunlenca Label-Prescribing Information; cited in the TPOs for WO'624 and WO'394 as Citations 3 and 2, respectively) and the European Medicines Agency (i.e., Sunlenca EPAR – Product Information; cited in the TPO for WO'394 as Citation 3) disclose the identical dosing regimens and the alternative regimens thereof in case of missed dosage/s, as those claimed in WO'624 or WO'394.

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[1] https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2024220624
[2] https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2025029247
[3] https://patentscope.wipo.int/search/en/detail.jsf?docId=WO2025042394

Apart from these, Gilead has filed the present Application, WO2025029247, claiming another dosing regimen for lenacapavir comprising orally administering the initiation dosage, maintenance dosage, as well as a schedule in case of missed oral maintenance dosage.

The TPO accompanying these Additional Comments observes, through the cited prior art documents, that the claimed oral regimen is also already known and disclosed in the prior art.

Further, it is important to note that Gilead has filed these multiple applications with several identical dependent claims across all Applications. Some of the prior art documents used in the accompanying TPO also contains the same claims. Section V of the Additional Comments (below) highlights this aspect of the dependent claims of not just the present Application, WO'247, but also the other applications filed for dosing regimens of lenacapavir.

III. LACK OF NOVELTY AND/OR INVENTIVE STEP

Apart from the comparison of the claims set out in Table A below that clearly brings out the identical nature of the claims across the multiple applications, including the prior art document, the TPO filed along with these Additional Comments, and the TPOs filed for the other two applications, WO'624 and WO'394 observes, through the cited prior art documents, that:

1. Shaik, et al. [Citations 1 and 1A in the accompanying TPO, poster *available at* https://presentations.gilead.com/files/6416/5877/1579/Shaik-1_AIDS2022_33x46.8_Final_printready.pdf and also *available at* https://web.archive.org/web/20230204060120/https://www.hivandmore.d

e/kongresse/iac2022/slides/Shaik_LEN-QWK-Simul_AIDS2022_PESUB23.pdf]] discloses an oral weekly regimen for lenacapavir and the simulated recommended regimen in case of one or two missed oral maintenance doses. This is identical to the disclosures in Example 1 (pp.126–129 of WO'247). Thus, the Claims of WO'247 lack novelty to the extent of overlap with regards to the claims for the weekly oral dosing regimen and the schedule in case of the missed doses.

2. Dosing regimen of lenacapavir comprising initiation dosage, maintenance dosage and regimen in case of missed dosages are already known [Shaik et al.; Citation 1 and 1A in the accompanying TPO, poster *available at* https://presentations.gilead.com/files/6416/5877/1579/Shaik-1_AIDS2022_33x46.8_Final_printready.pdf and also *available at* https://web.archive.org/web/20230204060120/https://www.hivandmore.de/kongresse/iac2022/slides/Shaik_LEN-QWK-Simul_AIDS2022_PESUB23.pdf]. While some of these known regimens comprise administering lenacapavir orally (loading) and subcutaneously, it is also known that in case when subcutaneous lenacapavir was not available, lenacapavir was administered orally [NCT04925752, i.e., the PURPOSE 2 trial; Citation 3 in the accompanying TPO; version 30 dated 03.07.2023; available at: https://clinicaltrials.gov/study/NCT04925752?tab=history&a=30#version-content-panel]. Further, prior art documents disclose (a) the long acting potential of lenacapavir due to its pharmacokinetics, i.e., the required plasma levels are reached with oral and subcutaneous administration and the long half-life of lenacapavir and (b) less frequent administration of lenacapavir [Begley et al., Citation 4A in the accompanying TPO; *available at* https://www.croiconference.org/wp-

content/uploads/sites/2/posters/2020/1430_S_Begley_00470.pdf]. Thus, all the three dosing regimens claimed for lenacapavir in WO'624, WO'247 and WO'394 are obvious, and thus lack inventive step.

3. Also, the claims in the present Application WO'247 and the other two applications by Gilead, WO'624 and WO'394, for the method of treating or preventing HIV wherein the HIV-1 infection is characterised by resistance to the antiretroviral agents, mutant strains and the HTE patients failing their current antiretroviral therapy [Refer to Table A below], as well the claims for the formulation for tablet and subcutaneous solution lack inventive step [WO2020018459 and WO2021108544; Citations 6 and 7, respectively in the accompanying TPO].

V. LACK OF SUFFICIENCY OF DISCLOSURE

Without prejudice to the above submissions regarding lack of novelty and/or inventive step, the following may be noted.

It appears that the claims to the weekly oral dosing regimen, in the present Application, WO'247, are supported only by the data set out in Example 1 of the present Application, WO'247. Example 1 sets out the pharmacokinetics modelling simulations of lenacapavir weekly oral dosing regimen (Example 1; pp.126–129 of WO'247). It discloses that the purpose of this analysis was to identify lenacapavir dosing regimens, for example, in combination with other antiretroviral agents, for people living with HIV. Simulations were conducted to evaluate lenacapavir exposure for the missed dose scenarios. However, the present Application, WO'247, also claims a method using the same weekly oral regimen for (a) lenacapavir as a monotherapy, and (b) lenacapavir for pre-

exposure prophylaxis (PrEP). However, there is no data in the present Application, WO'247, to support the claims relating to claimed oral weekly regimen as monotherapy of lenacapavir or for lenacapavir as PrEP.

Thus, the claims of the present Application, WO'247, fail for sufficiency of disclosure, especially with respect to the claims for PrEP and monotherapy.

V. *COMPARISON OF CLAIMS OF THE PRIOR ART DOCUMENT, WO 2020/018459 [CITATION 6] WITH THE CLAIMS OF THE PRESENT APPLICATION, AND THOSE OF WO'624 AND WO'394*

The table below [**Table A**] shows the similarity between the dependent claims of the prior art document, WO2020/018459 [cited as Citation 6 in the accompanying TPO], and the claims of the present Application, WO'247; and the two other applications also filed by the Applicant, Gilead, that is, WO'624 and WO'394. The independent claims relate to the dosing regimen for lenacapavir.

It may be noted that the similarity can be observed between the claims other than those for the claimed dosing regimen. These claims are for the method of treating human immunodeficiency virus (HIV) infection in a heavily treatment-experienced patients (hereinafter referred to as "Method"),

Note: Where the text of the claims is identical to the text of the claims in the prior art document, WO'459, only the claim numbers in the Applications WO'247, WO'624, and WO'394 have been stated, for brevity.

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
Claim 1: Claim 1 relates to method of treating HIV with lenacapavir	*Claim 1 relates to method of treating / preventing HIV with weekly oral dosing regimen of lenacapavir, with alternative dosing regimen in case of missed dosing*	*Claim 1 relates to method of treating / preventing HIV with subcutaneous plus oral dosing regimen of lenacapavir, and an oral bridging strategy*	*Claim 1 relates to method of treating / preventing HIV with subcutaneous plus oral dosing regimen of lenacapavir, with alternative dosing regimen in case of missed dosing*
Claim 2: Method wherein the HIV infection is an HIV-1 infection characterized by HIV-1 mutant resistance to one or more antiretroviral medications.	Claim 51 identical to claim of WO'459	Claim 61 identical to claim of WO'459	Claim 62 identical to claim of WO'459
Claim 3: Method wherein the HIV infection is an HIV-1 infection characterized by HIV-l mutant resistance to two or more antiretroviral medications.	Claim 52 identical to claim of WO'459	Claim 62 identical to claim of WO'459	Claim 63 identical to claim of WO'459
Claim 4: Method wherein the HIV infection is an HIV-1 infection characterized by HIV-l mutant resistance to three or more antiretroviral medications.	Claim 53 identical to claim of WO'459	Claim 63 identical to claim of WO'459	Claim 64 identical to claim of WO'459

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
Claim 5: Method wherein the HIV-1 mutant is resistant to a protease inhibitor (PI), a nucleoside or nucleotide reverse transcriptase inhibitor (NRTI), a non nucleoside or non-nucleotide reverse transcriptase inhibitor (NNRTI), or an integrase strand transfer inhibitor (INSTI).	Claim 54 identical to claim of WO'459	Claim 64 identical to claim of WO'459	Claim 65 identical to claim of WO'459
Claim 6: Method wherein the HIV-1 mutant resistant to a protease inhibitor is selected from I50V, I84V/L90M, G48V/V82A/L90M, and G48V/V82S.	Claim 55 identical to claim of WO'459	Claim 65 identical to claim of WO'459	Claim 66 identical to claim of WO'459
Claim 7: Method wherein the HIV-1 mutant resistant to a nucleoside or nucleotide reverse transcriptase inhibitor is selected from K65R, M184V, and 6TAMs.	Claim 56 identical to claim of WO'459	Claim 66 identical to claim of WO'459	Claim 67 identical to claim of WO'459
Claim 8: Method wherein the HIV-1 mutant resistant to a non-nucleoside or non nucleotide reverse transcriptase inhibitor	Claim 57 identical to claim of WO'459	Claim 67 identical to claim of WO'459	Claim 68 identical to claim of WO'459

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
is selected from K103N, Y181C, Y188L, L100I/K103N, and K103N/Y181C.			
Claim 9: Method wherein the HIV-1 mutant resistant to a integrase strand transfer inhibitor is selected from Y143R, E138K/Q148K, G140S/Q148R, E92Q/N155H, N155H/Q148R, and R263K/M50I.	Claim 58 identical to claim of WO'459	Claim 68 identical to claim of WO'459	Claim 69 identical to claim of WO'459
Claim 10: Method wherein the patient is infected with HIV-1 resistant to at least one antiretroviral medication.	Claim 59 identical to claim of WO'459	Claim 69 identical to claim of WO'459	Claim 70 identical to claim of WO'459
Claim 11: wherein the patient is infected with multidrug resistant HIV-1 which is resistant to at least one antiretroviral medication from each of two different classes of antiretroviral medications, wherein the different classes of antiretroviral medications are selected from a nucleoside or nucleotide reverse	Claim 60 identical to claim of WO'459	Claim 70 identical to claim of WO'459	Claim 71 identical to claim of WO'459

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
transcriptase inhibitor (NRTI), a non-nucleoside or non-nucleotide reverse transcriptase inhibitor (NNRTI), a protease inhibitor (PI), and an integrase strand transfer inhibitor (INSTI).			
Claim 12: Method wherein the patient is infected with multidrug resistant HIV-l which is resistant to at least one antiretroviral medication from each of three different classes of antiretroviral medications, wherein the different classes of antiretroviral medications are selected from a nucleoside or nucleotide reverse transcriptase inhibitor (NRTI), a non-nucleoside or non-nucleotide reverse transcriptase inhibitor (NNRTI), a protease inhibitor (PI), and an integrase strand transfer inhibitor (INSTI).	Claim 61 identical to claim of WO'459	Claim 71 identical to claim of WO'459	Claim 72 identical to claim of WO'459

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
Claim 13: Method wherein the different classes of antiretroviral medications are selected from a nucleoside or nucleotide reverse transcriptase inhibitor (NRTI), a non-nucleoside or non-nucleotide reverse transcriptase inhibitor (NNRTI), and a protease inhibitor (PI).	Claim 62 identical to claim of WO'459	Claim 72 identical to claim of WO'459	Claim 73 identical to claim of WO'459
Claim 14: Method wherein the NRTI is selected from emtricitabine, lamivudine (3TC), zidovudine (azidothymidine (AZT)), didanosine (ddl), dideoxyinosine, tenofovir, tenofovir alafenamide, tenofovir disoproxil fumarate, stavudine (d4T), zalcitabine (dideoxycytidine, ddC), and abacavir.	Claim 63 identical to claim of WO'459	Claim 73 identical to claim of WO'459	Claim 74 identical to claim of WO'459
Claim 15: Method wherein the NNRTI is selected from efavirenz, etravirine, rilpivirine, nevirapine, and delavirdine.	Claim 64 identical to claim of WO'459	Claim 74 identical to claim of WO'459	Claim 75 identical to claim of WO'459

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
Claim 16: Method wherein the PI is selected from amprenavir, atazanavir, darunavir, fosamprenavir, indinavir, lopinavir, nelfmavir, ritonavir, saquinavir, and tipranavir.	Claim 65 identical to claim of WO'459	Claim 75 identical to claim of WO'459	Claim 76 identical to claim of WO'459
Claim 17: Method wherein herein the INSTI is selected from raltegravir, elvitegravir, dolutegravir, cabotegravir, and bictegravir.	Claim 66 identical to claim of WO'459	Claim 76 identical to claim of WO'459	Claim 77 identical to claim of WO'459
Claim 18: Method wherein the patient had been previously treated with at least one antiretroviral medication for at least 3 months.	Claim 67 identical to claim of WO'459	Claim 77 identical to claim of WO'459	Claim 78 identical to claim of WO'459
Claim 19: Method wherein the patient had been previously treated with at least one antiretroviral medication for at least 6 months.	Claim 68 identical to claim of WO'459	Claim 78 identical to claim of WO'459	Claim 79 identical to claim of WO'459
Claim 20: Method wherein the patient had been previously treated with at least one antiretroviral	Claim 69 identical to claim of WO'459	Claim 79 identical to claim of WO'459	Claim 80 identical to claim of WO'459

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
medication for at least 9 months.			
Claim 21: Method wherein the patient had been previously treated with at least one antiretroviral medication for at least 12 months.	Claim 70 identical to claim of WO'459	Claim 80 identical to claim of WO'459	Claim 81 identical to claim of WO'459
Claim 22: Method herein the patient failed a prior HIV treatment regimen comprising administration of at least one antiretroviral medication.	Claim 71 identical to claim of WO'459	Claim 81 identical to claim of WO'459	Claim 82 identical to claim of WO'459
Claim 23: Method wherein the prior treatment regimen comprised administration of at least one antiretroviral medication from each of two different classes of antiretroviral medications, wherein the different classes of antiretroviral medications are selected from a nucleoside reverse transcriptase inhibitor (NRTI), a non-nucleoside reverse	Claim 72 identical to claim of WO'459	Claim 82 identical to claim of WO'459	Claim 83 identical to claim of WO'459

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
transcriptase inhibitor (NNRTI), a protease inhibitor (PI), and an integrase strand transfer inhibitor (INSTI).			
Claim 24: Method wherein the prior treatment regimen comprised administration of at least one antiretroviral medication from each of three different classes of antiretroviral medications, wherein the different classes of antiretroviral medications are selected from a nucleoside reverse transcriptase inhibitor (NRTI), a non-nucleoside reverse transcriptase inhibitor (NNRTI), a protease inhibitor (PI), and an integrase strand transfer inhibitor (INSTI).	Claim 73 identical to claim of WO'459	Claim 83 identical to claim of WO'459	Claim 84 identical to claim of WO'459
Claim 25: Method wherein the different classes of antiretroviral medications are selected from a nucleoside reverse	Claim 74 identical to claim of WO'459	Claim 84 identical to claim of WO'459	Claim 85 identical to claim of WO'459

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
transcriptase inhibitor (NRTI), a non nucleoside reverse transcriptase inhibitor (NNRTI), and a protease inhibitor (PI).			
Claim 41: Method wherein the compound of Formula (Ia) is a sodium salt.	Claim 28: Method wherein the compound of Formula Ia is administered as the sodium salt	Claim 31 identical to claim of WO'247 and WO'459	Claim 32 identical to claim of WO'247 and WO'459
Claim 104: The tablet [of claims 102–103] wherein the tablet comprises a sodium salt of the compound of Formula (Ia).	Claim 29: Method wherein each oral administration is administered as a tablet comprising the sodium salt of the compound of Formula Ia	Claim 37 identical to claim of WO'247 and similar to claim of WO'459	Claim 38 identical to claim of WO'247 and similar to claim of WO'459
Claim 102: Tablet comprising a compound of Formula (Ia) or Formula (Ib) or a pharmaceutically acceptable salt thereof, and one or more pharmaceutically acceptable excipients, wherein the tablet is prepared from a spray-dried dispersion technology.	Claim 30: Method wherein each tablet is prepared from a spray-dried dispersion technology	Claim 38 identical to claim of WO'247 and similar to claim of WO'459	Claim 39 identical to claim of WO'247 and similar to claim of WO'459
Claim 105: The tablet wherein the tablet comprises about 5 w/w% to about 45 w/w% of the sodium salt of the compound of Formula (Ia), about	Claim 31: Method wherein each tablet comprises about 5 w/w% to about 45 w/w% of the sodium salt of the compound of Formula Ia, about 1	Claim 39 identical to claim of WO'247 and similar to claim of WO'459	Claim 40 identical to claim of WO'247 and similar to claim of WO'459

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
1 w/w% to about 10 w/w% of copovidone, about 0.01 w/w% to about 10 w/w% of poloxamer 407, about 5 w/w% to about 45 w/w% of microcrystalline cellulose, about 15 w/w% to about 70 w/w% of mannitol, about 1 w/w% to about 30 w/w% of croscarmellose sodium, and about 0.01 w/w% to about 10 w/w% of magnesium stearate.	w/w% to about 10 w/w% of copovidone, about 0.01 w/w% to about 10 w/w% of poloxamer 407, about 5 w/w% to about 45 w/w% of microcrystalline cellulose, about 15 w/w% to about 70 w/w% of mannitol, about 1 w/w% to about 30 w/w% of croscarmellose sodium, and about 0.01 w/w% to about 10 w/w% of magnesium stearate, and one or more pharmaceutically acceptable excipients.		
Claim 105: The tablet wherein the tablet comprises about 5 w/w% to about 45 w/w% of the sodium salt of the compound of Formula (Ia), about 1 w/w% to about 10 w/w% of copovidone, about 0.01 w/w% to about 10 w/w% of poloxamer 407, about 5 w/w% to about 45 w/w% of microcrystalline cellulose, about 15 w/w% to about 70 w/w% of mannitol, about 1 w/w% to about 30 w/w% of	Claim 32: Method wherein each tablet comprises about 15 w/w% to about 25 w/w% of the sodium salt of the compound of Formula Ia, about 3 w/w% to about 6 w/w% of copovidone, about 0.5 w/w% to about 3.0 w/w% of poloxamer 407, about 18 w/w% to about 30 w/w% of microcrystalline cellulose, about 40 w/w% to about 50 w/w% of mannitol, about 6 w/w% to about 10 w/w% of	Claim 40 identical to claim of WO'247 and similar to claim of WO'459	Claim 41 identical to claim of WO'247 and similar to claim of WO'459

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
croscarmellose sodium, and about 0.01 w/w% to about 10 w/w% of magnesium stearate.	croscarmellose sodium, and about 1.0 w/w% to about 3.0 w/w% magnesium stearate.		
The compound of Formula Ia or its pharmaceutically acceptable salt is administered in a dosage amount of 1–1000 mg, for example, administered once weekly at a dose of about 300 mg, 325 mg, 350 mg, etc pp.120–121, 124–125 of WO'459	Claim 33: Method wherein each tablet comprises about 300 mg of the compound of Formula Ia, or a pharmaceutically acceptable salt thereof.	Claim 41 identical to claim of WO'247 and similar to the disclosures of WO'459	Claim 42 identical to claim of WO'247 and similar to the disclosures of WO'459
The compound of Formula Ia or its pharmaceutically acceptable salt is administered in a dosage amount of 1–1000 mg, for example, administered once weekly at a dose of about 300 mg, 325 mg, 350 mg, etc pp.120–121, 124–125 of WO'459	Claim 34: Method wherein each tablet comprises about 306.8 mg of the sodium salt of the compound of Formula Ia.	Claim 42 identical to claim of WO'247 and similar to the disclosures of WO'459	Claim 43 identical to claim of WO'247 and similar to the disclosures of WO'459
Claim 106: The tablet wherein the tablet further comprises an outer film coat.	Claim 35: Method wherein each tablet further comprises an outer film coat.	Claim 43 identical to claim of WO'247 and similar to claim of WO'459	Claim 44 identical to claim of WO'247 and similar to claim of WO'459
Claim 107: The tablet wherein the outer film coat provides from	Claim 36: Method wherein the outer film coat provides from	Claim 44 identical to claim of WO'247 and	Claim 45 identical to claim of WO'247

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
about 1% to about 8% weight gain based on the uncoated tablet.	about 1% to about 8% weight gain based on the uncoated tablet.	similar to claim of WO'459	and similar to claim of WO'459
Claim 107: The tablet wherein the outer film coat provides from about 1% to about 8% weight gain based on the uncoated tablet.	Claim 37: Method wherein the outer film coat provides about 4% weight gain based on the uncoated tablet.	Claim 45 identical to claim of WO'247 and similar to claim of WO'459	Claim 46 identical to claim of WO'247 and similar to claim of WO'459
Method for treating or preventing an HIV infection comprising administering a compound of Formula (Ia) in combination with a therapeutically effective amount of one or more (for example, one, two, three, or four; etc) additional therapeutic agents pp.129–132 of WO'459	Claim 77: Method wherein the method further comprises administering one, two, three or four additional therapeutic agents to the patient.	Claim 87 identical to claim of WO'247 and similar to the disclosures of WO'459	Claim 88 identical to claim of WO'247 and similar to the disclosures of WO'459
A compound of Formula (Ia) or Formula (Ib), or a pharmaceutically acceptable salt thereof, is administered with a therapeutically effective amount of at least one additional therapeutic agent. In the above embodiments, the additional therapeutic agent can be an anti-HIV agent selected from the group	Claim 78: Method wherein the additional therapeutic agents are selected from the group consisting of combination drugs for HIV, other drugs for treating HIV, HIV protease inhibitors, HIV non-nucleoside or non-nucleotide inhibitors of reverse transcriptase, HIV nucleoside or nucleotide inhibitors of reverse transcriptase, HIV	Claim 88 identical to claim of WO'247 and similar to the disclosures of WO'459	Claim 89 identical to claim of WO'247 and similar to the disclosures of WO'459

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
consisting of combination drugs for treating HIV, other drugs for treating HIV, HIV nucleoside reverse transcriptase translocation inhibitors, HIV protease inhibitors, HIV non-nucleoside or non-nucleotide inhibitors of reverse transcriptase, HIV nucleoside or nucleotide inhibitors of reverse transcriptase, HIV integrase inhibitors, HIV non-catalytic site (or allosteric) integrase inhibitors, HIV entry inhibitors, HIV maturation inhibitors, latency reversing agents, compounds that target the HIV capsid, immune-based therapies, phosphatidylinositol 3-kinase (PI3K) inhibitors, HIV antibodies, bispecific antibodies and "antibody -like" therapeutic proteins, HIV pl7 matrix protein inhibitors, IL-13 antagonists, peptidyl-prolyl cis-trans isomerase A	integrase inhibitors, HIV non-catalytic site (or allosteric) integrase inhibitors, HIV entry inhibitors, HIV maturation inhibitors, latency reversing agents, compounds that target the HIV capsid, immune-based therapies, phosphatidylinositol 3 -kinase (PI3K) inhibitors, HIV antibodies, bispecific antibodies and "antibody-like" therapeutic proteins, HIV pl7 matrix protein inhibitors, IL-13 antagonists, peptidyl-prolyl cis-trans isomerase A modulators, protein disulfide isomerase inhibitors, complement C5a receptor antagonists, DNA methyltransferase inhibitor, HIV vif gene modulators, Vif dimerization antagonists, HIV-1 viral infectivity factor inhibitors, TAT protein inhibitors, HIV-1 Nef modulators, Hck tyrosine kinase modulators, mixed		

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
modulators, protein disulfide isomerase inhibitors, complement C5a receptor antagonists, DNA methyltransferase inhibitor, HIV vif gene modulators, Vif dimerization antagonists, HIV-l viral infectivity factor inhibitors, TAT protein inhibitors, HIV-l Nef modulators, Hck tyrosine kinase modulators, mixed lineage kinase-3 (MLK-3) inhibitors, HIV-l splicing inhibitors, Rev protein inhibitors, integrin antagonists, nucleoprotein inhibitors, splicing factor modulators, COMM domain containing protein 1 modulators, HIV ribonuclease H inhibitors, retrocyclin modulators, CDK-9 inhibitors, dendritic IC AM- 3 grabbing nonintegrin 1 inhibitors, HIV GAG protein inhibitors, HIV POL protein inhibitors, Complement Factor H modulators, ubiquitin ligase inhibitors, deoxycytidine kinase	lineage kinase-3 (MLK-3) inhibitors, HIV-1 splicing inhibitors, Rev protein inhibitors, integrin antagonists, nucleoprotein inhibitors, splicing factor modulators, COMM domain containing protein 1 modulators, HIV ribonuclease H inhibitors, retrocyclin modulators, CDK-9 inhibitors, dendritic ICAM-3 grabbing nonintegrin 1 inhibitors, HIV GAG protein inhibitors, HIV POL protein inhibitors, Complement Factor H modulators, ubiquitin ligase inhibitors, deoxycytidine kinase inhibitors, cyclin dependent kinase inhibitors, proprotein convertase PC9 stimulators, ATP dependent RNA helicase DDX3X inhibitors, reverse transcriptase priming complex inhibitors, G6PD and NADH-oxidase inhibitors, pharmacokinetic enhancers, HIV gene therapy, and HIV vaccines, or any combinations thereof.		

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
inhibitors, cyclin dependent kinase inhibitors, proprotein convertase PC9 stimulators, ATP dependent RNA helicase DDX3X inhibitors, reverse transcriptase priming complex inhibitors, G6PD and NADH-oxidase inhibitors, pharmacokinetic enhancers, HIV gene therapy, HIV vaccines, and combinations thereof. pp.136–137 of WO'459			
In the above embodiments, the additional therapeutic agent can be an anti-HIV agent selected from the group consisting of combination drugs for treating HIV, other drugs for treating HIV, HIV nucleoside reverse transcriptase translocation inhibitors, HIV protease inhibitors, HIV non-nucleoside or non-nucleotide inhibitors of reverse transcriptase, HIV nucleoside or nucleotide inhibitors	Claim 79: Method wherein the additional therapeutic agents are selected from the group consisting of HIV protease inhibiting compounds, HIV nonnucleoside inhibitors of reverse transcriptase, HIV non-nucleotide inhibitors of reverse transcriptase, HIV nucleoside inhibitors of reverse transcriptase, HIV nucleotide inhibitors of reverse transcriptase, HIV integrase inhibitors, gp41 inhibitors, CXCR4	Claim 89 identical to claim of WO'247 and similar to the disclosures of WO'459	Claim 90 identical to claim of WO'247 and similar to the disclosures of WO'459

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
of reverse transcriptase, HIV integrase inhibitors, HIV non-catalytic site (or allosteric) integrase inhibitors, HIV entry inhibitors, HIV maturation inhibitors, latency reversing agents, compounds that target the HIV capsid, immune-based therapies, phosphatidylinositol 3-kinase (PI3K) inhibitors, HIV antibodies, bispecific antibodies and "antibody -like" therapeutic proteins, HIV pl7 matrix protein inhibitors, IL-13 antagonists, peptidyl-prolyl cis-trans isomerase A modulators, protein disulfide isomerase inhibitors, complement C5a receptor antagonists, DNA methyltransferase inhibitor, HIV vif gene modulators, Vif dimerization antagonists, HIV-l viral infectivity factor inhibitors, TAT protein inhibitors, HIV-l Nef modulators, Hck	inhibitors, gp120 inhibitors, CCR5 inhibitors, capsid polymerization inhibitors, pharmacokinetic enhancers, and other drugs for treating HIV, or any combinations thereof.		

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
tyrosine kinase modulators, mixed lineage kinase-3 (MLK-3) inhibitors, HIV-l splicing inhibitors, Rev protein inhibitors, integrin antagonists, nucleoprotein inhibitors, splicing factor modulators, COMM domain containing protein 1 modulators, HIV ribonuclease H inhibitors, retrocyclin modulators, CDK-9 inhibitors, dendritic IC AM- 3 grabbing nonintegrin 1 inhibitors, HIV GAG protein inhibitors, HIV POL protein inhibitors, Complement Factor H modulators, ubiquitin ligase inhibitors, deoxycytidine kinase inhibitors, cyclin dependent kinase inhibitors, proprotein convertase PC9 stimulators, ATP dependent RNA helicase DDX3X inhibitors, reverse transcriptase priming complex inhibitors, G6PD and NADH-oxidase inhibitors, pharmacokinetic enhancers, HIV gene therapy, HIV vaccines,			

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
and combinations thereof. pp.136–137 of WO'459			
In some embodiments, a compound disclosed herein (for example, a compound of Formula (Ia) or Formula (Ib), or a pharmaceutically acceptable salt thereof), is combined with abacavir sulfate, tenofovir, tenofovir disoproxil, tenofovir disoproxil fumarate, tenofovir disoproxil hemifumarate, tenofovir alafenamide, tenofovir alafenamide fumarate, tenofovir alafenamide hemifumarate, bictegravir (or a pharmaceutically acceptable salt thereof), or 4' -ethynyl-2-fluoro-2' -deoxyadenosine (EFdA). p.145 of WO'459	Claim 80: Method wherein the additional therapeutic agents are selected from the group consisting of bictegravir or a pharmaceutically acceptable salt thereof, abacavir sulfate, tenofovir, tenofovir disoproxil, tenofovir disoproxil fumarate, tenofovir disoproxil hemifumarate, tenofovir alafenamide, and tenofovir alafenamide hemifumarate.	Claim 90 identical to claim of WO'247 and similar to the disclosures of WO'459	Claim 91 identical to claim of WO'247 and similar to the disclosures of WO'459
A compound of Formula (Ia) or a	Claim 81: Method wherein the additional therapeutic agents are	Claim 91 identical to claim of WO'247 and	Claim 92 identical to claim of WO'247 and similar to the

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
pharmaceutically acceptable salt thereof, is administered with a therapeutically effective amount of at least one additional therapeutic agent, wherein the additional therapeutic agent can be bictegravir, tenofovir alafenamide, tenofovir alafenamide fumarate, tenofovir alafenamide hemifumarate, etc pp.138–139 of WO'459	selected from the group consisting of bictegravir or a pharmaceutically acceptable salt thereof, tenofovir alafenamide, tenofovir alafenamide fumarate, and tenofovir alafenamide hemifumarate.	similar to the disclosures of WO'459	disclosures of WO'459
Compound of Formula Ia or a pharmaceutically acceptable salt thereof, is administered sequentially with one or more additional therapeutic agents pp.132–134, 146–147 of WO'459	Claim 82: Method wherein the additional therapeutic agents are administered simultaneously with the compound of Formula Ia, or a pharmaceutically acceptable salt thereof.	Claim 92 identical to claim of WO'247 and similar to the disclosures of WO'459	Claim 93 identical to claim of WO'247 and similar to the disclosures of WO'459
Compound of Formula Ia or a pharmaceutically acceptable salt thereof, is combined with one or more additional therapeutic agents in a unitary dosage form for	Claim 83: Method wherein the compound of Formula Ia, or a pharmaceutically acceptable salt thereof, is combined with the additional therapeutic agents in a	Claim 93 identical to claim of WO'247 and similar to the disclosures of WO'459	Claim 94 identical to claim of WO'247 and similar to the disclosures of WO'459

TABLE A			
Claims of Prior art document WO2020018459 (WO'459)	**Claims of present Application WO2025029247**	**Claims of another Application by Gilead WO2024220624**	**Claims of another Application by Gilead WO2025042394**
simultaneous administration to a patient. pp.132–134 of WO'459	unitary dosage form for simultaneous administration.		
Compound of Formula Ia or a pharmaceutically acceptable salt thereof, is administered sequentially with one or more additional therapeutic agents, the combination may be administered in two or more administrations. pp.132–134 of WO'459	Claim 84: Method wherein the compound of Formula Ia, or a pharmaceutically acceptable salt thereof, and the additional therapeutic agents are administered sequentially.	Claim 94 identical to claim of WO'247 and similar to the disclosures of WO'459	Claim 95 identical to claim of WO'247 and similar to the disclosures of WO'459

VI. CONCLUSION

As shown above, Gilead, the Applicant of the present Application, WO'247, has filed multiple applications for various dosing regimens of lenacapavir. However, in light of the prior art cited in the accompanying TPO, common general knowledge regarding lenacapavir and the Additional Comments, all the claims of the present Application, WO'247, relating to the

oral weekly regimen and the regimen in case of missed doses, lack novelty (to the extent of overlap), and also lack inventive step. Without prejudice to this, the claims of the present Application, WO'247, also fail for sufficiency of disclosure.