

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CLEAN CHEMISTRY, INC.,
Petitioner,

v.

ENVIRO TECH CHEMICAL SERVICES, INC.,
Patent Owner.

IPR2025-01472
U.S. Patent No. 8,546,449

**PETITIONER'S OPPOSITION TO PATENT OWNER'S
DISCRETIONARY DENIAL BRIEF**

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EXHIBIT LIST

Exhibit No.	Description
<u>1017</u>	U.S. Patent No. 7,919,122
<u>1018</u>	Reserved
<u>1019</u>	PCT Application No. PCT/US2011/000539
<u>1020</u>	Written Opinion for PCT Application No. PCT/US2011/000539
<u>1021</u>	Reserved
<u>1022</u>	Reserved
<u>1023</u>	Western District of Texas Median Time to Trial Report
<u>1024</u>	Judge Albright's Average Time to Trial Report
<u>1025</u>	Judge Albright Trial Docket
<u>1026</u>	Reserved
<u>1027</u>	Envirotech Chemical Services, Inc.'s Initial Infringement Contentions, dated March 4, 2025
<u>1028</u>	<i>Food Safety</i> , World Health Organization (Oct. 4, 2024), https://www.who.int/news-room/fact-sheets/detail/food-safety
<u>1029</u>	Environmental Assessment for Food Contact Notification FCN 23352 (Feb. 1, 2024)
<u>1030</u>	Chapter 7: Peracetic Acid Acute Exposure Guideline Levels in Acute Exposure Guideline Levels for Selected Airborne Chemicals (2010), available at https://www.ncbi.nlm.nih.gov/books/NBK220001/
<u>1031</u>	EP2688399 Prosecution History

<u>1032</u>	Plaintiff Enviro Tech Chemical Services, Inc.'s Objections and Responses to Defendant's First Set of Requests for Admissions (Nos. 1–2)
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I. INTRODUCTION

Petitioner Clean Chemistry, Inc. (“Petitioner”) hereby submits this Opposition to Patent Owner’s Discretionary Denial Brief (Paper 10) in the above-captioned *inter partes* review (IPR) of U.S. Patent No. 8,546,449 (the “’449 patent”). Institution is warranted under both *Advanced Bionics* and *Fintiv*, as well as additional considerations outlined in the March 26, 2025 Memorandum titled “Interim Processes for PTAB Workload Management.” The Petition presents compelling challenges to the ’449 patent based on art and arguments that were not considered during prosecution. The same art resulted in a rejection from a different U.S. Examiner during examination of a related PCT application, and a novelty rejection by the European Patent Office (“EPO”). Patent Owner withheld these decisions from the Examiner during prosecution of the ’449 patent, preventing the Examiner from fully considering the prior art individually and in combination and warranting institution in this proceeding.

Additional compelling reasons exist for institution, including 1) the Petitioner properly relies on expert testimony, 2) there is a compelling public health interest in instituting the Petition, and 3) Patent Owner does not commercialize or sell a product the embodies the ’449 patent, which weighs against settled expectations.

II. DISCRETIONARY DENIAL UNDER *ADVANCED BIONICS* IS UNWARRANTED

A. *Advanced Bionics* Step 1 is Unmet Because the Petition Raises Art and Arguments Not Previously Considered by the Office

Because the Petition raises novel and non-cumulative art and arguments, denial under 35 U.S.C. § 325(d) is inappropriate under *Advanced Bionics* Step 1. *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (“*Advanced Bionics*”) (precedential).

1. The Examiner did Not Consider the Petition’s Asserted References During Prosecution of the ’449 Patent

There is no evidence that the Examiner considered any of the asserted prior art during prosecution of the ’449 patent. Contrary to Patent Owner’s argument that the art was considered during prosecution of the ’449 patent (Paper 10, 16-18), no evidence exists in the prosecution history of the ’449 patent of the Examiner ever substantively considering the asserted prior art. Paper 10, 16-17. To the contrary, JP 2006-045147 (“Okano”) (EX1005), the primary reference relied on in the Petition, was never cited during the prosecution of the ’449 patent or any related patents. Additionally, Patent Owner does not even attempt to explain how U.S. Patent No. 7,919,122 (“Okano122”) (EX1017) is similar to or cumulative of Okano. Paper 10, 17. Patent Owner cannot do so because the cited disclosures of Okano in the Petition, particularly with respect to Okano’s Example 1 that render obvious the claimed methods of the ’449 patent (Paper 2, 14, 18-31, 37-46), are materially distinct from

the disclosures of Okano122. Specifically, Okano's Example 1 includes disclosures that are missing from Okano122. For example, Okano122 does not disclose the order in which the triacetin, hydrogen peroxide, and sodium hydroxide are added. *Compare* EX1005, [0056-0057] (specifying that sodium hydroxide is added after triacetin and hydrogen peroxide are mixed with the water), *with* EX1017, 13:41-52:35 (failing to specify the order in which each ingredient is added). As another example, Okano122 does not disclose mixing the resulting solution for 5 minutes, whereas Okano does disclose mixing and stirring the solution for 5 minutes for maximum generation of a non-equilibrium solution of peracetic acid. EX1005, [0056-0057].

Moreover, there is no evidence that the Examiner ever considered the particular obviousness grounds, along with the expert declaration accompanying the combination, that the Petition now raises. *See BMW of N. Am., LLC v. Foras Techs., Ltd.*, IPR2024-01346, Paper 7 at 20-21 (PTAB Mar. 7, 2025) ("BMW") (refusing to exercise § 325(d) discretion to deny institution when petitioner raised additional combinations that were not before the Examiner and expert testimony supporting the obviousness combination).

Further, Patent Owner only listed WO 2001/046519 ("Withenshaw"), U.S. Patent No. 3,432,546 ("Oringer"), and Okano122 in the IDS filings during prosecution of the '449 patent, which the Examiner initialed and signed. EX1002,

97, 71, 11, 29, 58. This, however, is not enough. Absent “other evidence of record to show that the Examiner considered [the reference] in any meaningful way during prosecution . . . ,” Step 1 is not satisfied. *Samsung Elecs. Co. v. Maxell, Ltd.*, IPR2024-00906, Paper 11 at 14-15 (PTAB Dec. 11, 2024) (“*Samsung*”). “The exercise of discretion in *Advanced Bionics* did not turn on mere citation in an IDS of the art asserted in the petition.” *Whitewater West Indus., Ltd. v. Am. Wave Machines, Inc.*, IPR2022-01033, Paper 8 at 16 (PTAB Nov. 22, 2022). Thus, contrary to Patent Owner’s position, the mere citation to Withenshaw, Oringer, and Okano122 during the prosecution of the ’449 patent is not enough to satisfy *Advanced Bionics* Step 1 as to the patent challenged here. Paper 10, 16-17.

B. *Advanced Bionics* Step 2 is Unmet and § 325(d) Denial Is Inappropriate Due to Examiner Error and Patent Owner’s Actions

Discretionary denial under § 325(d) is not warranted under Step 2 even if the Director were to consider the mere citations to Withenshaw, Oringer, and Okano122 in the parent ’449 patent as being sufficient to satisfy Step 1. There is clear evidence that the Examiner failed to consider and examine the proposed obviousness combinations, as evidenced by the Written Opinion to PCT Application No. PCT/US2011/000539 (the “’539 PCT application”) and examination at the European Patent Office (EPO); this combined with Patent Owner’s failure to raise the Written

Opinion and EPO proceedings to the Examiner for consideration makes denial under § 325(d) inappropriate.

Patent Owner submitted the '539 PCT application on March 24, 2011, designating the United States and selecting the USPTO as the Searching Authority. EX1019, 107-110. The '539 PCT application shares the same specification as the '449 patent. *Compare* EX1019, specification, *with* EX1001, specification. Patent Owner also filed nearly identical claims to those recited in the '449 patent. *Compare* EX1001, cls. 1-23, *with* EX1019, 91-96 (cls. 7-25, 28-29, 32-33, and 39). A USPTO Examiner reviewing the claims of the '539 PCT application found, amongst other things, that the claims lacked an inventive step in view of US 2010/0227000 ("Ames"), US 2009/0175956 ("Buschmann"), and Withenshaw. EX1020, 3-5, 11. The Petition identifies some of the same prior art as secondary references here, such as Withenshaw.

Patent Owner never submitted to the '449 patent Examiner during prosecution the adverse Written Opinion in the parallel '539 PCT application or the obviousness combinations relied on therein. Instead, Patent Owner seemingly ignored or suppressed the adverse Written Opinion and continued prosecution of the '449 patent and related family members. Thus, the '449 Examiner could not and did not fully consider the asserted prior art individually or in combination, much less the adverse Written Opinion. Patent Owner was obligated to disclose the adverse

Written Opinion from the '539 PCT application but instead chose to sweep it under the rug, preventing the '449 patent's Examiner from fully considering the prior art and material information.

Examiners at the EPO also reached the same conclusions as that of the USPTO Examiner in the '539 PCT application on the Challenged Claims in a foreign counterpart, EP2688399. Patent Owner originally filed identical claims to the EPO, as outlined in the table below.

EP2688399 Application Claims	'449 Patent Claims
<p>7. A method of generating non-equilibrium solution of peracetic acid, comprising:</p> <ul style="list-style-type: none"> a. providing water; b. introducing a hydrogen peroxide-triacetin solution to the water; c. mixing the hydrogen peroxide-triacetin solution and the water to form a mixture; d. adding an aqueous source of an alkali metal or earth alkali metal hydroxide to the mixture; and e. forming a reaction medium comprising a non-equilibrium solution of peracetic acid. 	<p>1. A method of generating non-equilibrium solution of peracetic acid, comprising:</p> <ul style="list-style-type: none"> a. providing water; b. introducing a hydrogen peroxide-triacetin solution to the water; c. mixing the hydrogen peroxide-triacetin solution and the water to form a mixture; d. adding an aqueous source of an alkali metal or earth alkali metal hydroxide to the mixture; and e. forming a reaction medium comprising a non-equilibrium solution of peracetic acid.
<p>8. The method of claim 7, further comprising, prior to step (b), a step of providing the hydrogen peroxide-triacetin solution comprising: introducing triacetin to a solution of aqueous hydrogen peroxide; and</p>	<p>2. The method of claim 1, further comprising, prior to step (b), a step of providing the hydrogen peroxide-triacetin solution comprising: introducing triacetin to a solution of aqueous hydrogen peroxide; and</p>

allowing the triacetin and the solution of aqueous hydrogen peroxide to mix to form the hydrogen peroxide-triacetin solution.	allowing the triacetin and the solution of aqueous hydrogen peroxide to mix to form the hydrogen peroxide-triacetin solution.
10. The method of claim 9, wherein the hydrogen peroxide-triacetin solution has a mole ratio of hydrogen peroxide to triacetin of about 2.98:1 to about 12.84:1.	3. The method of claim 1, wherein the hydrogen peroxide-triacetin solution has a mole ratio of hydrogen peroxide to triacetin of about 2.98:1 to about 12.84:1.
11. The method of claim 7, wherein the provided water is an aqueous stream.	4. The method of claim 1, wherein the provided water is an aqueous stream.
12. The method of claim 7, wherein the provided water is contained in a mixing tank or other vessel.	5. The method of claim 1, wherein the provided water is contained in a mixing tank or other vessel.
13. The method of claim 9, wherein the aqueous source of the alkali metal or earth alkali metal hydroxide is sodium hydroxide.	6. The method of claim 1, wherein the aqueous source of the alkali metal or earth alkali metal hydroxide is sodium hydroxide.
14. The method of claim 13, wherein the sodium hydroxide is about 1.82% to about 7.28%.	7. The method of claim 6, wherein the sodium hydroxide is about 1.82% to about 7.28%.
15. The method of claim 7, wherein step (d) is performed simultaneously with step (b).	8. The method of claim 1, wherein step (d) is performed simultaneously with step (b).
16. The method of claim 7, further comprising allowing the reaction medium sufficient time to maximize the conversion of the hydrogen peroxide-triacetin into peracetic acid.	9. The method of claim 1, further comprising allowing the reaction medium sufficient time to maximize the conversion of the hydrogen peroxide triacetin into peracetic acid.
17. The method of claim 16, wherein the time to maximize the conversion of the hydrogen peroxide -triacetin into peracetic acid is about 30 seconds to about five minutes.	10. The method of claim 9, wherein the time to maximize the conversion of the hydrogen peroxide triacetin into peracetic acid is about 30 seconds to about five minutes.
18. The method of claim 17, further comprising, after step (e), a step of sampling the reaction medium to determine the time required to maximize the amount of hydrogen	11. The method of claim 10, further comprising, after step (e), a step of sampling the reaction medium to determine the time required to maximize the amount of hydrogen

peroxide -triacetin that is converted into peracetic acid.	peroxide triacetin that are converted into peracetic acid.
19. The method of claim 16, wherein the percent of triacetin that is converted into peracetic acid is about 40.9% to about 85.7%.	12. The method of claim 9, wherein and the percent of triacetin that is converted into peracetic acid is about 40.9% to about 85.7%.
20. The method of claim 14, wherein the mole ratio of the sodium hydroxide to the hydrogen peroxide to the triacetin is about 4.2:3.8:1.	13. The method of claim 7, wherein the mole ratio of the sodium hydroxide to the hydrogen peroxide to the triacetin is about 4.2:3.8:1.
21. The method of claim 7, wherein steps (a) through (e) are performed on a continuous basis.	14. The method of claim 1, wherein steps (a) through (e) are performed on a continuous basis.
22. The method of claim 7, wherein steps (a) through (e) are performed on an intermittent basis.	15. The method of claim 1, wherein steps (a) through (e) are performed on an intermittent basis.
23. The method of claim 7, wherein the peracetic acid solution is for immediate use.	16. The method of claim 1, wherein the peracetic acid solution is for immediate use.
24. The method of claim 7, further comprising, after step (e), a step of adding a source of acid to stabilize the non-equilibrium solution of peracetic acid for storing and using throughout a working day.	17. The method of claim 1, further comprising, after step (e), a step of adding a source of acid to stabilize the non-equilibrium solution of peracetic acid for storing and using throughout a working day.
25. The method of claim 7, wherein the peracetic acid solution is prepared on a site having a point-of-use.	18. The method of claim 1, wherein the peracetic acid solution is prepared on a site having a point-of-use.
28. The method of claim 8, wherein the liquid acetyl precursor is triacetin defining a hydrogen peroxide-triacetin solution.	19. The method of claim 2, wherein the liquid is triacetin defining a hydrogen peroxide-triacetin solution.
29. The method of claim 28, wherein the hydrogen peroxide-triacetin solution has a mole ratio of hydrogen peroxide to triacetin of about 2.98:1 to about 12.84:1.	20. The method of claim 19, wherein the hydrogen peroxide-triacetin solution has a mole ratio of hydrogen peroxide to triacetin of about 2.98:1 to about 12.84:1.

32. The method of claim 28, wherein the aqueous source of the alkali metal or earth alkali metal hydroxide is sodium hydroxide.	21. The method of claim 19, wherein the aqueous source of the alkali metal or earth alkali metal hydroxide is sodium hydroxide.
33. The method of claim 32, wherein the sodium hydroxide is about 1.82% to about 7.28%.	22. The method of claim 21, wherein the sodium hydroxide is about 1.82%to [sic] about 7.28%.
39. The method of claim 33, wherein the mole ratio of the sodium hydroxide to the hydrogen peroxide to the triacetin is about 4.2:3.8:1.	23. The method of claim 22, wherein the mole ratio of the sodium hydroxide to the hydrogen peroxide to the triacetin is about 4.2:18:1.

Compare EX1031, 257-260 (cls. 7-8, 10-25, 28-29, 32-33, 39) *with* EX1001, cls. 1-

23. The EPO issued novelty rejections of those claims based on some of the same prior art that the Petition identifies: Okano and Withenshaw. EX1031, 215-218. Rather than challenging the prior art on the merits, Patent Owner instead implicitly agreed that Okano and Withenshaw prevented the claims from issuing as drafted and, in response, amended and narrowed the claims. *Id.* at 171-182, 184-198. As with the '539 PCT application's adverse Written Opinion, Patent Owner failed to inform the '449 Examiner of the EPO findings during prosecution of the '449 patent, preventing the Examiner from fully considering the prior art individually and in combination as well as other information material to patentability. This further supports the grounds in the Petition that the Challenged Claims are obvious over the proposed obviousness combinations and that *inter partes* review is the appropriate way to correct this egregious circumstance.

Additionally, Dr. Klibanov's expert declaration, which was not available during prosecution of the '449 patent, maps the prior art to the Challenged Claims and explains why the Challenged Claims are unpatentable over the prior art. This warrants reconsideration and weighs against discretionary denial under § 325(d). *Therabody, Inc. v. Hyperice IP Subco, LLC*, PGR2024-00053, Paper 8 at 10-11 (PTAB Apr. 21, 2025) (finding "factor (f) weigh[ed] against exercising discretion to deny institution under § 325(d)" in light of expert declaration).

III. DISCRETIONARY DENIAL UNDER *FINTIVIS* UNWARRANTED

A. Factor One: Likelihood of a stay in parallel litigation.

Currently, this factor is largely neutral. While no stay has been entered in the parallel litigation as of yet, Petitioner intends to negotiate a stay with Patent Owner upon the institution of this IPR, as well as the related IPRs.

B. Factor Two: Proximity of the court's trial date to the Board's final written decision.

This factor weighs against discretionary denial. The parallel litigation is currently pending in front of Judge Albright in the Western District of Texas. While the schedule currently has pending trial date scheduled for the week of December 28, 2026, it is very likely that this date will be postponed. As an initial matter, the median time to trial in the Western District of Texas is currently approximately 33 months. EX1023. In the past two years, Judge Albright's average time to trial is closer to the district average of approximately 33 months. EX1024. Therefore, it is

likely that the parallel litigation will not go to trial until October 2027. In contrast, the Final Written Decision in this IPR is due in March 2027, which would be 7 months before a trial date consistent with the 33-month district average.

Additionally, Judge Albright continues to have a busy docket. Currently, there are 16 trials scheduled within 4 weeks of the parallel litigation. EX1025. Specifically, six trials are set for the week of December 7, 2026, eight trials are set for the week of December 14, 2026, and the parallel litigation here is set for December 28, 2026. Further, Judge Albright's busy docket consistently results in rescheduling trial dates. *See e.g.*, Minute Entry, *AlmondNet, Inc. v. Amazon.com, Inc.*, No. 6:21-cv-00898 (W.D. Tex. Jan. 4, 2024), Dkt. 235 (delaying trial by four months, from February 5, 2024 to June 10, 2024, stating that a "trial date of 2/5 cannot be maintained due to the Court's schedule"); *see also id.* Dkt. 238 (Order); Transcript of Record at 4, *IOEngine, LLC v. Roku Inc.*, No. 6:21-cv-01296 (W.D. Tex. Sept. 23, 2023), Dkt. 309 (Judge Albright explaining that due to trial date conflicts, "it makes more sense" to move the October 16, 2023 trial setting to the spring of 2024).

Given Judge Albright's alignment with the Western District of Texas overall time-to-trial, there is a high likelihood that the final written decision in this case will issue several months before the likely actual trial in the parallel litigation. *See iRhythm Techs., Inc. v. Welch Allyn, Inc.*, IPR2025-00363, Paper 10 at 2 (PTAB June

6, 2025) (finding this factor weighs against discretionary denial under similar circumstances).

C. Factor Three: Investment in the parallel proceeding by the Court and parties.

This factor weighs against discretionary denial. The parallel litigation is still in its early stages. The Court recently issued a claim construction order with the representation that it would provide detailed reasoning on the order in due course. EX2005, 1. Thus, the Court has not expended significant resources on the substantive issues of invalidity in the parallel litigation. Fact discovery has just opened, and expert discovery has not commenced nor have the parties exchanged expert reports. *Bio-Rad Labs., Inc. v. Cal. Inst. of Tech.*, IPR2024-01451, Paper 11 at 10-11 (PTAB Mar. 27, 2025) (Factor 3 weighed against denial where “infringement and invalidity contentions ha[d] been served, damages contentions ha[d] been exchanged, . . . [and] a *Markman* hearing ha[d] been held” . . . but “expert reports, expert discovery, expert depositions, and pretrial motions and disclosures” remained).

Patent Owner argues the Petitioner delayed in filing this IPR. Paper 10, 9. Not so. Petitioner worked diligently to determine which claims Patent Owner intended to litigate. In its complaint, Patent Owner only alleged claim 1 of each patent was infringed. EX1015, ¶¶ 19, 37, 51, 67. On March 4, 2025, Patent Owner served its

Initial Infringement Contentions, asserting all claims across four patents, totaling 43 claims. EX1027, 4, Ex. A. Petitioner attempted to ascertain which patents and claims Patent Owner intended to litigate, but Patent Owner has refused to narrow its asserted claims to date. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 11 (PTAB Mar. 20, 2020) (“Apple”) (precedential) (“The Board recognizes . . . that it is often reasonable for a petitioner to wait to file its petition until it learns which claims are being asserted against it . . .”) Thereafter, Petitioner diligently worked to prepare its petitions for IPR across the patents asserted in the parallel litigation, even while engaged in claim construction briefing. Petitioner did not unduly delay. *NEC Corp. v. Peloton Interactive, Inc.*, No. 22-987-CJB, 2024 WL 1533952, at *2 (D. Del. Apr. 9, 2024) (“[F]iling an IPR petition close to the one-year statutory deadline is not problematic *per se*, because ‘accused infringers often understandably want to have a good handle on what the scope of the district court litigation will be before they file an IPR petition.’” (citation omitted)).

D. Factor Four: Overlap between issues

Petitioner hereby stipulates that if this IPR is instituted, Petitioner will not pursue in the parallel litigation (i) the specific grounds of invalidity that were raised or that reasonably could have been raised under 35 U.S.C. §§ 102 or 103 on the basis of prior art patents or printed publications in this IPR, and (ii) grounds of invalidity under 35 U.S.C. § 103 on the basis of any other prior art that could not have been

raised in the IPR (e.g., non-patent art) in combination with any of those prior art references relied on listed in the grounds for this IPR with respect to any challenged claim. To avoid any doubt, if the PTAB declines or rescinds institution of IPR, Petitioner reserves the right to pursue any and all grounds of invalidity, including but not limited to the grounds in (i) and (ii), in the pending litigation.

E. Factor Six: Compelling merits

The compelling merits factor strongly favors institution here, outweighing any other *Fintiv* factors individually or collectively. *Inergy Tech., Inc. v. Force MOS Tech. Co.*, IPR2024-00093, Paper 13 at 17-20, 23-25 (PTAB May 21, 2024) (refusing to exercise discretion to deny petition despite each *Fintiv* factor weighing against institution—including a trial date several months before the deadline for the PTAB’s decision—because petition presented a prima facie case that at least one of the challenged claims was unpatentable); *TVision Insights, Inc. v. Nielsen Co. (US), LLC*, IPR2023-01014, Paper 10 at 52-53 (PTAB Jan. 8, 2024) (compelling merits of Petition’s challenges “very heavily weigh[] against exercising . . . discretion to deny institution”).

As explained above, there is clear and compelling evidence that the Challenged Claims are unpatentable over the grounds asserted in the Petition. Section II.B, above, explains how a USPTO Examiner rejected nearly identical claims in the ’539 PCT application and the EPO found the identical claims

unpatentable over the Petition's prior art combinations. Further, Patent Owner ignored the rejections and failed to draw the Examiner's attention to either the rejection or the particular references individually or in combination during prosecution of the '449 patent.

1. The Petition Properly Relies on Expert Testimony

Patent Owner argues that the Petition is overly reliant on its expert declaration, but cites no examples of any over-reliance. Paper 10, 18. Patent Owner merely faults the expert declaration for being longer than the Petition and the fact that it is cited 139 times in the Petition. *Id.* In *iRhythm*, the Director held that this factor weighs towards institution when the expert "explain[s] the background knowledge" of a Person of Ordinary Skill in the Art ("POSA"), "provides citations to evidence in support of his statements," and does not "fill gaps in the prior art." *iRhythm Techs.*, IPR2025-00363, Paper 10, 2-3. Dr. Klivanov's expert declaration (EX1003) does just that and provides a detailed explanation of the state of the art, and ample citations to evidence in support of his opinions. As in *iRhythm*, the Petition's degree of reliance on Dr. Klivanov's expert opinion weighs in favor of institution.

2. Petitioner's Arguments are Not Moot

Patent Owner misconstrues the District Court's claim construction order. Paper 10, 18-19. The District Court agreed with Petitioner that "[s]teps (a) to (e) must be performed sequentially in the same order in which they are recited" in claim

1. EX2005, 3. The District Court also found that steps (b) and (d) can be performed simultaneously. EX2005, 3. The Petition points out that the option to perform steps (b) and (d) simultaneously, while logically unsound based on the language of the claims, does not negate the requirement that the steps recited in claim 1 must be performed in order. Paper 2, 11-13. Further, the Petition sufficiently lays out the obviousness grounds for the simultaneous addition of steps (b) and (d) as recited in claim 8. Paper 2, 69. Therefore, Petitioner's arguments are not rendered moot, but rather reinforced, by the District Court's claim construction order.

3. There Are Compelling Public Health Interests for Institution

Food safety is an important public health interest. EX1028. As described in a Food Contact Notice (FCN) issued by the FDA, Petitioner sells products that are used as an antimicrobial substance in food production. EX1029 (Food Contact Notification No. 2352, dated February 1, 2024, issued by the U.S. Food and Drug Administration). Petitioner's products also eliminate airborne exposure of peracetic acid, which is otherwise a health risk to line workers in food processing facilities. *See generally* EX1030.

Patent Owner alleges that Petitioner's products infringe the '449 patent in the parallel litigation. *See generally* EX1015. Patent Owner does not sell any products embodying the '449 patent. Petitioner's products protect and advance the interest of food safety and public health, and support environmental protection through the

provision of effective antimicrobial substances that are environmentally benign. Patent Owner's assertion that Petitioner infringes the '449 patent with its products warrant institution of the Petition challenging the claims of the '449 patent.

4. Settled Expectations Favor Institution

Settled expectations weigh in favor of institution. While the '449 patent issued twelve years ago, there is "no bright-line rule on when expectations become settled," and there "may be persuasive reasons why the Board should review challenged claims [even] several years after their issuance date." *Intel Corp. v. Proxense LLC*, IPR2025-00327, Paper 12, at 2-3 (PTAB June 26, 2025); *Dabico Airport Sols. Inc. v. AXA Power ApS*, IPR2025-00408, Paper 21 at 2-3 (PTAB June 18, 2025); Such persuasive reasons include Patent Owner's lack of commercialization or application of the patent. *Intel Corp.*, IPR2025-00327, Paper 12, at 2-3.

The '449 patent has not "been commercialized, asserted, marked, licensed, or otherwise applied in a petitioner's particular technology space, if at all" before Patent Owner reached out to Petitioner in 2024. *Id.* There is no evidence that Patent Owner itself creates, sells, or commercializes any products whatsoever embodying the '449 patent, and Patent Owner makes no claim to have any products that embody the '449 patent or were offered for sale prior to the filing of this Petition. In fact, Patent Owner admits that it does not sell or offer to sell any product encompassed within the scope of the '449 patent. EX1032, at Response to Request for Admission

No. 1. Patent Owner's lack of commercialization, marking, assertion, licensing, or other application “weigh against a patent owner’s claim of settled expectations.” *Intel Corp.*, IPR2025-00327, Paper 12, 2-3.; *see also Shenzhen Tuozhu Tech. Co., Ltd. v. Stratasy, Inc.*, IPR2025-00531, Paper 10 at 3 (PTAB July 17, 2025) (finding that a challenged patent “in force for approximately 10 years” but which had “never been ‘commercialized, asserted, marked, licensed, or otherwise applied’ in Petitioner’s ‘particular technology space’” had not developed strong settled expectations).

Patent Owner argues that because Petitioner was aware of and hired former employees of Patent Owner, Petitioner should have challenged the ’449 patent earlier, and Patent Owner is therefore entitled to settled expectations. Paper 10, 13-15. Patent Owner does not cite to any authority for this position. On the contrary, as explained above, it is reasonable for a petitioner to wait to file its petition after it learns what claims will be asserted against it. *Apple*, IPR2020-00019, Paper 11 at 11.

Moreover, even patents that have been in force for twelve years, like the ’449 patent, may nevertheless be appropriate for Board review if “the Office materially erred during prosecution of the challenged patent.” *Xencor, Inc. v. Merus N.V.*, IPR2025-00604, Paper 12 at 2-3 (PTAB Jul. 17, 2025) (referring IPR challenging patent that had been “in force for approximately nine years” due to material error by

Office); *Anthony Inc. v. Controltec, LLC*, IPR2025-00636, Paper 9 at 2 (PTAB Jul. 16, 2025) (referring IPRs challenging patents in force for “approximately eighteen and seventeen years”). This is the case here because, as explained above, “the Office erred in a manner material to the patentability of the challenged [claims]” “by overlooking the teachings of” the prior art in Petitioner’s invalidity grounds. *Id.* If anything, the “settled expectations” in the relevant markets were that no reasonably prudent owner of the ’449 patent – aware of its file history and those of its counterparts - would have asserted the ’449 patent as granted, given the adverse Written Opinion in the ’539 PCT counterpart, and the prior art disclosed in the EPO counterpart, which the applicant failed to cite to the U.S. Examiner who issued the ’449 patent.

IV. CONCLUSION

For the foregoing reasons, Petitioner respectfully opposes Patent Owner’s Request for Discretionary Denial.

DATED: December 18, 2025

/ Daniel J. Knauss /

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CERTIFICATE OF SERVICE

I hereby certify that a complete copy of the foregoing **PETITIONER'S OPPOSITION TO PATENT OWNER'S DISCRETIONARY DENIAL BRIEF** and related documents were served via electronic email on December 18, 2025, the same day as the filing of the above-identified documents in the United States Patent and Trademark Office/Patent Trial and Appeal Board, upon Patent Owner's attorneys of record:

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