

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

BIO-RAD LABORATORIES, INC.,
Petitioner,

v.

CALIFORNIA INSTITUTE OF TECHNOLOGY,
Patent Owner

Case No. IPR2025-01546

OPPOSITION TO REQUEST FOR DISCRETIONARY DENIAL OF
INSTITUTION

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EX1005	Declaration of Kevin Struhl, Ph.D., <i>Bio-Rad Labs., Inc. v. Cal. Inst. Tech.</i> , IPR2024-01451, EX2001 (Dec. 30, 2024)
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EX1010	Internet Archive WayBackMachine, Feb. 22, 2024, archived copy of Synbio Technologies, Precision and Accuracy with TaqMan Probes, https://synbio-tech.com/precision-and-accuracy-with-taqman-probes/ , https://web.archive.org/web/20240519044916/https://synbio-tech.com/precision-and-accuracy-with-taqman-probes/ , accessed Sept. 12, 2024.
EX1011	Pamela M. Holland, et al., “Detection of specific polymerase chain reaction product by utilizing the 5’ → 3’ exonuclease activity of <i>Thermus aquaticus</i> DNA polymerase,” <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 88, pp. 7276-7280, August 1991 Biochemistry “TaqMan Paper”

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EX1012	U.S. Patent Application Publication No. US 2008/0003649 A1 “Maltezos”
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EX1014	Complaint for Patent Infringement of U.S. Patent Nos. 12,168,797, filed on February, 18 2025, Dkt No. 1, <i>Cal. Inst. of Tech. v. Bio-Rad, Laby’s, Inc.</i> , Case No. 6:25-cv-01701, consolidated into <i>In re ChromaCode Litigation</i> , Case No. 5:23-cv-04823-EKL (N.D. Cal.).
EX1015	Shivaprasad H. Sathyanarayana and Lauren M. Wainman, “Chapter 2, Laboratory approaches in molecular pathology: the polymerase chain reaction,” <i>Diagnostic Molecular Pathology</i> , 2024
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EX1017	U.S. Patent Application Publication No. US 2010/0227386 A1 “Neuzil”
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EX1021	U.S. Patent Application Publication No. US 2012/0100600 A1 “Slepnev”
EX1022	European Patent Specification 0,594,763 B1 “Lehnen”
EX1023	Nucleic Acids, https://www.genome.gov/genetics-glossary/Nucleic-Acids , updated September 2, 2025
EX1024	Introduction of Molecular Beacons, https://molecularbeacons .

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Exhibit #	Description
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EX1025	Notice of Allowance from Prosecution File History of U.S. Patent No. 12,168,797, filed on November 18, 2024
EX1026	Final Rejection of U.S. Patent No. 12,168,797, filed on July 13, 2023
EX1027	Information Disclosure Statement noting Saxonov from Prosecution File History of U.S. Patent No. 10,068,051 filed on August 5, 2014
EX1028	Information Disclosure Statement from Prosecution File History of U.S. Patent No. 10,770,170 filed on March 7, 2018
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EX1031	Declaration of Maria P Garcia, IP Research Librarian
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EX1033	Plaintiffs California Institute of Technology and ChromaCode, Inc.’s Opening Claim Construction Brief for the ’797 Patent, filed on October, 29 2025, Dkt No. 160, <i>In re ChromaCode Litigation</i> , Case No. 5:23-cv-04823-EKL (VKD) (N.D. Cal.).
EX1034	Mingyong Han, et al., “Quantum-dot-tagged microbeads for multiplexed optical coding of biomolecules,” <i>nature biotechnology</i> , Volume 19, pp. 631-635, July 2001, “Han”
EX1035	The Examiner’s search terms and results from Prosecution File History of U.S. Patent No. 12,168,797 filed on July 13, 2023
EX1036	Order, filed on December 19, 2025, Dkt No. 178, <i>In re ChromaCode Litigation</i> , Case No. 5:23-cv-04823-EKL (VKD) (N.D. Cal.).

I. INTRODUCTION

Petitioner Bio-Rad Laboratories, Inc. (“Petitioner”) opposes Patent Owner California Institute of Technology (“PO”)’s request for discretionary denial of institution. PO’s arguments for discretionary denial focus first and foremost on the idea that trial in the parallel district court case is imminent and that there is no prospect of a stay. PO, for instance, alleges that there has been “over 21 months of discovery,” and that Petitioner has never indicated it would seek a stay. *See* Paper No. 6 at 9-10; EX2011 ¶ 10. PO likewise repeatedly proclaims that “it is unlikely the district court will stay the litigation.” Paper No. 6 at 6-7, 9 n.3. Such arguments, however, are based on omitting key aspects of the record and flat-out mischaracterizing others.

Petitioner has not, as PO contends, been silent about a stay but has rather expressly advised the district court at a scheduling conference that if institution were granted here it “might make sense to do a stay at that point.” EX2017 at 36:14-16. In this regard, Petitioner requested that the district court defer setting a trial date for PO’s patents specifically so that this tribunal would be more likely to consider the merits of the Petition, at which point the outcome could be considered in further case management. *Id.* at 48:8-20. The district court adopted Petitioner’s proposal, which negates all of PO’s main arguments and confirms that, if anything, a stay is highly

likely if institution is granted. Indeed, this is precisely what the district court judge has done in other cases. PO omits all of this from its brief.

As to the alleged “21 months of discovery” that PO points to, in fact, the ’797 patent issued only a year ago, and Caltech only asserted it against Bio-Rad ten months ago. There cannot possibly have been “21 months of discovery.” PO’s exaggerated discovery period for the ’797 patent is based on using a timeline beginning when PO asserted *different* patents against Bio-Rad. But the case on the ’797 patent is in its earliest stages, and the court’s decision to delay setting a trial date so this tribunal could consider the merits of the Petition was highly warranted.

In this regard, while PO contends that Petitioner’s invalidity theory is “weak,” it presents nothing to substantiate this. As documented herein, the Examiner did not understand the meaning of the mathematical formulae in the claims and, accordingly, committed material error in concluding that this was absent from the prior art after deficient prior art searching. PO, for its part, only made the task more difficult by drowning the Examiner in 363 different prior art references.

The ’797 patent is a bad patent that issued only after a flawed examination. The Director should not exercise its discretion to deny review here.

II. THE *FINTIV* CONSIDERATIONS FAVOR INSTITUTION

As its lead argument, PO points to three of the *Fintiv* factors relating to the status of district court litigation. As detailed below, however, these factors all weigh

overwhelmingly against discretionary denial. Most important, the district court is well-aware of not just the status of this proceeding but also that Petitioner will seek a stay if institution is granted, and has, accordingly, deferred setting a trial date for the '797 patent specifically so that the Board can consider the merits of the Petition. PO's assertions that the district court is steaming inexorably towards trial are unfounded and do not support discretionary denial.

A. The District Court Is Likely To Stay The Case Pending IPR

According to PO there is “no evidence” that the district court will grant a stay if review is granted. Yet, Petitioner has already raised the interplay of this IPR with the parallel litigation, including the prospect of a stay, at a district court scheduling conference. There, Petitioner was clear that if IPR is instituted, it would seek a stay. As Petitioner explained, “[i]t might not make sense to go forward at that point. It might make sense to do a stay at that point.” EX2017 at 36:14-16.¹

¹ Counsel for PO, Jesse Salen, submits a declaration stating that “Petitioner has never moved for a stay of the parallel litigation nor indicated it would do so.” EX2011 ¶ 10. This is incorrect, as confirmed by the case management conference transcript.

Petitioner was likewise up-front that if the district court were to set an early trial date, this might impact the likelihood of institution here. The district court agreed with this concern and then declined to set a trial date:

MR. WALTER: I want to be very up-front about that. We do not want to propose a ChromaCode trial date now, and the reason is, is because – I don't know if you're aware, the way things are with PTAB. There's a trial date, we may not even be able to get an IPR off the ground.

THE COURT: I did hear about this. So, actually, I agree with that, as well. So we're going to hold off on that, just because – we can revisit the ChromaCode trial date, because we will have a case management conference after the claim construction hearing, per normal, even though the schedule has pretty much been set for much of this, but why don't we plan on doing it that way.

Id. at 48:8-20; *see also id.* at 41:18-19 (“That way, the concerns in terms of getting that further information regarding the IPRs will be there.”). If the district court were not, in fact, inclined to grant a stay pending IPR, it would not have structured the case schedule with an eye towards preserving the ability to do precisely this.

In just the last few days, the district court again voiced its concerns about this issue. Specifically, in response to a recent request by PO to file an early summary judgment motion on patents that Petitioner is asserting against ChromaCode, the district court ordered the parties to “file a joint statement addressing the status of the PTAB proceeding for the '797 patent and what impact, if any, an April 2026 hearing

on the anticipated summary judgment motion may have on the PTAB proceeding.” EX1036. Considering that the patents Petitioner is asserting against ChromaCode are unrelated to the ’797 patent, the district court’s order is particularly confirmatory of how heavily focused it is on permitting this IPR to play out. There can be no other reason for this other than to ultimately grant a stay if institution is granted.

Consistent with the foregoing, the district court judge handling this matter has, in fact, stayed cases pending IPR. *See, e.g., Inari Med., Inc. v. Imperative Care, Inc.*, No. 24-CV-03117-EKL, 2025 WL 2772596, at *5 (N.D. Cal. Sept. 29, 2025). While PO criticizes Petitioner for not having already requested a stay, the district court judge’s practice thus far has been to delay implementing a stay until review is instituted. *See University of British Columbia v. Caption Health, Inc., et al.*, No. 24-cv-03200-EKL, Slip Op. at 5 (N.D. Cal. Aug. 6, 2025) (EX1032) (“For the foregoing reasons, the motion to stay is DENIED without prejudice to renewal if the PTAB institutes inter partes review of at least one of the patents asserted in this case.”). PO’s complaint that Petitioner has not already moved for a stay is yet another argument that omits key facts.

Regardless, upon institution, the facts here would align strongly in favor of a stay. In deciding whether to grant a stay, courts in the Northern District of California “consider three primary factors: (1) the stage of the litigation; (2) whether a stay will simplify the issues in question and trial of the case; and (3) whether a stay would

unduly prejudice or present a clear tactical disadvantage to the non-moving party.” *Inari*, 2025 WL 2772596, at *2. Here, an unpatentability finding by the Board would invalidate all asserted claims from the ’797 patent and may well effectively end the district court litigation.² As detailed further below, the district court litigation is in its earliest stages. Finally, PO would not suffer undue prejudice because Petitioner will promptly request a stay, and PO, as a not-for-profit research institution, does not commercially compete with Petitioner. This is an ideal case for a stay.

PO nonetheless asserts a stay is “unlikely” because “the ’170 Patent is also asserted in the parallel action,” and IPR was not instituted for this patent. *See* Paper No. 6 at 7. The district court, however, was well-aware of this when it declined to set a trial date in the parallel district court litigation. *See* EX2017 at 33:13-15. If the ’170 patent were truly a block to a potential stay, the district court would not have done this. In fact, as Petitioner explained to the district court judge, and as PO does not dispute, the ’170 patent is, at best, of minor importance to the overall

² Although PO asserts three additional patents besides the ’797 patent against Petitioner, the district court has already deemed one of these patents indefinite and a second patent is subject to IPR. A third patent, the ’170 patent, is not under review, but as detailed further below, this patent is of minimal relevance to the case and is unlikely to prevent a stay.

litigation because there are only modest damages for this patent. More specifically, the claims of the '170 patent require the analysis of five or more targets. *See* EX2003 at claim 1. There have been only a few thousand dollars-worth of product sold by Bio-Rad that does this. *See* EX2017 at 22:23-23:13. Petitioner's reliance on the alleged need for a prompt trial on the '170 patent is yet another argument that loses its force once the full facts are laid out.

B. There is No Trial Date

PO next contends that “based on the scheduling order, the trial on the '797 Patent will likely occur in March 2027, or even earlier.” Paper No. 6 at 7. PO's speculation about when a trial will “likely” occur if there is no stay is way off base.

To be clear, *there currently is no trial date*. In fact, as detailed above, the district court affirmatively declined to set a trial date specifically so that this tribunal could consider the merits of the Petition, at which point the district court could then consider the institution decision when further deciding how to manage the parallel litigation. Based on the district court judge's prior cases, and her comments during the scheduling conference, if there is institution here, the most likely outcome is not a prompt trial, but rather a quick stay of the district court litigation pending IPR. *See supra* Part II.A. While PO cites statistics from the Northern District of California regarding time-to-trial, this is irrelevant in view of the particularized consideration

that the district court has already given to how the district court case ought to be managed in view of this IPR proceeding.

What's more, as PO acknowledges, before there can even be a trial on the '797 patent, there will first need to be a separate trial on patents that Petitioner is asserting against ChromaCode. *See* Paper No. 6 at 5. This just further weakens the prospects for the trial date that PO says is "likely." While PO bets that it is "highly likely" it will secure a settlement or summary judgment with respect to the patents that Petitioner is asserting, which will then "likely" cascade to a January 2027 trial date, *see id.* at 7, this is just more speculation that is contrary to the record. Indeed, in November, the parties held an unsuccessful JAMS mediation, and no further discussions are scheduled. Likewise, PO offers no reason to believe that it will likely secure an early summary judgment with respect to the entire case that Petitioner raises against ChromaCode. In fact, just the opposite is true. The district court has recently indicated that the earliest possible date to even hold a hearing on a summary judgment motion is April, which is well after the deadline for institution in this matter. *See* EX1036.

PO ultimately concedes that, even without a stay, any trial on the '797 patent is most realistically going to happen after the FWD, stating "the estimated trial date is at most about a month after the FWD deadline." *Id.* at 8. This is thus not a case where the Board risks wasting its precious resources on a case that the district court

will handle more rapidly, but rather one where the Board is ideally suited to provide a more efficient resolution for the parties and Court.

C. The District Court Litigation Remains In Its Earliest Stages

PO's assertion that the parties have "invested significantly" in the parallel district court litigation is without merit and is based on stretched characterizations of the litigation history. This is revealed most starkly by PO's assertion that there has been "over 21 months of discovery." In fact, the '797 patent was not even asserted against Bio-Rad until February 18, 2025, which was just 10 months ago. *See* Paper No. 6 at 4. And the '797 patent did not even issue until December 17, 2024, which was only 12 months ago. It is thus impossible for there to have been "over 21 months of discovery."

PO's assertions to this effect are based on pointing to the timeframe starting when PO originally asserted *related patents* against Petitioner and then erroneously applying that timeframe to the '797 patent, even though that patent did not even exist for most of that time interval. In fact, during much of the alleged "over 21 months of discovery" that PO points to, little was happening with respect to any of the patents that PO asserted against Petitioner. While PO contends that there have been nine depositions, five of these depositions were brief deposition of third parties in response to PO's subpoenas. PO has not yet deposed even a single witness from the Petitioner. Although PO states that "Petitioner deposed PO's technical expert on

November 10,” *id.* at 5, this was merely a short deposition of PO’s claim construction declarant. PO’s imprecise language to this effect leaves the false impression that expert discovery in the district court is nearly complete.

In fact, there has been no expert discovery, no summary judgment, and fact witness depositions are just underway. These are not the facts that warrant discretionary denial, and the cases PO cites are inapposite. In *10x Genomics*, for instance, the Petition was denied first and foremost for being “deficient on its face” with respect to 37 C.F.R. 42.104(b)(3). *See 10X Genomics, Inc. v. President and Fellows of Harvard Coll.* IPR2023-01299, Paper 15 at 13 (PTAB Mar. 7, 2024). As to discretionary denial, the district court in *10x Genomics* had previously declined to stay proceedings pending IPR, and neither party suggested that it would even move for a stay; the trial was likely to happen *five months* before the FWD. *Id.* at 15-16. This case is nothing like *10x Genomics*.

Similarly, in *Advanced Micro Devices*, there was a scheduled trial date that was *before* the final written decision. *See Advanced Micro Devices, Inc. et al. v. Concurrent Ventures, LLC*, IPR2025-00223, Paper 9 at 2 (Director June 12, 2025). Here, there is no trial date. Notably, IPR was ultimately instituted in *Advanced Micro Devices*. *See Advanced Micro Devices*, Paper Nos. 12, 14. Finally, the *Elong* case, like the other cases cited by PO, involved a scheduled trial date well before the deadline for FWD. *See Elong Int’l USA Inc. v. Feit Elec. Co.*, IPR2025-00258, Paper

16 at 2 (Director June 25, 2025) (trial date 6 months before FWD). Unlike this case, where there is ample evidence suggesting a stay is likely, there was “insufficient evidence” to this effect in *Elong*. *Id.* at 2.

PO’s reliance on inapt authority underscores the weakness of its position.

D. The Overlap Between The Issues In the Petition And District Court Favor Institution

According to PO the “patentability issues alleged in the Petition mirror those in the parallel case.” Paper No. 6 at 12. This is true: Petitioner challenges all asserted claims of the ’797 patent. This, however, does not support discretionary denial but rather establish that the Board’s work would have the effect of eliminating the need for district court litigation by invalidating the claims at issue.

PO nonetheless raises concerns about duplication of effort, alleging that, in the district court, Petitioner has served invalidity contentions with “31 additional references.” *Id.* Such concerns cannot be genuine. In fact, as documented above, if IPR is instituted, the litigation will likely be stayed and none of “31 additional references” will ever be considered in the district court.

Nevertheless, to eliminate any concerns over duplication of efforts, Petitioner stipulates that if the Board institutes review (unless institution is later vacated, reversed, or withdrawn), it will not pursue against the ’797 patent any ground “that was raised or could have been reasonably raised” during this IPR proceeding in the

parallel litigation, removing any overlap between the proceedings. *Sotera Wireless, Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 at 13 (PTAB Dec. 1, 2020) (precedential as to § II.A.). This favors institution.

E. The Remaining *Fintiv* Factors Weigh Against Discretionary Denial

Any remaining *Fintiv* factors weigh against discretionary denial. Most important, there is no trial date and a stay pending IPR is likely, which weighs heavily in favor of institution. Further, both Petitioner and PO are parties in the district court. This factor weighs against discretionary denial where, as here, the projected statutory deadline for a final written decision is before the district court trial and when a stay of the district court litigation is likely if the Petition is instituted. *See BOE Technology Group Co., Ltd. v. Optronic Sciences LLC*, IPR2024-01130, Paper 16 at 13-14 (PTAB Jan. 27, 2025).

III. THE EXAMINER'S MATERIAL ERROR AND THE STRENGTH OF THE PETITION FAVOR INSTITUTION

PO contends that Petitioner's invalidity challenge is "weak," but spends little time justifying this assertion. *See* Paper No. 6 at 13-15. In fact, the invalidity argument here is rock solid. The claims here only issued because Examiner did not fully understand the claims and because he ran prior art searches unlikely to yield relevant art. PO did not help matters but rather flooded the Examiner with 363

references and made no effort to point him to the relevant disclosure amidst these references. If ever there were a patent needing a fresh look, the '797 patent is it.

A. The Strength Of The Invalidity Challenge Favors Institution

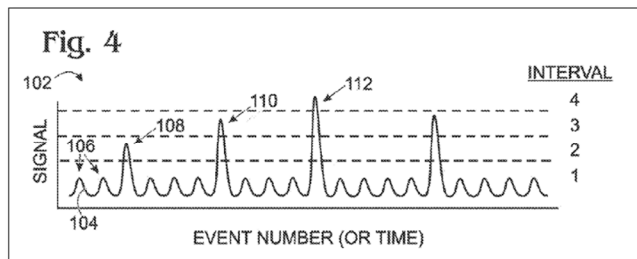
Petitioner's invalidity arguments here are unusually strong.

As set forth in the Petition, the claims encompass little more than (1) detecting multiple targets using a single light color by mapping the targets to intensities that follow the progression 1, 2, 4, 8, etc. and (2) merely replicating this across four independent colors to detect more targets. *See* Petition at 1-2, 7-11. Far from challenging this basic understanding of the claims, PO has echoed it in the parallel district court litigation. *See* EX1033 at 4-8.

There, PO has relied upon Table 8 of the '797 patent as reflecting an "Example of the Claimed System." *See id.*; *see also* Petition at 1-2, 7-11. Table 8 depicts the detection of four targets at each of four colors using the intensities 1, 2, 4, and 8. *See* Petition at 7-11. Importantly, there is no requirement for the detection of four targets at each color, nor is there a requirement that any targets be identified using multiple light colors. In fact, PO contends that Petitioner infringes through the detection of just *two* targets at each of multiple independent colors using the most rudimentary possible signal intensities of just 1 and 2. *See id.* at 12-13, 41-42.

As set forth in the Petition, the Jouvenot reference renders obvious this very approach, teaching not just the detection of two targets at a single color by using

distinct intensities, but also that one can detect different targets at different independent colors. *See id.* at 33, 42-44. As shown below, PO's own expert has already conceded Jouvenot's disclosure of the claimed intensity progression:



Q. Okay. The droplets that are -- have no targets, that's 106. That is like intensity zero?
A. Yes.
Q. And then 108 with one target is like intensity 1?
A. Yes.
Q. And 110 with the other target, that's like 2, intensity 2?
A. Yes.
Q. And then 112 is both targets; that's like 3?
A. Yes.

Id. at 42-44. The Examiner notably did not have the benefit of this testimony during examination. This is significant because it helps establish that obviousness of the claimed scheme could not be more straightforward in view of Jouvenot. *See id.* at 1-2.

PO's arguments as to the alleged weakness of this invalidity theory are poor, and, if anything, reinforce the strength of the invalidity arguments here. PO's lead argument is that Petitioner is "gravely confused" about what decoding matrix is. Paper No. 6 at 14. PO, however, never even explains how Petitioner's alleged "grave" confusion impacts the substance of its invalidity theory. At most, PO's arguments suggest a non-substantive semantic issue about terminology.

To the extent PO mentions the substance, it punts to its forthcoming POPR and asserts that “increasing the number of channels from one to four, five, or six is not merely duplicative.” *Id.* It is difficult to see how any arguments to this effect, however, would show weakness in the Petition because the ’797 patent admits that instruments with four channels had been “widely used” in the art:

Many real-time PCR and quantitative PCR instruments comprise an excitation light source and band pass filters that enable the detection of fluorescent signals in four colors (e.g., blue, green, yellow, and red). Therefore, the methods of the invention can be readily applied using instruments widely used in the art.

EX1001 at 35:30-35. The ’797 patent, if anything, admits obviousness.

While PO goes on to vaguely suggest that increasing colors “vastly increases the dimension of the intensity-color space,” there is no requirement in the claims for a complex “intensity-color space.” As explained in the Petition, and as PO cannot dispute, the claims allegedly cover a simple system wherein one detects just two targets at each of four colors. Because PO has neither challenged Petitioner’s characterization of the claims nor presented any serious response to the merits of the Petition, PO’s cursory challenge that the invalidity theory is “weak” should be rejected. The only remaining question is whether the Examiner erred in his examination. As detailed below, he did.

B. The Examiner Committed Material Error In His Review Of The Prior Art

While the Petition presents a compelling invalidity case, the Examiner identified no relevant prior art and, ultimately, committed material error in his examination.

The Examiner's failure to identify relevant prior art was unsurprising because his searching was based on generic terms, such as "wavelength fluorophores cumulative channel analyte hybridization," "analytes," and "detector." *See* EX1035. The Examiner's unfocused search terms show that he never sought to identify approaches like those claimed in the '797 patent, wherein targets are distinguished by different intensities in the same color that follow the progression 1, 2, 4, 8, etc. This by itself was material error.

During prosecution, the Examiner did not even identify prior art that he deemed sufficient to address all the claims, including claim 3 of the then-pending application, which recited the mathematical formula $M = C \cdot \log_2(F+1)$. EX1026. According to the Examiner, the "prior art does not teach the equation in the claim, and more specifically, the prior art does not teach the equation with the specific values of M, C, and F." *Id.* at 17-18.

This, however, was incorrect and reflected gross error. In fact, as set forth above and in the Petition, the claimed equation encompasses nothing more than a

simple scenario wherein two targets are detected using a single color, and one target is detected according to an intensity of 1 and another is detected according to an intensity of 2. *See* Petition at 7-11. This is undeniably in the prior art, including in the Jouvenot reference, as detailed above. *See supra* Part III.A. It is likewise present in the Lehnen reference, which teaches “reagent of proportions 1:2:4:8” and that this progression offers the ability of unique summing so that the different combinations of analytes can be distinguished. *See* EX1022 at 13:15-53.

The Examiner, however, conducted no searches for this straightforward signal intensity pattern, and instead searched at most for generic words that appear in the claims. The Examiner’s failure to conduct such searches and his conclusion that the prior art fails to disclose the claimed mathematical formula reflects a failure to grasp the underlying substance of claimed mathematical equation, which is directed to an exceedingly straightforward concept.

To the extent the Examiner made any prior art rejections whatsoever, they were all based on an article by Han et al., entitled “Quantum-dot-tagged microbeads for multiplexed optical coding of biomolecules.” *See* EX1034. The Han reference, however, focuses on how to assemble quantum dots containing multiple colors of fluorophores, and rather than teaching an approach like the claimed method where targets are detected based on a single color, Han contemplates “multicolor optical coding.” *Id.* at Abstract. Han, if anything, is the opposite of the claimed invention

and is largely irrelevant when it comes to the as-issued claims in the '797 patent. The Examiner's reliance on Han simply further substantiates material error.

IV. DISCRETIONARY DENIAL UNDER § 325(D) IS UNWARRANTED

PO further contends that institution should be denied because the Examiner supposedly already considered the Jouvenot, Larsen, and Brabetz references, pointing out that these references, or variations thereof, were included in an IDS. *See* Paper No. 6 at 18. This, however, is yet another argument based on omitting facts and that illustrates the weakness of PO's arguments for discretionary denial.

The Examiner did not truly consider any of Jouvenot, Larsen, or Brabetz. Indeed, during prosecution, PO buried the Examiner in 363 different references. Petitioner's conjecture that the Examiner reviewed and reasonably considered the content of all 363 of the references it submitted is far-fetched. This tribunal has been clear that where, as here, an Examiner is inundated with hundreds of references it is not, in general, appropriate to discretionarily deny institution on the basis that the examiner truly considered the content of a particular reference that is later cited in a petition for IPR. *See, e.g., Ecto World LLC et al. v. RAI Strategic Holdings, Inc.*, IPR2024-01280, Paper 13 at 6-7 (PTAB May 19, 2025) ("Thus, the Board should consider a petitioner's argument based on the volume of the references submitted to the Office during examination and any applicant information or assistance regarding the relevance of references."); *Samsung Elecs. Co. v. Maxell, Ltd.*, IPR2024-00906,

Paper 11 at 18 (PTAB Dec. 11, 2024) (where 114 references were submitted, instituting review because the record did not “indicate that the Examiner considered [the reference] in a meaningful way”).

Rather than making a rejection using the on-point references relied upon in the Petition, the Examiner based his prior art rejections on the minimally relevant Han reference. As documented above, the Examiner did not understand the content of the claimed mathematical formulae and thus failed to both identify Jouvenot and the other references in the Petition and consider their content. This was error.³

³ PO argues that the Petition itself is deficient for failure to demonstrate “that the Examiner materially erred by allowing the challenged claims over Jouvenot.” Paper No. 6 at 19-20. The Director has made clear, however, that this brief is where such issues should be addressed. See “Interim Director Discretionary Process,” USPTO, III.C, <https://www.uspto.gov/patents/ptab/interim-director-discretionary-process> (“A petitioner’s brief should be responsive to the arguments raised in patent owner’s discretionary denial brief and should raise any discretionary issues, including issues relating to 35 U.S.C. § 325(d)”); see also *Harbor Freight Tools USA, Inc. et al v. Champion Power Equipment, Inc.*, IPR2025-00805, Paper 20 (PTAB Sep. 19, 2025) (referring petition to Board where petitioner first addressed discretionary denial criteria in opposing request for discretionary denial).

Moreover, in addition to not having the benefit of the testimony of PO's expert regarding Jouvenot, there is no question that the Lehnert reference relied upon in the Petition was never before the Examiner in any way. While PO contends that the Petition's Ground 2 based on Lehnert is an "afterthought," Paper No. 6 at 15, PO never elaborates on this let alone attempts to rebut the Petitioner's theory of invalidity based on Lehnert. The Lehnert theory is not merely an "afterthought," but rather a reasoned theory based on a reference that undeniably discloses the 1, 2, 4, 8 signal progression that is in Table 8 of the patent and encompassed by the claims. As Lehnert explains, a reagent containing two subpopulations of detectors combined in the proportions 1 :2 will exhibit that property, as will a 3 part reagent of proportions 1 :2:4, as will a 4 part reagent of proportions 1:2:4:8. In the general case, a multiple subpopulation reagent in which the numbers of micro- spheres in each subpopulation added is in turn twice that of the successive subpopulation will exhibit the desired property of unique summing." EX1022 at 13. Even if one assumes the Examiner considered Larson, Jouvenot, and Brabetz, the Petition's ground based on Lehnert presents an independent basis for institution.

V. CONCLUSION

The Director should not exercise its discretion to deny institution.

Opposition To Request For Discretionary Denial
U.S. Patent No. 12,168,797

Dated: December 23, 2025

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CERTIFICATE OF COMPLIANCE

Pursuant to the Interim Director Discretionary Process, the undersigned hereby certifies that this brief complies with the type-volume limitations of Section III.C.iii because this brief contains 20 pages.

Respectfully submitted,

JONES DAY

Dated: December 23, 2025

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of **PETITION'S OPPOSITION TO PATENT OWNER'S REQUEST FOR DISCRETIONARY DENIAL** is being served on December 23, 2025, via email pursuant to 37 C.F.R. § 42.6(e) to the Patent Owner at the address below:

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