APPENDIX

APPENDIX A

UNITED STATES COURT OF APPEALS,
FOR THE FEDERAL CIRCUIT

THE CLEVELAND CLINIC FOUNDATION,
CLEVELAND HEARTLAB, INC.,
Plaintiffs-Appellants
v.
TRUE HEALTH DIAGNOSTICS LLC,
Defendant-Appellee

2016-1766

Appeal from the United States District Court for the Northern District of Ohio in No. 1:15-cv-02331-PAG, Judge Patricia A. Gaughan.

Decided: June 16, 2017

LAWRENCE D. ROSENBERG, Jones Day, Washington, DC, argued for plaintiffs-appellants. Also represented by SUSAN M. GERBER, Cleveland, OH.

ADAM LOUIS MARCHUK, Perkins Coie LLP, Chicago, IL, argued for defendant-appellee. Also represented by MICHAEL ROBERT OSTERHOFF, MARK T. SMITH,

CAROLINE AYRES TEICHNER; DAN L. BAGATELL, Hanover, NH.

Before LOURIE, REYNA, and WALLACH, *Circuit Judges*.

REYNA, Circuit Judge.

The Cleveland Clinic Foundation and Cleveland HeartLab, Inc. accused True Health Diagnostics LLC of infringement of three patents that claim methods for testing for myeloperoxidase in a bodily sample and a fourth patent that claims a method for treating a patient that has cardiovascular disease. The United States District Court for the Northern District of Ohio found that the asserted claims of the three testing patents are not directed to patent-eligible subject matter and that Cleveland Clinic failed to state a claim of contributory or induced infringement of the fourth patent. For the reasons explained below, we affirm.

BACKGROUND

In 2003, researchers at the Cleveland Clinic Foundation developed methods for detecting the risk of cardiovascular disease in a patient. When an artery is damaged or inflamed, the body releases the enzyme myeloperoxidase, or MPO, in response. MPO is an early symptom of cardiovascular disease, and it can thus serve as an indicator of a patient's risk of cardiovascular disease.

The prior art taught that MPO could be detected in an atherosclerotic plaque or lesion that required a surgically invasive method. Another prior art method *indirectly* detected for MPO in blood. Yet another

known method could detect MPO in blood but yielded results that were not predictive of cardiovascular disease. The inventors here purportedly discovered how to "see" MPO in blood and correlate that to the risk of cardiovascular disease.

The patents disclose methods for detecting MPO and correlating the results to cardiovascular risk.[1] The patents disclose that "[m]yeloperoxidase activity may be determined by any of a variety of standard methods known in the art." *E.g.*, J.A. 39 at col. 8 ll. 32–33. These methods include colorimetric-based assay, flow cytometry, and enzyme-linked immunosorbent assay ("ELISA"). Additionally, the patents disclose MPO detection kits modified from commercially available kits "by including, for example, different cut-offs, different sensitivities at particular cut-offs, as well as instructions or other printed material for characterizing risk based upon the outcome of the assay." *E.g.*, J.A. 38 at col. 6 ll. 21–24.

In addition to ways to "see" MPO, the inventors developed a way to correlate MPO with risk of developing cardiovascular disease. To do this, the inventors compiled MPO data from a population to create a "predetermined" or "control" value. Then, using statistical methods, the inventors analyzed the data based on whether the person was "apparently healthy" or had some cardiovascular disease. *E.g.*, J.A. 45 at col. 20 ll. 32–43. Diagnosers could then use

---

[1] The testing patents are U.S. Patent No. 7,223,552, U.S. Patent No. 7,459,286, and U.S. Patent No. 8,349,581.

The fourth patent, which relates to a method for treating a patient, is U.S. Patent No. 9,170,260. The '552 patent and '260 patent share a specification, as do the '286 patent and '581 patent.

this data to determine whether a patient presents a risk of cardiovascular disease:

> If the level of the present risk predictor in the test subject's bodily sample is greater than the predetermined value or range of predetermined values, the test subject is at greater risk of developing or having [cardiovascular disease] than individuals with levels comparable to or below the predetermined value or predetermined range of values.

J.A. 46 at col. 21 ll. 37–42.

The '552 patent claims methods for characterizing a test subject's risk for cardiovascular disease by determining levels of MPO in a bodily sample and comparing that with the MPO levels in persons not having cardiovascular disease. The dependent claims limit the way MPO is detected and how the MPO values in the control subjects are evaluated. The district court analyzed claims 11, 14, and 15, which provide:

> 11. A method of assessing a test subject's risk of having atherosclerotic cardiovascular disease, comprising
>
> comparing levels of myeloperoxidase in a bodily sample from the test subject with levels of myeloperoxidase in comparable bodily samples from control subjects diagnosed as not having the disease, said bodily sample being blood, serum, plasma, blood leukocytes selected from the group consisting of neutrophils, monocytes, subpopulations of neutrophils, and sub-populations of monocytes, or any combination thereo[f];

wherein the levels of myeloperoxidase in the bodily from the test subject relative to the levels of [m]yeloperoxidase in the comparable bodily samples from control subjects is indicative of the extent of the test subject's risk of having atherosclerotic cardiovascular disease.

J.A. 50 at col. 30 ll. 48–62.

14. A method of assessing a test subject's risk of developing a complication of atherosclerotic cardiovascular disease comprising:

determining levels of myeloperoxidase (MPO) activity, myeloperoxidase (MPO) mass, or both in a bodily sample of the test subject, said bodily sample being blood, serum, plasma, blood leukocytes selected from the group consisting of neutrophils and monocytes, or any combination thereof;

wherein elevated levels of MPO activity or MPO mass or both in the test subject's bodily sample as compared to levels of MPO activity, MPO mass, or both, respectively in comparable bodily samples obtained from control subjects diagnosed as not having the disease indicates that the test subject is at risk of developing a complication of atherosclerotic cardiovascular disease.

J.A. 51 at col. 31 ll. 8–23.

15. The method of claim 14, wherein the test subject's risk of developing a complication of atherosclerotic cardiovascular disease is determined by comparing levels of my[elo]peroxidase mass in the test subject's bodily sample to levels of myeloperoxidase mass

> in comparable samples obtained from the control subjects.

J.A. 51 at col. 31 ll. 24–29.

The '286 patent and '581 patent further claim ways of detecting MPO. The dependent claims of the '286 patent limit MPO detection by flow cytometry and further require detection of another compound, troponin. Other dependent claims of the '286 patent and '581 patent require detection of MPO byproducts. The district court analyzed claims 21 and 22 of the '286 patent and claim 5 of the '581 patent, which provide:

> 21. A method of assessing the risk of requiring medical intervention in a patient who is presenting with chest pain, comprising
>
> characterizing the levels of myeloperoxidase activity, myeloperoxidase mass, or both, respectively in the bodily sample from the human patient, wherein said bodily sample is blood or a blood derivative,
>
> wherein a patient whose levels of myeloperoxidase activity, myeloperoxidase mass, or both is characterized as being elevated in comparison to levels of myeloperoxidase activity, myeloperoxidase mass or both in a comparable bodily samples obtained from individuals in a control population is at risk of requiring medical intervention to prevent the occurrence of an adverse cardiac event within the next six months.

J.A. 71 at col. 23 l. 45–col. 24 l. 10.

> 22. A method of determining whether a patient who presents with chest pain is at risk of requiring medical intervention to prevent an

adverse cardiac event within the next six months comprising:

comparing the level of a risk predictor in a bodily sample from the subject with a value that is based on the level of said risk predictor in comparable samples from a control population, wherein said risk predictor is myeloperoxidase activity, myeloperoxidase mass, a myeloperoxidase-generated oxidation product, or any combination thereof, and wherein said bodily sample is blood, serum, plasma, or urine,

wherein a subject whose bodily sample contains elevated levels of said risk predictor as compared to the control value is at risk of requiring medical intervention to prevent an adverse cardiac event within 6 months of presenting with chest pain, and

wherein the difference between the level of the risk predictor in the patient's bodily sample and the level of the risk predictor in a comparable bodily sample from the control population establishes the extent of the risk to the subject of requiring medical intervention to prevent an adverse cardiac event within the next six months.

J.A. 71 at col. 24 ll. 11–33.

5. A method of determining whether a patient who presents with chest pain is at risk of requiring medical intervention to prevent an adverse cardiac event within the next six months comprising:

determining the level of risk predictor in a bodily sample from the subject, wherein said risk predicttor is myeloperoxidase activity,

> myeloperoxidase mass, a myeloperoxidase (MPO)-generated oxidetion product or any combination thereof,
>
> wherein said bodily sample is blood, serum, plasma or urine,
>
> wherein said myeloperoxidase-generated oxidation product is nitrotyrosine or a myeloperoxidase-generated lipid peroxidation product selected from [list of products] or any combination thereof, and
>
> comparing the level of said risk predictor in the bodily sample of the patient to the level of said risk predictor in comparable samples obtained from a control population,
>
> wherein a subject whose bodily sample contains elevated levels of said risk predictor as compared to the control value is at risk of requiring medical intervention to prevent an adverse cardiac event within 6 months of presenting with chest pain.

J.A. 86 at col. 20 ll. 12–50.

The '260 patent builds on these patents and requires administration of a lipid lowering drug to a patient at risk of cardiovascular disease. Claim 1 of the '260 patent recites:

> 1. A method for administering a lipid lowering agent to a human patient based on elevated levels of myeloperoxidase (MPO) mass and/or activity comprising:
>
> (a) performing an enzyme linked immunosorbent assay (ELISA) comprising contacting a serum or plasma sample with an anti-MPO antibody and a

> peroxidase activity assay to determine MPO activity in the serum or plasma sample;
>
> (b) selecting a patient who has elevated levels of MPO mass and/or activity compared to levels of MPO mass and/or activity in apparently healthy control subjects; and
>
> (c) administering a lipid lowering agent to the selected human patient.

J.A. 117 at col. 30 ll. 10–23.

True Health is a diagnostic laboratory. It purchased the assets of Health Diagnostics Lab, which had contracted with the Cleveland Clinic to perform MPO testing. Rather than continue the relationship with Cleveland Clinic, True Health opted to perform its own MPO testing. In November 2015, Cleveland Clinic sued True Health, asserting infringement of the testing patents. Cleveland Clinic moved for a temporary restraining order and preliminary injunction, which the district court denied. *Cleveland Clinic Found. v. True Health Diagnostics, LLC*, No. 1:15 CV 2331, 2015 WL 7430082, at *6 (N.D. Ohio Nov. 18, 2015).

After the district court denied the motion for temporary restraining order and preliminary injunction, Cleveland Clinic amended its complaint to add allegations of infringement of the '260 patent. True Health moved to dismiss the amended complaint, arguing that the testing patents were directed to patent-ineligible subject matter and that Cleveland Clinic failed to state a claim for indirect infringement of the '260 patent.

The district court granted True Health's motion. *Cleveland Clinic Found. v. True Health Diagnostics,*

LLC, No. 1:15 CV 2331, 2016 WL 705244, at *9 (N.D. Ohio Feb. 23, 2016). The district court found all the claims of the testing patents patent ineligible under 35 U.S.C. § 101 (2012). *Id.* at *5–7. The district court also dismissed the contributory and induced infringement claims of the '260 patent, and denied leave to amend the complaint. *Id.* at *7–9.

Procedurally, the district court found that it was proper to consider § 101 at the motion to dismiss stage. Although Cleveland Clinic argued that the district court should first conduct formal claim construction on some identified terms, the district court reasoned that "plaintiff offer[ed] no proposed construction for these terms." *Id.* at *3. And though Cleveland Clinic objected to treating any claims as representative of others, the district court found it appropriate to consider the above asserted claims representative because "plaintiff fail[ed] to point out any claim that is not represented by the aforementioned claims." *Id.*

The district court next found the testing patents patent ineligible under the two-step framework for analyzing patent subject matter eligibility under § 101 articulated in *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2355 (2014). *See Cleveland Clinic*, 2016 WL 705244, at *7. The district court found that the testing patents' claims were directed to a law of nature under *Alice* step one because the claims were directed to "the correlation between MPO in the blood and the risk of [cardiovascular disease]." *Id.* at *6. Under *Alice* step two, the district court found there was no saving inventive concept. First, the patents employ well-known methods to detect MPO. *Id.* Second, comparing MPO levels with a control value could be a bare mental process. *Id.* Finally, even

looking at the claims as a whole, the steps in combination "simply instruct a user to apply a natural law, *i.e.*, that an increase in MPO mass or MPO activity in a blood sample correlates to an increase in [cardiovascular disease] risk." *Id.*

Regarding infringement of the '260 patent, the district court found that True Health's testing service was not a "material or apparatus" that could form the basis for contributory infringement. *Id.* at *7–8 (citing *In re Bill of Lading Transmission & Processing Sys. Patent Litig.*, 681 F.3d 1323, 1337 (Fed. Cir. 2012) ("Contributory Infringement occurs if a party sells or offers to sell, a material or apparatus for use in practicing a patented process, and that 'material or apparatus' is material to practicing the invention, has no substantial non-infringing uses, and is known by the party to be especially made or especially adapted for use in an infringement of such patent.") (internal quotation marks and citation omitted)).

Regarding induced infringement, the district court found that Cleveland Clinic did not allege facts sufficient to show the specific intent to induce a third party to infringe. The district court reasoned that, "in generic terms, the third-party direct infringer must administer a lipid lowering agent based on elevated levels of MPO in order to infringe the '260 patent." *Id.* at *9. Hence, the "plaintiff must sufficiently allege that defendant specifically intends to induce doctors to administer a lipid lowering agent based on elevated levels of MPO. The complaint is completely devoid of any factual allegations supporting this theory." *Id.*

In response to the motion to dismiss, Cleveland Clinic sought leave to amend its complaint in the event

the claim was dismissed. *Id.* The district court denied Cleveland Clinic's request. *Id.* (citing *PR Diamonds, Inc. v. Chandler*, 364 F.3d 671, 699 (6th Cir. 2004)).

Cleveland Clinic timely appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

DISCUSSION

We first address whether the testing patents are patent ineligible under § 101 and conclude that they are. We next address whether the district court properly dismissed the '260 patent infringement claims and conclude that it did.

1. § 101 Subject Mater Eligibility

A. Standard of Review

For procedural questions not unique to patent law, we review a grant of a motion to dismiss according to the law of the regional circuit, which in this case is the Sixth Circuit. *See, e.g., Univ. of Utah v. Max-Planck-Gesellschaft zur Forderung der Wissenschaften E.V.*, 734 F.3d 1315, 1319 (Fed. Cir. 2013). The Sixth Circuit reviews de novo dismissals for failure to state a claim. *Bovee v. Coopers & Lybrand C.P.A.*, 272 F.3d 356, 360 (6th Cir. 2001). We also review de novo whether a claim is patent-ineligible under the judicially created exceptions to § 101. *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1311 (Fed. Cir. 2016).

B. Procedural Challenges

As a preliminary matter, we address Cleveland Clinic's procedural challenges to the district court's patentable subject matter eligibility analysis. Cleveland Clinic argues that the district court erred by analyzing only certain claims from each of the

testing patents as representative. Cleveland Clinic also argues that the district court should have undertaken claim construction and developed the factual and expert record before analyzing whether the claims were eligible under § 101. We do not find these arguments persuasive.

As to Cleveland Clinic's first procedural challenge, we find no error in the district court addressing claims 11, 14, and 15 of the '552 patent, claims 21 and 22 of the '286 patent, and claim 5 of the '581 patent as representative. Although Cleveland Clinic argues that the unexamined dependent claims provide sufficient inventive concepts over the representative claims, our examination reveals the opposite. For example, Cleveland Clinic argues that the district court failed to take into consideration claims that require specific analytical techniques, claims that limit the predetermined comparison values to a single value or representative value or ranges, or claims that measure the presence of specific MPO-generated oxidetion products. Each limitation Cleveland Clinic raises, however, merely recites known methods of detecting MPO or MPO derivatives and applies the correlation between these biomarkers and cardiovascular health. Where, as here, the claims "are substantially similar and linked to the same" law of nature, analyzing representative claims is proper. *Content Extraction & Transmission LLC v. Wells Fargo Bank, N.A.*, 776 F.3d 1343, 1348 (Fed. Cir. 2014).

As to Cleveland Clinic's second procedural challenge, we have repeatedly affirmed § 101 rejections at the motion to dismiss stage, before claim construction or significant discovery has commenced.

See, e.g., Genetic Techs. Ltd. v. Merial L.L.C., 818 F.3d 1369, 1373–74 (Fed. Cir. 2016) ("We have repeatedly recognized that in many cases it is possible and proper to determine patent eligibility under 35 U.S.C. § 101 on a Rule 12(b)(6) motion."); *OIP Techs, Inc. v. Amazon.com, Inc.*, 788 F.3d 1359, 1362 (Fed. Cir. 2015) (similar); *Content Extraction*, 776 F.3d at 1349 (similar); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) (similar). In any event, Cleveland Clinic provided no proposed construction of any terms or proposed expert testimony that would change the § 101 analysis. Accordingly, it was appropriate for the district court to determine that the testing patents were ineligible under § 101 at the motion to dismiss stage.

C. *Alice* Step One

Section 101 of the Patent Act defines patent eligible subject matter:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

35 U.S.C. § 101. The Supreme Court has long held that there are certain exceptions to this provision: laws of nature, natural phenomena, and abstract ideas. *Alice*, 134 S. Ct. at 2354 (collecting cases).

To determine whether a claim is invalid under § 101, we employ the two-step *Alice* framework. In step one, we ask whether the claims are directed to ineligible subject matter, such as a law of nature. *Alice*, 134 S. Ct. at 2355; *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 75–77 (2012),

McRO, 837 F.3d at 1311–12; *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1375 (Fed. Cir. 2015). While method claims are generally eligible subject matter, method claims that are directed only to natural phenomena are directed to ineligible subject matter. *Ariosa*, 788 F.3d at 1376. If the claims are directed to eligible subject matter, the inquiry ends. *Thales Visionix Inc. v. United States*, 850 F.3d 1343, 1349 (Fed. Cir. 2017).

The claims of the testing patents are directed to multistep methods for observing the law of nature that MPO correlates to cardiovascular disease. *E.g.*, J.A. 50 at col. 30 ll. 47–52; J.A. 71 at col. 24 ll. 11–18; J.A. 86 at col. 20 ll. 12–44. Moreover, the testing patents' specifications similarly instruct that the inventions are "based on the discovery that patients with cardiovascular disease have significantly greater levels of leukocyte and [MPO]," J.A. 36 at col. 2 ll. 33–36; *see* J.A. 67 at col. 16 ll. 56–67 (describing the study's results as to MPO levels), 68 at col. 17 ll. 30–39 (same), and they do not purport to alter MPO levels in any way, *see Genetic Technologies*, 818 F.3d at 1376 (evaluating the asserted patents' specification in support of its conclusion that the claims were focused on a patent-ineligible law of nature because, inter alia, they "involved[d] no creation or alteration of DNA sequences"). Cleveland Clinic's invention thus involves "seeing" MPO already present in a bodily sample and correlating that to cardiovascular disease. Because the testing patents are based on "the relation [between cardiovascular disease and heightened MPO levels that] exists in principle apart from human action," they are directed to a patent-ineligible law of nature. *Mayo*, 566 U.S. at 77.

This case is similar to our decision in *Ariosa*. In *Ariosa*, the ineligible claims were directed to a method of detecting paternally inherited cell-free fetal DNA, which is naturally occurring in maternal blood. 788 F.3d at 1376. The inventors there did not create or alter any of the genetic information encoded in that DNA. *Id.* Likewise, here, the testing patents purport to detect MPO and other MPO-related products, which are naturally occurring in bodily samples. The method then employs the natural relationship between those MPO values and predetermined or control values to predict a patient's risk of developing or having cardiovascular disease. Thus, just like *Ariosa*, the method starts and ends with naturally occurring phenomena with no meaningful non-routine steps in between—the presence of MPO in a bodily sample is correlated to its relationship to cardiovascular disease. The claims are therefore directed to a natural law. *Id.*

Cleveland Clinic argues that its invention is similar to the patent-eligible invention described in *Rapid Litigation Management Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042 (Fed. Cir. 2016). In *CellzDirect*, the inventors developed cryopreservation techniques to preserve liver cells for later use. *Id.* at 1045. We held that the claims were not directed to a natural law because they were "simply not directed to the ability of [liver cells] to survive multiple freeze-thaw cycles. Rather, the claims of the [asserted patent were] directed to a new and useful laboratory technique for preserving [liver cells]." *Id.* at 1048. Unlike *CellzDirect*, the asserted claims of the testing patents are directed to the natural existence of MPO in a bodily sample and its correlation to cardiovascular risk rather than to "a new and useful laboratory

technique" for detecting this relationship. Indeed, Cleveland Clinic has not created a new laboratory technique; rather, it uses well-known techniques to execute the claimed method. The specifications of the testing patents confirm that known testing methods could be used to detect MPO and that there were commercially available testing kits for MPO detection. *E.g.*, J.A. 39 at col. 8 ll. 32–33; J.A. 38 at col. 6 ll. 21–24.

Because the claims of the testing patents are directed to a natural law, we turn to the second step of the *Alice* framework.

D. *Alice* Step Two

In *Alice* step two, we examine the elements of the claims to determine whether they contain an inventive concept sufficient to transform the claimed naturally occurring phenomena into a patent-eligible application. *Mayo*, 566 U.S. at 71–72; *McRO*, 837 F.3d at 1312 (quoting *Alice*, 134 S. Ct. at 2355). We must consider the elements of the claims both individually and as an ordered combination to determine whether additional elements transform the nature of the claims into a patent-eligible concept. *Ariosa*, 788 F.3d at 1375 (citations omitted). "To save a patent at step two, an inventive concept must be evident in the claims." *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017).

We conclude that the practice of the method claims does not result in an inventive concept that transforms the natural phenomena of MPO being associated with cardiovascular risk into a patentable invention. *Mayo* and *Ariosa* make clear that transforming claims that are directed to a law of nature requires more than

simply stating the law of nature while adding the words "apply it." *Mayo*, 566 U.S. at 72; *Ariosa*, 788 F.3d at 1377.

In *Ariosa*, the challenged claims involved a method that was a general instruction to doctors to apply routine, conventional techniques when seeking to detect paternally inherited cell-free fetal DNA in the blood serum of a pregnant woman. *Ariosa*, 788 F.3d at 1377. The same is true here. The '552 patent and '581 patent contain a "determining" step that requires analyzing MPO levels. Cleveland Clinic does not purport to have invented colorimetric-based assay, flow cytometry, or ELISA, or any of the claimed methods to "see" MPO and its derivatives in bodily samples. Rather, the claims here instruct that MPO levels be detected or determined using any of these known techniques. The claims of the testing patents also contain a "comparing" step where MPO levels are compared to statistically derived control or predetermined values. Here too, Cleveland Clinic does not purport to derive new statistical methods to arrive at the predetermined or control levels of MPO that would indicate a patient's risk of cardiovascular disease. Known statistical models can be employed, as described, for example, in the specification of the '552 patent:

> Predetermined values of MPO activity or MPO mass, such as for example, mean levels, median levels, or "cut-off" levels, are established by assaying a large sample of individuals in the general population or the select population and using a statistical model such as the predictive value method for selecting a positivity criterion or receiver operator characteristic curve that defines optimum

> specificity (highest true negative rate) and sensitivity (highest true positive rate) as described in Knapp, R.G., and Miller, M.C. (1992) . . . .

J.A. 46 at col. 21 ll. 12–20.

The claims, whether considered limitation-by-limitation or as a whole, do not sufficiently transform the natural existence of MPO in a bodily sample and its correlation to cardiovascular risk into a patentable invention. The process steps here merely tell those "interested in the subject about the correlations that the researchers discovered." *Mayo*, 566 U.S. at 78.

Cleveland Clinic's invention here is distinct from the *CellzDirect* invention when examining *Alice* step two. In *CellzDirect*, the inventors took the discovery that certain liver cells will survive multiple freeze-thaw cycles and applied that to improve existing methods for preserving liver cells. *CellzDirect*, 827 F.3d at 1051. Here, the testing patents here do not extend their discovery that MPO correlates to cardiovascular risk to a patentable method. They require only conventional MPO detection methods and compare those values to predetermined or control values derived from conventional statistical methods.[2]

Cleveland Clinic argues that its invention is narrowly preemptive and thus should be patent eligible. However, "[w]here a patent's claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, as they are in this case, preemption concerns are fully addressed and

---

[2] The '260 patent, which claims a method of treating a patient that is determined to have a risk of cardiovascular disease, is not challenged under § 101.

made moot." *Ariosa*, 788 F.3d at 1379. Likewise, while Cleveland Clinic argues that its discovery of the relationship between MPO and cardiovascular health was groundbreaking, "even such valuable contributions can fall short of statutory patentable subject matter, as it does here." *Id.* at 1380.

Accordingly, we affirm the district court's determination that the testing patents are directed to patent-ineligible subject matter.

2. '260 Patent Infringement

The '260 patent is a method-of-treatment patent whose claims require "administering a lipid lowering agent to the selected human patient." J.A. 117 at col. 30 ll. 22–24. Cleveland Clinic does not allege that True Health directly infringes this patent, rather, it alleges that True Health indirectly infringes via contributory and induced infringement. As discussed below, we find that the district court properly dismissed Cleveland Clinic's claims.

A. Standard of Review

In the Sixth Circuit, courts employ two standards of review for denials of motions to amend complaints: (1) abuse of discretion, the general standard when a court denies a motion for leave to amend; or (2) de novo, the standard when a court denies leave to amend because the amended pleading would not withstand a motion to dismiss. *Pulte Homes, Inc. v. Laborers' Int'l Union of N. Am.*, 648 F.3d 295, 304–05 (6th Cir. 2011) (citations omitted). Here, like in *Pulte*, Cleveland Clinic did not file a motion for leave to amend, but rather "buried its request . . . in its brief opposing the motion to dismiss" and the district court "did not explain why it withheld leave to amend. The lesser

standard, abuse of discretion, therefore applies." *Id.* at 305.

B. The District Court Properly Dismissed Cleveland Clinic's Contributory Infringement Claims

Contributory infringement occurs if a party sells, or offers to sell, a material or apparatus for use in practicing a patented process, and that "material or apparatus" is material to practicing the invention, it has no substantial non-infringing uses, and it is known by the party "to be especially made or especially adapted for use in an infringement of such patent." 35 U.S.C. § 271(c); *Bill of Lading*, 681 F.3d at 1337. A party that provides a service, but no "material or apparatus," cannot be liable for contributory infringement. *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1357 (Fed. Cir. 2007) ("Under the plain language of the statute, a person who provides a service that assists another in committing patent infringement may be subject to liability under § 271(b) for active inducement of infringement, but not under § 271(c) for contributory infringement.").

True Health provides MPO testing services. The only "material or apparatus" that Cleveland Clinic claims True Health sells are lab reports documenting the results of True Health's testing services. We agree with the district court that the "lab reports attached to the complaint reflect the manner in which defendant reports the results of the service it provides." *Cleveland Clinic*, 2016 WL 705244, at *8. They are not a "material or apparatus." Accordingly, it was not an abuse of discretion for the district court to dismiss

Cleveland Clinic's contributory infringement claims and deny leave to amend.

C. The District Court Properly Dismissed Cleveland Clinic's Induced Infringement Claims

"Whoever actively induces infringement of a patent shall be liable as an infringer." 35 U.S.C. § 271(b). "However, knowledge of the acts alleged to constitute infringement is not enough." *DSU Med. Corp. v. JMS Co.*, 471 F.3d 1293, 1305 (Fed. Cir. 2006) (en banc) (citations omitted). The mere knowledge of possible infringement by others does not amount to inducement; specific intent and action to induce infringement must be proven. *Id.*

It is undisputed that True Health does not sell or prescribe lipid lowering drugs to patients. Cleveland Clinic argues that True Health's lab reports are sufficient to create the reasonable inference that a doctor who ordered such a report would rely on the results and would administer a lipid lowering agent where the results indicated the patient had a cardiovascular disease risk. Cleveland Clinic alleges no facts that suggest any connection between True Health and doctors that may prescribe lipid lowering drugs. Cleveland Clinic thus falls short of showing "specific intent and action" on behalf of True Health to induce infringement of the '260 patent. It was not an abuse of discretion for the district court to dismiss Cleveland Clinic's induced infringement claims and deny leave to amend.

CONCLUSION

We have considered Cleveland Clinic's other arguments and do not find them persuasive. We thus

affirm the district court's grant of True Health's motion to dismiss.

AFFIRMED

APPENDIX B

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

THE CLEVELAND CLINIC FOUNDATION, et al.,
Plaintiffs,
v.
TRUE HEALTH DIAGNOSTICS LLC,
Defendant.

Case No. 1:15 CV 2331

Decided: February 23, 2016

MEMORANDUM OF OPINION AND ORDER

PATRICIA A. GAUGHAN, *District Judge*.

INTRODUCTION

This matter is before the Court upon the Motion of Defendant True Health Diagnostics LLC to Dismiss

(Doc. 25). This is a patent infringement case. For the reasons that follow, the motion is GRANTED.[1]

FACTS[2]

Plaintiffs, The Cleveland Clinic Foundation ("CCF") and Cleveland HeartLab ("HeartLab") (CCF and Heartlab, sometimes, collectively "plaintiff") filed this lawsuit against defendant, True Health Diagnostics. In 2003, researchers at CCF developed a test that assesses a patient's risk for cardiovascular disease ("CVD"). The test, called Myeloperoxidase or "MPO" testing, analyzes inflammation of the blood vessels. MPO is an enzyme released by white blood cells when inflammation occurs in the body. When an artery wall is damaged or becomes inflamed, MPO is released into the blood stream in an effort to kill bacteria. Thus, MPO is an early symptom of many types of CVD.

CCF filed a series of patent applications relating to MPO. The Patent and Trademark Office ("PTO") granted CCF's applications, and it is currently the owner of the four patents at issue in this lawsuit: U.S. Patent No. 7,223,552 ("the '552 patent"); U.S. Patent No. 7,459,286 ("the '286 patent"); U.S. Patent No.

---

[1] Plaintiff's request for judicial notice is GRANTED in PART and DENIED in PART. The Court will take judicial notice of the patent prosecution history excerpts and the prior art identified by plaintiff. The Court cannot, however, take judicial notice of the facts contained in the "TRO motion and its supporting papers." Simply because a particular fact is filed in a court document does not mean that it is "not subject to reasonable dispute."

[2] Although the factual recitation contains some citations to materials that are outside the scope of the Complaint, those citations are for background purposes only and are not relied on by the Court in assessing defendant's motion to dismiss.

8,349,581 ("the '581 patent"); and U.S. Patent No. 9,170,260 ("the '260 patent"). The '552 patent, which issued on May 29, 2007, has since been the subject of validity challenges by competitors in two reexamination proceedings before the PTO. The '552 patent was confirmed valid in both proceedings, most recently in 2011.

The '552 patent, '286 patent, and '581 patent teach a method of analyzing MPO biomarkers in a patient's blood sample[3] to predict a patient's potential for CVD. They do so by comparing the level of MPO found in the patient's blood sample with levels of MPO in control subjects to see if the patient has elevated levels of MPO. The '552 patent does so with regard to a typical patient, while the '286 patent and the '581 patent are directed at patients presenting with chest pain.

The '260 patent issued after the filing of this lawsuit. Plaintiff filed an amended complaint to add a claim of infringement regarding this newly issued patent. The '260 patent teaches a method for administering a lipid lowering agent based on elevated levels of MPO. In addition, the amended complaint added a claim for infringement of U.S. Patent No. 9,164,095 ("the '095 patent"), which also issued after the filing of this lawsuit.

Shortly after filing the amended complaint, plaintiff voluntarily dismissed count four, which asserted infringement based on the '095 patent. Each of the

---

[3] For ease of reference, the Court uses the phrase "blood" or "blood sample" to include "blood, serum, plasma, blood leukocytes selected from the group consisting of neutrophils, monocytes, subpopulations of neutrophils, and subpopulations of monocytes, or any combination thereon."

four remaining claims assert a claim for infringement for each of the remaining patents. The Court previously denied plaintiff's motion for a temporary restraining order and preliminary injunction. Defendant now moves to dismiss this lawsuit and plaintiff opposes the motion.

STANDARD OF REVIEW

When considering a motion to dismiss pursuant to Rule 12(b)(6) of the Federal Rules of Civil Procedure, the allegations of the complaint must be taken as true and construed liberally in favor of the plaintiff. *Lawrence v. Chancery Court of Tenn.*, 188 F.3d 687, 691 (6th Cir. 1999). Notice pleading requires only that the defendant be given "fair notice of what the plaintiff's claim is and the grounds upon which it rests." *Conley*, 355 U.S. at 47. However, the complaint must set forth "more than the bare assertion of legal conclusions." *Allard v. Weitzman* (*In Re DeLorean Motor Co.*), 991 F.2d 1236, 1240 (6th Cir. 1993). Legal conclusions and unwarranted factual inferences are not accepted as true, nor are mere conclusions afforded liberal Rule 12(b)(6) review. *Fingers v. Jackson-Madison County General Hospital District*, 101 F.3d 702 (6th Cir. Nov. 21, 1996), *unpublished*. Dismissal is proper if the complaint lacks an allegation regarding a required element necessary to obtain relief. *Craighead v. E.F. Hutton & Co.*, 899 F.2d 485, 489-490 (6th Cir. 1990).

In addition, a claimant must provide "enough facts to state a claim to relief that is plausible on its face." *Bell Atlantic Corp. v. Twombly*, 550 U.S. 544, 569 (2007). A pleading that offers "labels and conclusions" or "a formulaic recitation of the elements of a cause of

action will not do." *Ashcroft v. Iqbal*, 129 S.Ct. 1937, 1955 (2009). Nor does a complaint suffice if it tenders "naked assertion[s]" devoid of "further factual enhancement." *Id.*

> To survive a motion to dismiss, a complaint must contain sufficient factual matter, accepted as true, to state a claim to relief that is plausible on its face. A claim has facial plausibility when the plaintiff pleads factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged. The plausibility standard is not akin to a "probability requirement," but it asks for more than a sheer possibility that a defendant has acted unlawfully. Where a complaint pleads facts that are "merely consistent with" a defendant's liability, it stops short of the line between possibility and plausibility of 'entitlement to relief.'

Id. at 1949 (citations and quotations omitted). *See also, Hensley Mfg. v. ProPride, Inc.*, 579 F.3d 603 (6th Cir.2009).

ANALYSIS

1. Preliminary issues

A. Timing and burden of proof

As an initial matter, the Court finds that it is procedurally proper to address defendant's arguments concerning invalidity based on patent-eligibility at the 12(b)(6) stage. *See, Content Extraction and Transmission, LLC v. Wells Fargo National Bank Association*, 776 F.3d 1343 (Fed. Cir. 2014). In addressing defendant's arguments, the Court will presume that the patents are valid and grant the motion only if defendant is able to show invalidity by

clear and convincing evidence. Although post-*Alice* courts appear to call into question whether a presumption of validity applies in this context, the Court will nonetheless apply the presumption.

The Court rejects plaintiff's argument that the Court cannot address these issues before claim construction. *See, Cyberfone Sys. LLC v. CNN Interactive Group, Inc.*, 558 Fed. Appx. 988, 991 n.1 (Fed. Cir. 2014). For purposes of this motion, defendant indicates that it is willing to accept plaintiff's proposed claim construction. In connection with its motion for temporary restraining order and preliminary injunction, plaintiff argued to the Court that "[e]xcept for "MPO Activity" and "MPO Mass," all of the claim terms should simply be afforded their plain and ordinary meaning." In its brief in opposition to the instant motion, plaintiff indicates that it is *now* apparent that additional terms need construction. Those terms include "immunological technique," "comparing levels," and "determining levels." Yet, plaintiff offers no proposed construction for these terms. Defendant has stipulated for purposes of this motion to plaintiff's proposed claim construction, yet plaintiff offers none with regard to these terms. Plaintiff's failure will not serve to block the Court from considering defendant's motion. Otherwise, a plaintiff could prevent dismissal before claim construction simply by noting without explanation that claim construction is "necessary." The Court rejects any such rule.

B. Representative claims

The Court further rejects plaintiff's argument that the Court must address each claim in each patent

separately. Defendant argues that claims 11, 14, and 15 of the '552 patent are representative of the remaining claims. Similarly, defendant argues that claims 21 and 22 are representative of the claims in the '286 patent and claim 5 is representative of the claims in the '581 patent. Defendant notes that with the exception of claim 14 of the '552 patent, plaintiff's motion for temporary restraining order and preliminary injunction was based solely on these claims. Moreover, plaintiff fails to point out any claim that is not represented by the aforementioned claims. Rather, plaintiff simply argues:

> Importantly in this regard, no one asserted claim is representative of the others. Some claims require "determining levels" while others claim "comparing levels." Some of the dependent claims contain limitations, *e.g.*, "immunological technique," that further ground those claims as patentable subject matter. These limitations each add additional inventive matter, and thus must each be separately considered.

As defendant notes, however, the representative claims do include the "determining" and "comparing" limitations referenced by plaintiff. Moreover, to the extent dependent claims 7 and 23 contain the "immunological technique,[4]" the Court will address the limitation below. As such, the Court finds that the claims identified by defendant are representative of the claims in the patents in suit.

---

[4] Plaintiff notes in its motion that claim 18 contains the "immunological technique" limitation. (Doc. 30 at p. 5). No such limitation appears in claim 18.

C. Claim language

Claims 11, 14, and 15 in the '552 patent provide as follows:

> 11. A method for assessing a test subject's risk of having atherosclerotic cardiovascular disease, comprising:
>
> comparing levels of myeloperoxidase in a bodily sample from the test subject with levels of myeloperoxidase in comparable bodily samples from control subjects diagnosed as not having the disease, said bodily sample being blood, serum, plasma, blood leukocytes selected from the group consisting of neutrophils, monocytes, subpopulations of neutrophils, and subpopulations of monocytes, or any combination thereon;
>
> wherein elevated levels of myeloperoxidase in the bodily sample from the test subject relative to the levels of myeloperoxidase in the comparable bodily samples from control subjects is indicative of the extent of the test subject's risk of having atherosclerotic cardiovascular disease.
>
> 14. A method of assessing a test subject's risk of developing a complication of atherosclerotic cardiovascular disease, comprising:
>
> determining levels of myeloperoxidase (MPO) activity, myeloperoxidase (MPO) mass, or both in a bodily sample of the test subject, said bodily sample being blood, serum, plasma, blood leukocytes selected from the group consisting of neutrophils and monocytes, or any combination thereof;

wherein elevated levels of MPO activity or MPO mass or both in the subject's bodily sample as compared to levels of MPO activity, MPO mass or both, respectively, in comparable bodily samples obtained from control subjects diagnosed as not having the disease indicates that the test subject is at risk of developing a complication of atherosclerotic cardiovascular disease.

15. The method of claim 14, wherein the test subject's risk of developing a complication of atherosclerotic cardiovascular disease is determined by comparing levels of myeloperoxidase mass in the test subject's bodily sample to levels of myeloperoxidase mass in comparable samples obtained from the control subjects.

Claims 21 and 22 of the '286 patent provide as follows:

21. A method of assessing the risk of requiring medical intervention in a patient who is presenting with chest comprising

characterizing the levels of myeloperoxidase activity, myeloperoxidase mass, or both, respectively in the bodily sample from the human patient, wherein said bodily sample is blood or a blood derivative,

wherein a patient whose levels of myeloperoxidase activity, myeloperoxidase mass, or both is characterized as being elevated in comparison to levels of myeloperoxidase activity, myeloperoxidase mass or both in a comparable bodily samples

obtained from individuals in a control population is at risk of requiring medical intervention to prevent the occurrence of an adverse cardiac event within the next six months.

22. A method of determining whether a patient who presents with chest pain is at risk of requiring medical intervention to prevent an adverse cardiac event within the next six months comprising:

comparing the level of a risk predictor in a bodily sample from the subject with a value that is based on the level of said risk predictor in comparable samples from a control population, wherein said risk predictor is myeloperoxidase activity, myeloperoxidase mass, a myeloperoxidase-generated oxidation product, or any combination thereof, and wherein said bodily sample is blood, serum, plasma, or urine,

wherein a subject whose bodily sample contains elevated levels of said risk predictor as compared to the control value is at risk of requiring medical intervention to prevent an adverse cardiac event within 6 months of presenting with chest pain, and

wherein the difference between the level of the risk predictor in the patient's bodily sample and the level of the risk predictor in a comparable bodily sample from the control population establishes the extent of the risk to the subject of requiring medical intervention to

prevent an adverse cardiac event within the next six months.

Claim 5 of the '581 patent provides as follows:

5. A method of determining whether a patient who presents with chest pain is at risk of requiring medical intervention to prevent an adverse cardiac event within the next six months comprising:

determining the level of risk predictor in a bodily sample from the subject, wherein said risk preddictor is myeloperoxidase activity, myeloperoxidase mass, a myeloperoxidase (MPO)-generated oxidation product or any combination thereof,

wherein said bodily sample is blood, serum, plasma or urine,

wherein said myeloperoxidase-generated oxidation product is nitrotyrosine or a myeloperoxidase-generated lipid peroxidation product selected from [list of products]...or any combination thereof, and

comparing the level of said risk predictor in the bodily sample of the patient to the level of said risk predictor in comparable samples obtained from a control population,

wherein a subject whose bodily sample contains elevated levels of said risk predictor as compared to the control value is at risk of requiring medical intervention to prevent an adverse cardiac event within 6 months of presenting with chest pain.

2. Invalidity

Defendant argues that three of the four remaining patents in this lawsuit are invalid. According to defendants, the '552 patent, the '286 patent, and the '581 patent are invalid for ineligible subject matter. According to defendant, these patents are directed at a law of nature and contain no inventive step. Plaintiff disagrees.

Pursuant to 35 U.S.C. § 101, [w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore...." Section 101 is limited, however, and does not cover "laws of nature, natural phenomena, and abstract ideas." *Alice Corp. Pty. Ltd v. CLS Bank International*, 134 S.Ct. 2347, 2354 (2014). In "applying the § 101 exception, we must distinguish between patents that claim the 'building block[s]' of human ingenuity and those that integrate the building blocks into something more." *Id.* (*citing Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S.Ct. 1289, 1303 (2012)).

In *Alice*, the Supreme Court employed a two-part test "for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Id.* at 2355. Courts must tread carefully because "at some level, all inventions...embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Id.* at 2354. First, the court must determine "whether the claims at issue are directed at a patent-ineligible concept." If the claims are so directed, the Court must proceed to step two,

which involves a determination as to whether the patent contains an "inventive concept," which is described as "an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself." *Id.* (Internal citations and quotations omitted).

In *Mayo*, the Supreme Court addressed the validity of a patent designed to "help doctors who use thiopurine drugs to treat patients with autoimmune diseases determine whether a given dosage level is too low or too high." 132 S.Ct. at 1294. Specifically, the patent described a process of evaluating the safety of the concentrations of a particular metabolite in a person's blood. The Federal Circuit determined that in addition to the natural correlations, the patent claimed specific steps of administering a thiopourine drug and determining the resulting metabolite level. As such, the Federal Circuit determined that the patent was directed at patent-eligible subject matter. The Supreme Court reversed, finding:

> To put the matter more succinctly, the claims inform a relevant audience about certain laws of nature; any additional steps consist of well-understood, routine, conventional activity already engaged in by the scientific community; and those steps, when viewed as a whole, add nothing significant beyond the sum of their parts taken separately.

Id. at 1298.

With regard to the first prong of the *Alice* test, the Court finds that the patents at issue are directed at a law of nature. Defendant claims that the patents

recite the relationship between MPO levels in the bloodstream and the risk of having or developing CVD. Plaintiff does not respond to this argument. Upon review, the Court agrees with the defendant that the patents at issue are directed at a natural law, *i.e.*, the correlation between MPO in the blood and the risk of CVD.

The second step in the *Alice* test requires the Court to determine whether the patents contain an "inventive concept," which is described as "an element or combination of elements that is sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself." Upon review, the Court finds that the patents do not satisfy step two.

The '552 patent and the '581 patent contain a "determining" step. That step, however, simply calls for determining the MPO mass or activity level from the blood sample by whatever method the user chooses. As defendant notes, a myriad of methods well-known in the art existed at the time of invention. The patents themselves acknowledge that such well-known techniques existed. *See, e.g.*, '552 patent, col. 8:32-33 ("[MPO] activity may be determined by any of a variety of standard methods known in the art.") Thus, the "determining" step does not add an inventive concept.

Similarly, the "comparing" step is insufficient to satisfy the *Alice* test. As an initial matter, this step involves a mental process, which does not add an inventive step. This step simply requires comparing the MPO mass or activity level in the test subject to the level in a control population. The control samples

are in turn derived from basic statistical techniques and can vary in form. *See, e.g.*, '552 patent, col. 21:11-29. The Court finds that this step does not add an inventive concept. *See, PerkinElmer, Inc. v. Intema Ltd.*, 496 Fed. Appx. 65 (2012)("comparing" step is an ineligible mental process where the statistical information was well-understood, conventional information).

Furthermore, looking at the claims as a whole, the steps in combination do not make the ineligible mental steps and natural law patent-eligible.[5] Here, like the claims at issue in *PerkinElmer*, do not require that a doctor act on any risk. Rather, the steps in combination simply instruct a user to apply a natural law, *i.e.*, that an increase in MPO mass or MPO activity in a blood sample correlates to an increase in CVD risk.

Plaintiff argues that the prosecution history shows that the patents-in-suit claim a non-routine way of measuring and using MPO to achieve a new and useful result. According to plaintiff, it invented a specific way to "see" MPO. Rather than rely on the myeloperoxidase intracelleular index ("MPXI"), plaintiff's patents allow for "new measurement" techniques, namely using "MPO mass" and "MPO activity" to detect CVD. Upon review, the Court disagrees. As defendant notes, plaintiff defines "MPO

---

[5] The Court has reviewed each of the representative patent claims in all three of the patents. Each claim, however, contains no step or combination of steps that contain an inventive element. Rather, all representative claims contain combinations of the "comparing" or "determining" limitations that, when read in combination, do not amount to an inventive concept.

activity" to mean "that a substrate is provided to assess the enzymatic activity of the MPO." Similarly, "MPO mass" means the amount of MPO molecules in a sample, measured, for example, in picomoles per liter (pmol/L)." In other words, these terms refer to naturally occurring measurements, *i.e.*, enzymatic activity level and amount of MPO molecules. Thus, even assuming plaintiff was the first to discover that the amount of MPO molecules in blood or the enzymatic activity level in the MPO can be correlated to CVD, this does not amount to an "inventive" step.[6] As noted in *Association for Molecular Pathology v. Myriad Genetics*, 133 S.Ct. 2107 (2013), "[g]roundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry." Thus, even though plaintiff may have been the first to "see" MPO by looking at the amount of MPO molecules and/or the enzymatic activity level, these values are naturally occurring and their discovery does not render the patents eligible under § 101. *Id.* ("Discovering important and useful gene and separating it from its surrounding genetic material is not an act of invention."). *See also, Ariosa Diagnostics, Inc v. Sequenom, Inc.*, 788 F.3d 1371 (Fed. Cir. 2015)(as it is undisputed that cffDNA is naturally located in maternal blood, the fact that plaintiffs were the first to "see" it does not in and of itself satisfy § 101).

---

[6] Defendant argues that the prior art shows that, contrary to plaintiff's position, it was *not* the first to look at MPO mass in the blood. Defendant appears correct in this regard. The United States Patent Office ("USPTO") rejected certain claims in the '552 patent as being anticipated by Minota, which "teaches detecting MPO mass in blood from vasculitis patients."

Plaintiff repeatedly argues that the PTO issued the patents and, therefore, they must contain an inventive concept. Plaintiff points out that the '552 patent was reexamined twice and the PTO determined that measuring MPO with MPXI was the prior conventional approach for detecting MPO and that the '552 patent claims "non-routine techniques that could measure MPO in a different way." For the aforementioned reasons, the Court rejects plaintiff's argument. The fact that the PTO issued the patent is not sufficient, standing alone, to satisfy § 101. All of the patents challenged in invalidity proceedings were issued by the PTO and presumably the PTO found them "different from" and "improvements over" prior art. Plaintiff points to nothing in the prosecution history showing that the PTO addressed § 101.

Plaintiff also argues that certain dependent claims contain an inventive step because they call for the use of an "immunological technique." (*See*, *e.g.*, claims 7 and 23 of the '552 patent) Plaintiff initially argues that this term requires construction, yet provides the Court with no proposed construction. As set forth above, plaintiff's failure in this regard will not prevent the Court from addressing defendant's motion to dismiss. Nor does plaintiff provide any specific argument as to why the inclusion of an "immunological technique" satisfies § 101. On the other hand, defendant argues that this limitation does not amount either singularly or in combination with other limitations to an inventive concept because it simply instructs that the levels of MPO mass are "determined by an immunological technique." The Court agrees with defendant that this does not add an inventive step. The patent identifies that one type of immunological

technique is ELISA and "commercial kits for MPO quantification are available." *See*, '552 patent col. 9:30-33. Regardless, in the face of defendant's position to the contrary, plaintiff offers no argument as to why the inclusion of an "immunological technique" satisfies § 101. Accordingly, any such argument is rejected.[7]

Plaintiff argues that the patent satisfies § 101 because it does not preempt the entire field since it does not foreclose the use of other current or future MPO measuring techniques. The argument is rejected. *See, Ariosa Diagnostics*, 788 F.3d at 1379 ("Where a patent's claims are deemed only to disclose patent ineligible subject matter under the *Mayo* framework, as they are in this case, preemption concerns are fully addressed and made moot.").

3. Sufficiency of the allegations

In count five, plaintiff asserts a claim for indirect infringement of the '260 patent. Defendant argues that count five fails to state a claim for indirect infringement based on either contributory or induced infringement. In response, plaintiff argues that the allegations are sufficient and, in the alternative, requests leave to amend the claim.

A. Contributory infringement

Upon review, the Court finds that the complaint fails to state a claim for contributory infringement under 35 U.S.C. § 271(c). "Contributory infringement occurs if a party sells or offers to sell, a material or

---

[7] To the extent plaintiff argues that the patent requires use of a "new" testing kit, the argument is rejected. Nowhere in the claim language does the patent require use of any particular "new" kit.

apparatus for use in practicing a patented process, and that 'material or apparatus' is material to practicing the invention, has no substantial non-infringing uses, and is known by the party to be especially made or especially adapted for use in an infringement of such patent." *In re Bill of Lading Transmission & Processing Sys. Patent Litig.*, 681 F.3d 1323, 1337 (Fed.Cir.2012). "Under the plain language of the statute, a person who provides a service that assists another in committing patent infringement may be subject to liability under section 271(b) for active inducement of infringement, but not under section 271(c) for contributory infringement." *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1357 (Fed. Cir. 2007).

The Court agrees with defendant that the complaint does not state a claim for contributory infringement because plaintiff fails to identify any "material or apparatus" sold by defendant. Plaintiff argues that it identifies and attaches to its complaint five lab-reports, which plaintiff claims constitute a "material or apparatus" for purposes of 35 U.S.C. § 271(c). The Court disagrees. To the contrary, plaintiff expressly alleges that defendant purchases (as opposed to sells) the MPO testing kits. (Doc. 20 at ¶ 30). Plaintiff further alleges that defendant infringes by "using MPO test kits and performing and/or selling MPO testing services." (Doc. 20 at ¶¶ 39, 45). At best, the lab reports attached to the complaint reflect the manner in which defendant reports the results of the service it provides. The Court finds that, based on the allegations in the complaint, the lab reports do not constitute a "material or apparatus" for purposes of a contributory infringement claim. Having failed to

allege this element of the claim, the Court agrees with defendant that dismissal is warranted.

B. Induced infringement

> Under section 271(b), whoever actively induces infringement of a patent shall be liable as an infringer. To establish liability under section 271(b), a patent holder must prove that once the defendants knew of the patent, they actively and knowingly aided and abetted another's direct infringement. However, knowledge of the acts alleged to constitute infringement is not enough. The mere knowledge of possible infringement by others does not amount to inducement; specific intent and action to induce infringement must be proven.

DSU Medical Corp. v. JMS Co. Ltd., 471 F.3d 1293 (Fed. Cir. 2006)(internal citations and quotations omitted). Here, defendant argues that plaintiff fails to state a claim for induced infringement because there are no facts supporting plaintiff's bare allegations that defendant "intended that its actions would induce direct infringement by others" or that defendant "knew or should have known that its actions would induce direct infringement by others."

In response, plaintiff argues that the complaint sufficiently alleges that defendant had knowledge of the '260 patent. According to plaintiff, defendant purchased some of the assets of Health Diagnostics Lab ("HDL") in a bankruptcy proceeding. In its bid for HDL's assets, defendant sought HDL's customer list, including HDL's MPO testing customers, but expressly excluded HDL's Laboratory Services Agreement with HeartLab. Thereafter, HeartLab's

CEO emailed defendant on September 14, 2015, to advise defendant regarding the patents. The letter provides as follows:

> We understand that you intend on rejecting our contract as part of the conclusion of your asset purchase, however please be advised that although the terms of our agreement may be rejected, our intellectual property rights are not something that can be rejected in a bankruptcy or 363 asset sale process. For background, many of our patents are referenced in Section 7 of our LSA that is referenced in the attached letter. There are multiple issued patents on MPO in our patent family as well as additional patents pending and this IP has been successfully defended multiple times in re-examination. It is also important to know that these are Cleveland Clinic patents and they have an obligation to protect them.

This email was sent before the '260 patent issued. Plaintiff also points out that the Laboratory Services Agreement identified the '799 application, which plaintiff claims became the '260 patent. Plaintiff further notes that in the context of this litigation, defense counsel acknowledged investigating the '381 application, which is a continuation of the '799 application. Therefore, plaintiff claims that the allegations in the complaint are sufficient to meet the knowledge requirement.

The Court finds that assuming *arguendo* that the aforementioned allegations are sufficient to meet the pleading requirements with regard to the knowledge of the '260 patent, the Court finds that the complaint nonetheless fails to sufficiently allege a claim for

induced infringement. As defendant notes, *in addition* to knowledge, plaintiff must allege sufficient factual support to meet the specific intent element:

> Beyond that threshold knowledge, the inducer must have an affirmative intent to cause direct infringement. ...[I]nducement requires that the alleged infringer knowingly induced infringement and possessed specific intent to encourage another's infringement. Accordingly, inducement requires evidence of culpable conduct, directed to encouraging another's infringement, not merely that the inducer had knowledge of the direct infringer's activities."

DSU Medical Corp., 471 F.3d at 306. (Citations and quotations omitted). Moreover, "mere knowledge of possible infringement by others does not amount to inducement; specific intent and action to induce infringement must be proven." *Id.* at 1305.

Here, plaintiff does not respond to defendant's argument that the complaint fails to allege facts sufficient to show the specific intent to induce a third-party to infringe. The '260 patent is a method patent directed at "administering a lipid lowering agent to a human patient based on elevated levels of [MPO] mass and/or activity comprising..." Thus, in generic terms, the third-party direct infringer must administer a lipid lowering agent based on elevated levels of MPO in order to infringe the '260 patent. Although the complaint is devoid of any factual allegations regarding the relationship between defendant and these "third party infringers," it appears to the Court that the third-party infringers are the doctors that order the testing. Thus, in order to be liable, plaintiff

must sufficiently allege that defendant specifically intends to induce doctors to administer a lipid lowering agent based on elevated levels of MPO. The complaint is completely devoid of any factual allegations supporting this theory. In fact, the complaint contains no allegations even generally describing defendant's alleged role in the infringement of the '260 patent or any manner in which defendant induces such infringement.[8] As such, the Court finds that plaintiff does not allege sufficient facts to satisfy the specific intent element of an inducement claim. Having concluded that plaintiff fails in this regard, the Court need not reach whether plaintiff adequately alleges an act of direct infringement.

The Court notes that plaintiff alternatively seeks leave to amend its complaint in the event the claim is dismissed. The Court denies plaintiff's request. *PR Diamonds, Inc. v. Chandler*, 364 F.3d 671, 699 (6th Cir. 2004).

CONCLUSION

For the foregoing reasons, the Motion of Defendant True Health Diagnostics LLC to Dismiss (Doc. 25) is GRANTED.

IT IS SO ORDERED.

/s/ Patricia A. Gaughan

---

[8] To infringe the '260 patent, the infringer must perform an "enzyme linked immunosorbent assay (ELISA)." Defendant claims that it does not measure MPO mass or activity in this fashion. The Court notes that it is not accepting defendant's statement as true for purposes of this motion. Rather, the Court simply notes that plaintiff wholly fails to describe or identify defendant's role in the alleged "inducement" of any infringement of the ' 260 patent.

PATRICIA A. GAUGHAN
United States District
Judge

Dated: 2/23/16

APPENDIX C

NOTE: This order is nonprecedential.

**UNITED STATES COURT OF APPEALS,
FOR THE FEDERAL CIRCUIT**

**THE CLEVELAND CLINIC FOUNDATION,
CLEVELAND HEARTLAB, INC.,**
Plaintiffs-Appellants
v.
TRUE HEALTH DIAGNOSTICS LLC,
Defendant-Appellee

2016-1766

Appeal from the United States District Court for the Northern District of Ohio in No. 1:15-cv-02331-PAG, Judge Patricia A. Gaughan.

ON PETITION FOR PANEL REHEARING AND REHEARING EN BANC

Before PROST, *Chief Judge*, NEWMAN, LOURIE, DYK, MOORE, O'MALLEY, REYNA, WALLACH, TARANTO, CHEN, HUGHES, and STOLL, *Circuit Judges*.

PER CURIAM.

ORDER

Appellants The Cleveland Clinic Foundation and Cleveland HeartLab, Inc. filed a combined petition for panel rehearing and rehearing en banc. The petition was referred to the panel that heard the appeal, and thereafter the petition for rehearing en banc was referred to the circuit judges who are in regular active service.

Upon consideration thereof,

IT IS ORDERED THAT:

The petition for panel rehearing is denied.

The petition for rehearing en banc is denied.

The mandate of the court will issue on September 7, 2017.

FOR THE COURT

August 31, 2017
Date

/s/ Peter R. Marksteiner
Peter R. Marksteiner
Clerk of Court

APPENDIX D

TITLE 35. PATENTS

* * *

CHAPTER 10—PATENTABILITY OF INVENTIONS

* * *

§100. Definitions

Section 100 in its present form will continue to apply for applications and patents issued thereon that were filed before Mar. 16, 2013. ….

When used in this title unless the context otherwise indicates—

(a) The term "invention" means invention or discovery.

(b) The term "process" means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.

* * *

§101. Inventions patentable

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

* * *

CHAPTER 29—REMEDIES FOR INFRINGEMENT OF PATENT, AND OTHER ACTIONS

* * *

§282. Presumption of validity; defenses

A patent shall be presumed valid. Each claim of a patent (whether in independent, dependent, or multiple dependent form) shall be presumed valid independently of the validity of other claims; dependent or multiple dependent claims shall be presumed valid even though dependent upon an invalid claim. Notwithstanding the preceding sentence, if a claim to a composition of matter is held invalid and that claim was the basis of a determination of nonobviousness under section 103(b)(1), the process shall no longer be considered nonobvious solely on the basis of section 103(b)(1). The burden of establishing invalidity of a patent or any claim thereof shall rest on the party asserting such invalidity.

The following shall be defenses in any action involving the validity or infringement of a patent and shall be pleaded:

(1) Noninfringement, absence of liability for infringement or unenforceability,

(2) Invalidity of the patent or any claim in suit on any ground specified in part II of this title as a condition for patentability,

(3) Invalidity of the patent or any claim in suit for failure to comply with—

(A) any requirement of section 112, except that the failure to disclose the best mode shall not be a

basis on which any claim of a patent may be canceled or held invalid or otherwise unenforceable; or

(B) any requirement of section 251.

(4) Any other fact or act made a defense by this title.

* * *

APPENDIX E

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF OHIO
EASTERN DIVISION

THE CLEVELAND CLINIC FOUNDATION 9500 Euclid Avenue, Cleveland OH 44195, and CLEVELAND HEARTLAB, INC. 6701 Carnegie Avenue, Suite 500 Cleveland, OH 44103, Plaintiffs, vs. TRUE HEALTH DIAGNOSTICS LLC, 6170 Research Road Frisco, TX 75033, Defendant.	Cas No. 1:15 CV 2331 JUDGE PATRICIA A. GAUGHAN **AMENDED COMPLAINT FOR PATENT INFRINGEMENT** (Jury Demand)

For their Amended Complaint against True Health Diagnostics LLC, The Cleveland Clinic Foundation and Cleveland HeartLab, Inc. state as follows:

* * *

4. CCF is the owner of U.S. Patent No. 7,223,552 ("the '552 Patent"), U.S. Patent No. 7,459,286 ("the

'286 Patent"), U.S. Patent No. 8,349,581 ("the '581 Patent"), U.S. Patent No. 9,164,095 ("the '095 Patent") and U.S. Patent No. 9,170,260 ("the '260 Patent") (Attached as Exhibits A, B, C, D and E).

* * *

13. The '552 Patent overcame two ex parte reexamination challenges before the USPTO, Control Nos. 90/009,501 and 90/009,744. Specifically, Plaintiffs successfully argued that using MPO to assess CVD risk was novel and that the claims were not obvious over a prior method for measuring MPO, known as mean peroxidase index (MPXI). Studies proved that MPXI was not an accurate predictor of cardiovascular disease (CVD).

14. The '552 Patent's claims include using MPO to asses CVD risk and "determining levels of [MPO] activity, [MPO] mass, or both," which were not known, well-known or routine as of the priority date of the '552 Patent. The patent claims a specific application of MPO and not MPO itself.

15. The '286 Patent's claims include using MPO to asses risk of an "adverse cardiac event within the next six months" and "comparing the level of a risk predictor . . . wherein said risk predictor is [MPO] activity, [MPO] mass, or a [MPO]-generated oxidation product, or any combination thereof," which were not known, well-known or routine as of the priority date of the '286 Patent. These patent claims a specific application of MPO and not MPO itself.

16. The '581 Patent's claims include using MPO to asses risk of an "adverse cardiac event within the 6 months of presenting with chest pain" and "determining the level of a risk predictor . . . wherein

said risk predictor is [MPO] activity, [MPO] mass, or a [MPO]-generated oxidation product, or any combination thereof," which were not known, well-known or routine as of the priority date of the '581 Patent. The patent claims a specific application of MPO and not MPO itself. The '581 Patent issued after the Supreme Court's decision in *Mayo Collaborative Servs. v. Prometheus Labs, Inc.*, 132 S. Ct. 1289 (2012).

* * *

Dated: November 30, 2015

Respectfully submitted,

s/ Todd R. Tucker
Todd R. Tucker (0065617)
ttucker@calfee.com
Joshua Friedman (0091049)
jfriedman@calfee.com
CALFEE, HALTER & GRISWOLD LLP
The Calfee Building
1405 E. 6th Street
Cleveland, Ohio 44114
(216) 622-8200 (Telephone)
(216-241-0816 (Facsimile)

Attorneys for Plaintiffs
Cleveland Clinic Foundation
Cleveland HeartLab, Inc.