UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

CARL ZEISS X-RAY MICROSCOPY, INC.,	
Plaintiff,	C.A. No. 20-1102 (LPS)
v.	
SIGRAY, INC.,	JURY TRIAL DEMANDED
Defendant.	

AMENDED COMPLAINT FOR PATENT INFRINGEMENT AND MISAPPROPRIATION OF TRADE SECRETS

Carl Zeiss X-Ray Microscopy, Inc. ("Plaintiff"), by and through its undersigned attorneys, brings this action against Defendant Sigray, Inc. ("Defendant" or "Sigray"), and hereby alleges as follows:

NATURE OF ACTION

- 1. This is an action for infringement of United States Patent No. 7,057,187 ("the '187 Patent") and United States Patent No. 7,400,704 ("the '704 Patent") instituted under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*, specifically 35 U.S.C. § 271, arising from Defendant's manufacture, use, sale, and offer for sale in the United States of products including those that Defendant refers to as the TriLambda X-Ray Microscopy ("XRM") products, including at least the TriLambda-40, TriLambda-Ultima, and TriLambda nano-XRM and those products that Defendant refers to as the PrismaXRM X-ray Microscope ("Prisma").
- 2. This is also an action for trade secret misappropriation in violation of the Federal Defend Trade Secrets Act, 18 U.S.C. § 1836 *et seg.*, and under California Civil Code § 3426 *et*

seq. arising from at least Defendant's theft by improper means and use of Plaintiff's confidential, proprietary, and trade secret information relating to the production and qualification of lenses used in Defendant's x-ray microscopy products and the production and qualification of scintillators used in Defendant's x-ray microscopy products.

3. This is also an action for unfair competition in violation of California Business and Professions Code Section 17200, *et seq.*, arising from Defendant's trade secret theft.

THE PARTIES

- 4. Plaintiff Carl Zeiss X-Ray Microscopy, Inc., is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business in Pleasanton, California.
- 5. On information and belief, Defendant Sigray, Inc., is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business in Concord, California.

JURISDICTION AND VENUE

- 6. With regard to Plaintiff's claims for patent infringement, this case arises under Title 35 of the United States Code. Accordingly, this Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).
- 7. With regard to Plaintiff's Federal claims for trade secret misappropriation, this case arises under, *inter alia*, the Defend Trade Secrets Act, 18 U.S.C. §1836 *et seq*.

 Accordingly, this Court also has subject matter jurisdiction under 28 U.S.C. § 1331.
- 8. With regard to Plaintiff's claims for trade secret misappropriation and unfair competition under state law, this Court has supplemental jurisdiction under 28 U.S.C. § 1367

because those claims are so related to claims in the action within the Court's original jurisdiction such that they form part of the same case or controversy.

- 9. This Court has personal jurisdiction over Defendant because it is incorporated, organized, and existing under the laws of the State of Delaware and has a registered agent in Wilmington, Delaware.
 - 10. Venue is proper under 28 U.S.C. §§ 1391 and 1400.

PATENTS-IN-SUIT

- 11. On June 6, 2006, United States Patent No. 7,057,187, entitled "Scintillator Optical System and Method of Manufacture," was duly and legally issued by the United States Patent and Trademark Office ("PTO"). A true and correct copy of the '187 Patent is attached as Exhibit A to this Amended Complaint.
 - 12. The application that led to the '187 Patent was filed on November 7, 2003.
- 13. The '187 Patent names Wenbing Yun, Yuxin Wang, and David R. Trapp as the inventors.
- 14. The named inventors assigned their rights in the '187 Patent to Xradia, Inc., ("Xradia") by an assignment recorded at Reel/Frame 014651/0531.
- 15. Plaintiff became the owner of all right, title, and interest in and to the '187 Patent as a consequence of transactions reflected in documents recorded at Reel/Frame 031938/0108.

 Plaintiff has the right to sue and recover damages for the infringement of the Patent-in-Suit.
- 16. On July 15, 2008, United States Patent No. 7,400,704, entitled "High Resolution Direct-projection Type X-ray Microtomography System Using Synchrotron or Laboratory-based X-ray Source," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '704 Patent is attached as Exhibit B to this Amended Complaint.

- 17. The application that led to the '704 Patent was filed on October 2, 2006.
- 18. The '704 Patent names Wenbing Yun, David Dean Scott, David R. Trapp, Frederick William Duewer, and Yuxin Wang as the inventors.
- 19. The named inventors assigned their rights in the '704 Patent to Xradia, Inc., by an assignment recorded at Reel/Frame 016497/0175.
- 20. Plaintiff became the owner of all right, title, and interest in and to the '704 Patent as a consequence of transactions reflected in documents recorded at Reel/Frame 031938/0108.

 Plaintiff has the right to sue and recover damages for the infringement of the Patent-in-Suit.

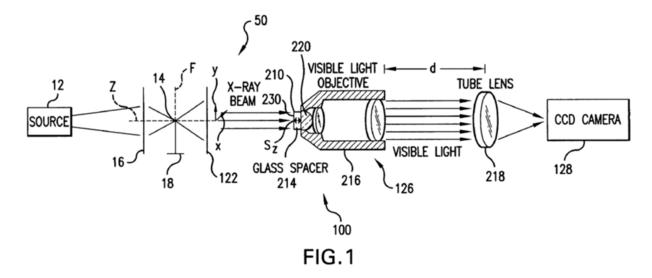
FACTUAL BACKGROUND

- 21. Plaintiff is a subsidiary of Carl Zeiss, Inc. ("Carl Zeiss"). The Carl Zeiss Family of companies began operations in Jena, Germany, in 1846, originally specializing in the customized production of scientific tools and instruments. By the early 1850s, the Carl Zeiss Family of companies began developing observation instruments, including microscopes, for the broader scientific community.
- 22. Over the past 174 years, the Carl Zeiss Family of companies has expanded into nearly every major area of optics, with a diverse product lineup of industrial, research, medical, and consumer products. Today, the Carl Zeiss Family of companies sells products ranging from microscopes, binoculars, rifle scopes, and eye glass lenses to ophthalmology instruments and lithography optics.
- 23. Plaintiff is an industry leader in the research, development, manufacture, and sales of optical components and machines that use x-rays to image samples. These microscopes allow a user to non-destructively create images of samples at a sub-micron level. These microscopes have a range of applications, including measuring tissue samples, pharmaceuticals, and minerals.

- 24. In 2013, Carl Zeiss acquired Xradia. Xradia was an x-ray microscope company co-founded in 2000 by Dr. Yun. Xradia had made advances and innovations in the field of x-ray microscopy that led to several patents, including the '187 Patent and the '704 Patent. Xradia had also developed numerous trade secrets related to the production and qualification of optical components used in its x-ray microscopes, and had maintained those trade secrets as trade secrets.
- 25. To implement the acquisition of Xradia, Xradia was merged with a subsidiary of Carl Zeiss, and the surviving corporation, a wholly owned subsidiary of Carl Zeiss, was renamed Carl Zeiss X-ray Microscopy, Inc., the Plaintiff in this suit.
- 26. As a consequence of this transaction, Plaintiff became the owner of all right, title, and interest in and to all patents and trade secrets owned and/or developed by Xradia and its employees.
- 27. Generally, x-ray microscopes work by generating x-rays that are directed to a sample, and then pass to a detector. The detector can employ or be based on a variety of different technologies, including chemical detectors such as a film or photoresist, or electronic detectors such as a charge-coupled device array (CCD).
- 28. Chemical detectors are generally single use, and require post-exposure chemical processing.
- 29. Electronic detectors such as CCD detectors can be used multiple times and do not require chemical processing. Using image processing software, an image of the sample can be generated from the data output from an electronic detector.
- 30. The '187 Patent discloses, *inter alia*, the use of a device called a "scintillator" between the sample and the electronic detector. The scintillator converts the x-rays into visible

light photons, which then pass to the electronic detector. Because these photons generally have lower energy than high-energy x-rays, the electronic detector does not degrade as quickly.

- 31. The '187 Patent also discloses, *inter alia*, placing microscope objective lenses between the scintillator and the electronic detector to capture and focus the visible photons emitted by the scintillator, improving resolution.
 - 32. Claim 1 of the '187 Patent reads:
 - **1.** A scintillator optical system comprising: scintillator material;
 - a lens system for collecting light generated in the scintillator material, wherein the lens system comprises an objective lens and a tube lens; and a substrate for spacing the scintillator material from the lens system.
 - 33. Figure 1 of the '187 Patent is illustrative of one embodiment:



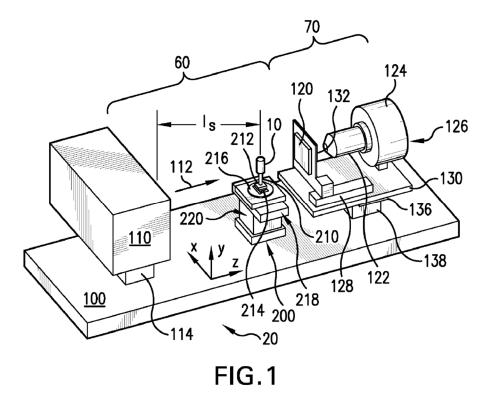
- 34. In the above figure, item 210 is a scintillator material. Item 214 is a glass spacer. Item 126 is an optical system that comprises item 216, a microscope objective, and item 218, a tube lens.
- 35. The '187 Patent also discloses, *inter alia*, a lens used to focus the x-rays from the x-ray source onto the sample. These can be condenser lenses, which are long tubes with small diameters. The inner surface of the condenser lens focuses the x-rays on the sample.

36. The '704 Patent discloses, *inter alia*, an x-ray imaging system that combines projection magnification and optical magnification, e.g., to ease constraints on x-ray source spot size, while improving imaging system footprint.

37. Claim 1 of the '704 Patent reads:

- 1. An x ray imaging system, comprising:
- a projection x ray stage including:
 - an x ray source generating a diverging x ray beam; and
 - a scintillator for converting the x ray beam, after interacting with a sample, into an optical signal;
- an optical stage including:
 - a detector; and
 - a magnification lens for imaging the optical signal of the scintillator onto the detector;
 - wherein a magnification of the projection x ray stage is between 1 and 10 times and a magnification of the optical stage is 5 or greater.

38. Figure 1 of the '704 Patent is illustrative of one embodiment:



- 39. In the above figure, item 110 is the x-ray source, which generates an x-ray beam, 112. Item 10 is a sample. Item 120 is a scintillator. Item 122 is a magnification lens system, and item 124 is a detector.
- 40. As part of the diligence process for evaluating Xradia for potential acquisition, Xradia was requested to disclose, and did disclose, what it considered to be its core trade secrets. Those trade secrets were generally summarized in a document disclosed by Xradia, dated November 27, 2012, titled "Summary of the Xradia IP Portfolio." In that document, Xradia stated that "a significant portion" of Xradia's intellectual property resides in trade secrets, and that these trade secrets generally comprise, *inter alia*, methods and processes for the production of high-performance x-ray optics. The document lists four general categories of such trade secrets, including in connection with: (1) the process of manufacturing and qualifying x-ray condenser lenses, (2) the preparation, polishing, packaging and qualification of x-ray detectors, including scintillators, (3) the process of manufacturing x-ray zone plate lenses, and (4) algorithms for image acquisition, reconstruction, visualization and analysis.
- 41. The document also identifies steps that Xradia took to protect its trade secrets, including limiting the dissemination of the secrets on a need-to-know basis within the company, ensuring that those need-to-know people sign non-disclosure agreements, and taking steps to ensure that no details about the manufacturing process, design details or materials used in the manufacturing process of x-ray optics were shared with parties outside the company. The document further states that to the extent a trade secret was shared with a development partner, the information was only shared under protection of a non-disclosure agreement. The document further states that all documents and materials that disclose or describe trade secrets and other confidential information were marked as "confidential."

- 42. In addition, Dr. Yun and other key Xradia employees were privy and had access to Xradia's trade secrets, including those at issue in this case, and had signed non-disclosure and non-competition agreements with Xradia stating that they would not "at any time, either during [their] employment with the Company or thereafter, disclose to others, or use for [their] own benefit or the benefit of others, any confidential, proprietary or secret information owned, possessed or used by the Company. . . . includ[ing] trade secrets."
- 43. Relying at least in part on its diligence of Xradia, including with regard to Xradia's trade secrets and other information disclosed by Xradia, Carl Zeiss acquired Xradia in 2013.
- 44. Since acquiring the trade secrets, Plaintiff has maintained strict control over, and confidentiality with regard to, the acquired trade secrets, including by limiting the disclosure of the secrets to only those employees who need to know the trade secrets in order to perform their jobs. The trade secrets are maintained on a server with access restricted to only those need-to-know individuals. Physical copies of documents that disclose or describe the trade secrets are marked "confidential." Further, these physical documents are kept in a locked area accessible only by badge access. Employees who have access to the trade secrets are required to sign non-disclosure agreements.
- 45. Dr. Yun was the Chief Technical Officer at Xradia. On information and belief, Dr. Yun was privy and had access to the Xradia trade secrets at issue in this case.
- 46. On July 17, 2013, shortly after the acquisition, Dr. Yun resigned from Plaintiff. His last day at the company was July 31, 2013.
- 47. On information and belief, Dr. Yun and Sylvia Jia Yun Lewis formed Defendant on August 2, 2013.

- 48. Defendant has recruited and hired away from Plaintiff several employees who had previously worked at Xradia, including David Trapp, Jeffrey Gelb, S.H. Lau, Alan Lyon, and Srivatsan Seshadri.
- 49. Mr. Trapp was a mechanical engineer who was experienced with manufacturing condenser lenses, and he joined Xradia in April 2001. While at Xradia and then Plaintiff, he helped develop the process and apparatuses for making and qualifying condenser lenses, including production tooling, and was involved in iterative testing to develop manufacturing parameters for condenser lenses and scintillators. On information and belief, he joined Defendant in or around January 2017.
- 50. Mr. Gelb was an Applications Engineer and material scientist at Xradia, and then Plaintiff. He joined Xradia in June 2006. He was involved in the development of the x-ray microscopes from alpha through release to manufacture, and in the creation of custom instrumentation for x-ray microscopes. On information and belief, he joined Defendant in or around September of 2017.
- 51. Mr. Lau was Vice President of Business Development at Xradia. He joined Xradia in October 2006, and was involved in business development at Xradia, and then Plaintiff. On information and belief, he joined Defendant in 2017.
- 52. Mr. Lyon was a scientist who was part of the Xradia research and development team and developed production tooling and apparatuses for making and qualifying x-ray optics. He was also involved in the development of manufacturing processes relating to the scintillator. On information and belief, he joined Defendant before August 2015.
- 53. Dr. Seshadri was a scientist at Xradia and then Plaintiff. He worked on the simulations of x-ray optics and he was heavily involved in the selection of scintillator material

and the selection of the specific thickness for the lenses, including condensers and how to qualify the condensers. On information and belief, he joined Defendant in September 2016.

- 54. Each of Messrs. Trapp, Gelb, Lau, Lyon, and Seshadri was, on information and belief, privy and had access to Xradia's trade secrets, and individually and collectively were, on information and belief, privy and had access to those trade secrets at issue in this case. Each signed a Non-Disclosure and Non-Competition Agreement with Xradia stating that he would not "at any time, either during [his] employment with the Company or thereafter, disclose to others, or use for [his] own benefit or the benefit of others, any confidential, proprietary or secret information owned, possessed or used by the Company. . . . includ[ing] trade secrets."
- 55. On information and belief, prior to February 2018, Defendant's website did not list any x-ray microscope products.
- 56. In or around February of 2018, Defendant updated its website to include a new product called the UltimaXRM, stating, "The UltimaXRM was developed by Sigray founder Dr. Wenbing Yun, who previously founded of [sic] Xradia and led the development of the 50-nm UltraXRM system, to be the most powerful 3D x-ray microscope on the market, with spatial resolution reaching down to 40 nanometers and dual energy capabilities. The system will be launched soon."
- 57. On information and belief, in the summer of 2018, Defendant shipped its first XRM tool to a university in China, which had been developed and manufactured by Defendant in the United States.
- 58. On information and belief, in the summer of 2020, Defendant offered to sell its Prisma tool to the Pacific Northwest National Laboratory in the State of Washington, which had been developed by Defendant in the United States.

- 59. On information and belief, Defendant's x-ray microscopes, including its XRM tool, included and include x-ray condenser lenses produced and qualified using trade secrets misappropriated from Plaintiff.
- 60. On information and belief, Defendant continues to use trade secrets misappropriated from Plaintiff in connection with the production and qualification of, *inter alia*, its x-ray condenser lenses.
- 61. On information and belief, Defendant's x-ray microscopes, including its XRM and Prisma tools, included and include a scintillator (in particular, on information and belief a thallium-doped cesium iodide scintillator) produced and qualified using trade secrets misappropriated from Plaintiff.
- 62. On information and belief, Defendant continues to use trade secrets misappropriated from Plaintiff in connection with the production and qualification of, *inter alia*, its scintillators, in particular, on information and belief, its thallium-doped cesium iodide scintillators.
- 63. On information and belief, at least Dr. Yun and Messrs. Trapp, Gelb, Lau, Lyon, and Seshadri have knowingly breached, and/or encouraged and induced others to breach, their Xradia Non-Disclosure and Non-Competition Agreements, including to obtain and use Plaintiff's trade secrets, including trade secrets concerning the production and qualification of condenser lenses and scintillators.

COUNT I (Patent Infringement of the '187 Patent, 35 U.S.C. § 271 et seq)

64. The allegations in paragraphs 1 through 63 are incorporated as though fully set forth herein.

- 65. On information and belief, Defendant has made, used, sold, and offered for sale in the United States, and is currently making, using, selling, and offering for sale in the United States, its XRM microscopes, including at least the TriLambda NanoXRM Microscope, the TriLambda-40, and the TriLambda-Ultima ("TriLambda Accused Products").
- 66. The TriLambda Accused Products infringe one or more claims of the '187 Patent, including claim 1.
- 67. The TriLambda Accused Products include a "scintillator optical system," as recited in claim 1:

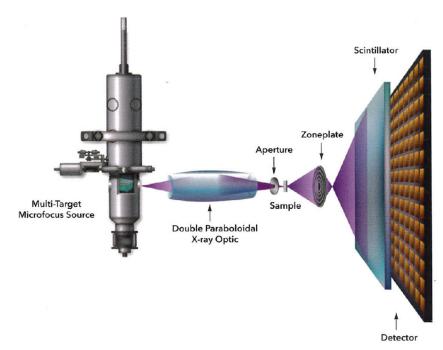


Figure 6: Schematic diagram of Tri-Lambda Nano-XRM. X-rays are produced by the Sigray microfocus X-ray source, captured and refocused by the proprietary double-paraboloidal capillary condenser, then refocused and magnified by a Fresnel-zone plate onto an X-ray sensitive, scintillator-coupled CCD detector.

Exhibit C, Jeff Gelb & David Vine, 3D Imaging of Microstructure with the Tri-Lambda Nano-X-Ray Microscope, White Paper, 3 ("White Paper").

- 68. As shown in the image above, the TriLambda Accused Products include "scintillator material" as recited in claim 1, which on information and belief is a thallium-doped, cesium iodide scintillator.
- 69. The TriLambda Accused Products also include "a lens system for collecting light generated in the scintillator material," as recited in claim 1. For example, the White Paper states that "The visible-light image [created by the scintillator] is then magnified by an optical objective onto a high-efficiency, low noise detector" Exhibit C, White Paper, 4.
- 70. The lens system of the TriLambda Accused Products includes "an objective lens" as recited in claim 1, described as an "optical objective" in the White Paper. Exhibit C, White Paper, 4.
- 71. On information and belief, the lens system of the TriLambda Accused Products includes "a tube lens," as recited in claim 1. For example, on information and belief, images from a July 1, 2018, Facebook post on Defendant's Facebook page show a tube lens in front of the detector:



Sigray Inc. Facebook Cover Photos, (July 1, 2018) *available at*, https://www.facebook.com/sigrayinc/photos/a.904647813076101/904648379742711 (last accessed Aug. 12, 2020).

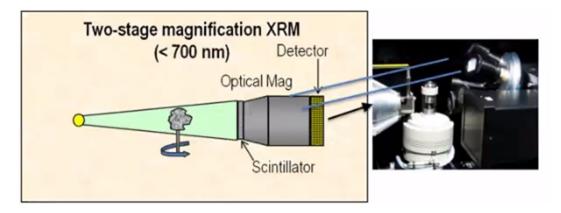
- 72. On information and belief, the scintillator material in the TriLambda Accused Products is mounted on "a substrate for spacing the scintillator material from the lens system," as recited in claim 1.
- 73. On information and belief, Defendant has no reasonable basis for contending that the claims of the '187 Patent are either invalid or not infringed by the TriLambda Accused Products.
 - 74. Defendant's infringement of the '187 Patent is and has been willful.

- 75. Plaintiff is being and has been damaged by Defendant's infringement.
- 76. Defendant's willful infringement warrants an award of both enhanced and exceptional damages.
- 77. On information and belief, Defendant's infringement has caused and will continue to cause Plaintiff irreparable harm. Plaintiff will suffer further irreparable injury and damage, for which it has no adequate remedy at law, unless and until Defendant is enjoined from infringing the '187 Patent.

COUNT II (Patent Infringement of the '704 Patent, 35 U.S.C. § 271 et seq)

- 78. The allegations in paragraphs 1 through 77 are incorporated as though fully set forth herein.
- 79. On information and belief, Defendant has made, used, and offered for sale in the United States, and is currently making, using, and offering for sale in the United States, geometric magnification x-ray instruments, including its PrismaXRM X-ray Microscope ("Prisma Accused Products").
- 80. The Prisma Accused Products infringe one or more claims of the '704 Patent, including claim 1.
- 81. The Prisma Accused Products are an x ray imaging system as recited in claim 1. For example, Sigray describes the product on its website as a "breakthrough 3D X-ray Microscope (micro-CT) system." PrismaXRM X-ray Microscope, SIGRAY available at sigray.com/prismaxrm (last accessed Nov. 15, 2020).
- 82. The Prisma Accused Products include "a projection x ray stage including: an x ray source generating a diverging x ray beam; and a scintillator for converting the x ray beam, after interacting with a sample, into an optical signal," as recited in claim 1. For example, at a

webinar presentation on June 16, 2020, Sigray presented information about the Prisma Accused Products, including the below images which shows a projection x ray stage, with an x ray source (the yellow spot) generating a diverging x ray beam (the green cone) and a scintillator (labeled) for converting the x ray beam after interacting with a sample (the grey abstract shape) into an optical signal.



S.H. Lau, Characterizing Hard to Soft Materials with a novel Multiscale, multi-energy X-ray Microscopy (XRM), University of Manchester Seminar (Jun. 16, 2020).

- 83. The Prisma Accused Products include "an optical stage: including a detector; and a magnification lens for imaging the optical signal of the scintillator onto the detector," as recited in claim 1. For example, the image above from the webinar shows that the Prisma Accused Products have a detector, and include an "optical mag," which on information and belief is an optical objective for imaging the optical signal of the scintillator.
- 84. On information and belief, the magnification of the projection x-ray stage of the Prisma Accused Products is between 1 and 10 times, as recited in claim 1.
- 85. The magnification of at least one setting of the optical stage of the Prisma Accused Products is 5 or greater, as recited in claim 1. For example, during a question and answer session following the webinar presentation, Dr. Wenbing Yun stated that one of the

lenses was a "20x objective lens." *See also* Exhibit D, Sigray, *PrismaXRM Submicron 3d X-ray Microscope*, 4 (Mar. 5, 2020).

- 86. On information and belief, Defendant has no reasonable basis for contending that the claims of the '704 Patent are either invalid or not infringed by the Prisma Accused Products.
 - 87. Defendant's infringement of the '704 Patent is and has been willful.
 - 88. Plaintiff is being and has been damaged by Defendant's infringement.
- 89. Defendant's willful infringement warrants an award of both enhanced and exceptional damages.
- 90. On information and belief, Defendant's infringement has caused and will continue to cause Plaintiff irreparable harm. Plaintiff will suffer further irreparable injury and damage, for which it has no adequate remedy at law, unless and until Defendant is enjoined from infringing the '704 Patent.

<u>COUNT III</u> (Violation of the Defend Trade Secrets Act, 18 U.S.C. § 1836 et. seq.)

- 91. The allegations in paragraphs 1 through 90 are incorporated as though fully set forth herein.
- 92. Defendant has misappropriated and continues to misappropriate Plaintiff's trade secrets in violation of the Defend Trade Secrets Act, 18 U.S.C. § 1836.
- 93. Plaintiff owns and possesses confidential, proprietary, and trade secret information relating to production and qualification of both condenser lenses and scintillators, including for x-ray microscopes.
- 94. Plaintiff's trade secrets relate to a product or service used in, or intended for use in, interstate commerce, as they are used in connection with Plaintiff's products and services, which are offered and used across the country.

- 95. Plaintiff, including as the successor-in-interest to Xradia, expended substantial effort and capital in developing, maintaining, and possessing its trade secrets that it incorporated into its revolutionary products.
- 96. Plaintiff is the leading manufacturer of x-ray microscopes in the world. Plaintiff's x-ray microscopes are used in laboratories and universities around the world. They are a critical tool for non-destructive imaging of samples and for obtaining high-quality, sub-micron resolution.
- 97. Plaintiff, like its predecessor-in-interest Xradia, has taken reasonable measures to maintain the secrecy of its trade secrets, including by limiting access to them, and by requiring confidentiality agreements from any individual granted access to its trade secrets that prohibit, among other things, unauthorized access, use, and disclosure of Plaintiff's trade secrets.

 Plaintiff's trade secrets cannot be properly acquired or duplicated because of the limited number of individuals who can access them, and because they are maintained entirely by Plaintiff's personnel and others who are contractually obligated to maintain the secrecy of these trade secrets.
- 98. Plaintiff's trade secrets derive substantial economic value from not being generally known, and not being readily ascertainable through proper means by others because such information is extremely valuable to Plaintiff, critical to Plaintiff's business, and, if available to others, would enable them to compete with Plaintiff to Plaintiff's detriment.
- 99. Defendant's misappropriation of Plaintiff's trade secrets began no later than the summer of 2018, when Defendant shipped its first x-ray microscope using critical components produced and qualified using Plaintiff's trade secrets. The information was acquired from Plaintiff's and its predecessor-in-interest Xradia's former employees who were bound under non-

disclosure agreements to maintain the secrecy of the information. Defendant knew or should have known that the trade secrets were acquired by improper means, and misused and misappropriated by Defendant through its commercial exploitation of those trade secrets.

- 100. On information and belief, Defendant has improperly used, and continues to improperly use, Plaintiff's trade secrets for manufacturing and qualifying x-ray microscope condenser lenses and scintillators, all without Plaintiff's express or implied consent. Defendant has at all relevant times known, or should have known, that Plaintiff's trade secrets were acquired by improper means, and misused and misappropriated by Defendant through its commercial exploitation of those trade secrets.
- 101. Defendant's conduct constitutes knowing, willful, and malicious misappropriation.
- 102. As a direct and proximate result of Defendant's wrongful conduct, Plaintiff has been substantially and irreparably harmed in an amount not readily capable of determination and for which there is no adequate remedy at law. Unless restrained by this Court, Defendant will cause further irreparable injury to Plaintiff.
- 103. Plaintiff is entitled to preliminary and permanent injunctive relief enjoining Defendant, Defendant's agents and employees, and all persons acting in concert or participation with Defendant, from engaging in any further use of Plaintiff's trade secrets and proprietary and confidential information.
- 104. As a result of Defendant's actions, Plaintiff has suffered direct and consequential damages and is entitled to recover compensatory damages, including opportunity costs and exemplary damages in an amount to be proven at trial.

- 105. Defendant has been unjustly enriched as a result of its misappropriation of Plaintiff's trade secrets. Plaintiff therefore seeks recovery for this unjust enrichment, at least through disgorgement of Defendant's ill-gotten profits.
- 106. To the extent Plaintiff's actual damages and Defendant's unjust enrichment are not reasonably ascertainable or subject to proof, Plaintiff is entitled to a reasonable royalty for the use of such trade secrets.

COUNT IV

(Violation of the California Uniform Trade Secrets Act, California Civil Code § 3426 et seq.)

- 107. The allegations in paragraphs 1 through 106 are incorporated as though fully set forth herein
- 108. By committing the actions set forth herein, Defendant has misappropriated and continues to misappropriate Plaintiff's trade secrets in violation of the California Uniform Trade Secrets Act, California Civil Code § 3426 et seq.
- 109. Plaintiff's trade secrets relate to a product or service used in, or intended for use in California as they are used in connection with Plaintiff's products and services, which are manufactured, offered for sale, and used in California.

COUNT V

(Violation of California Unfair Competition Law, California Business and Professions Code Section 17200, et seq.)

- 110. The allegations in paragraphs 1 through 109 are incorporated as though fully set forth herein.
- 111. Defendant engaged in unfair, and unlawful business practices and such conduct as alleged herein constitutes unfair competition in violation of California Business and Professions Code Section 17200, et seq.

- 112. Defendant's acts of unfair competition include but are not limited to its trade secret misappropriation.
- 113. As a direct and proximate result of Defendant's conduct, Plaintiff has been harmed in an amount to be proven at trial, and will suffer further, irreparable injury unless the requested relief is granted.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests that this Court:

- (1) Enter judgment that Defendant has infringed one or more claims of the '187 Patent and the '704 Patent;
- (2) Enter an order preliminarily and permanently enjoining Defendant and its officers, agents, employees, attorneys, and all persons in active concert or participation with any of them, from infringing the '187 Patent and the '704 Patent;
- (3) Award Plaintiff damages in an amount sufficient to compensate it for Defendant's infringement of the '187 Patent and the '704 Patent, together with pre-judgment and post-judgment interest and costs, and all other damages permitted under 35 U. S. C. § 284;
- (4) Order an accounting for acts of patent infringement not presented at trial and an award by the Court of additional damage for any such acts of infringement;
 - (5) Treble the damages awarded to Plaintiff under 35 U.S.C. § 285;
- (6) Enter an order preliminarily and permanently enjoining Defendant and its affiliates, employees, agents, officers, directors, attorneys, successors, and assigns and all those acting on behalf of or in concert with any of them from directly or indirectly misappropriating and continuing to utilize Plaintiff's trade secrets;

- (7) Award Plaintiff damages for actual loss caused by the misappropriation of its trade secrets and damages for unjust enrichment caused by the misappropriation of Plaintiff's trade secrets not addressed in computing damages for actual loss;
- (8) Award Plaintiff a reasonable royalty for Defendant's misappropriation of Plaintiff's trade secrets;
- (9) Award Plaintiff awarded punitive and exemplary damages for Defendant's willful and malicious misappropriation of Plaintiff's trade secrets;
- (10) Order the disgorgement of any profits Defendant has obtained, or will obtain, as a result of its improper use of Plaintiff's trade secrets;
 - (11) Award Plaintiff its reasonable costs, attorneys' fees, and expenses;
 - (12) Award Plaintiff all applicable pre- and post-judgment interest;
- (13) Enter an order preliminarily and permanently enjoining Defendant and its affiliates, employees, agents, officers, directors, attorneys, successors, and assigns and all those acting on behalf of or in concert with any of them from directly or indirectly engaging in any further acts of unfair competition;
- (14) Award Plaintiff damages in an amount sufficient to compensate it for Defendant's unfair competition;
 - (15) Award Plaintiff such other and further relief as this Court deems just and proper.

Dated: November 18, 2020 FISH & RICHARDSON P.C.

By: /s/ Susan E. Morrison

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