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 THE REGENTS OF THE UNIVERSITY OF MICHIGAN
 13

14 UNITED STATES DISTRICT COURT

15 FOR THE NOTHERN DISTRICT OF CALIFORNIA

16 THE REGENTS OF THE UNIVERSITY OF
 17 MICHIGAN, a Michigan constitutional
 18 corporation,

19 Plaintiff,

20 v.

21 LEICA MICROSYSTEMS INC.,

22 Defendant.

Case No. 5:19-cv-07470

**COMPLAINT FOR PATENT
 INFRINGEMENT**

DEMAND FOR JURY TRIAL

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 24
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1 Plaintiff The Regents of the University of Michigan (“University of Michigan”) by and for
2 its complaint against defendant Leica Microsystems Inc. (“Leica” or “Defendant”) alleges as
3 follows:

4 **NATURE OF THE ACTION**

5 1. This is a civil action for infringement of U.S. Patent No. 7,277,169 B2 under the
6 Patent Laws of the United States, 35 U.S.C. § 1, *et seq.*, including § 271. This action arises out of
7 Leica’s continuing willful infringement of University of Michigan’s innovative and valuable
8 patented inventions by Leica’s sales of white light laser confocal microscope systems.

9 **THE PARTIES**

10 2. University of Michigan is a constitutional corporation of the State of Michigan,
11 having a principal address at 1600 Huron Parkway, Second Floor, Ann Arbor, Michigan 48109-
12 2590.

13 3. Upon information and belief, Defendant Leica Microsystems Inc. is a corporation
14 organized and existing under the laws of Delaware with an established place of business located
15 at 400 Oyster Point Blvd Suite 137, South San Francisco, CA 94080.

16 **JURISDICTION AND VENUE**

17 4. University of Michigan brings this civil action for patent infringement pursuant to
18 the Patent Laws of the United States, 35 U.S.C. § 1, *et seq.* This Court has subject matter
19 jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

20 5. Upon information and belief, Leica transacts and conducts business in this District
21 and the State of California, and is subject to the personal jurisdiction of this Court. Upon
22 information and belief, Leica has minimum contacts within the State of California and this
23 District and has purposefully availed itself of the privileges of conducting business in the State of
24 California and in this District. University of Michigan’s causes of action arise directly from
25 Leica’s business contacts and other activities in the State of California and in this District.

26 6. Upon information and belief, Leica has committed acts of infringement within this
27 District and the State of California by, *inter alia*, making, using, selling, offering for sale,
28 importing, advertising, and/or promoting products that infringe one or more claims of U.S. Patent

1 No. 7,277,169 B2. More specifically, Leica, directly and/or through intermediaries, makes, uses,
2 sells, ships, imports, distributes, offers for sale, advertises, and otherwise promotes its products in
3 the United States, the State of California, and this District. Upon information and belief, Leica
4 solicits customers in the State of California and this District and has one or more customers who
5 are residents of the State of California and this District and who use or resell Leica's products in
6 the State of California and in this District.

7 7. Venue is proper in this District under 28 U.S.C. §§ 1391 and 1400(b), including
8 based on Leica's transaction of business in this District directly and/or through its customers and
9 acts of patent infringement in this District. Leica has a regular and established place of business
10 located at 400 Oyster Point Blvd Suite 137, South San Francisco, CA 94080. The Leica
11 Microsystems Imaging Center located in South San Francisco, California, showcases the breadth
12 of technologies allegedly developed by Leica Microsystems for life science research including the
13 SP8 confocal microscope, according to Leica's web site, and hosts the Leica SP8 FALCON
14 confocal microscope system. [https://www.leica-microsystems.com/company/news/news-
15 details/article/leica-microsystems-opens-first-ever-imaging-center-in-san-francisco/](https://www.leica-microsystems.com/company/news/news-details/article/leica-microsystems-opens-first-ever-imaging-center-in-san-francisco/).

16 **INTRADISTRICT ASSIGNMENT**

17 8. Pursuant to Local Rule 3-2(c), this case is subject to district-wide assignment
18 because it is an Intellectual Property Action.

19 **THE PATENT-IN-SUIT**

20 9. University of Michigan owns the entire right, title, and interest in U.S. Patent No.
21 7,277,169 B2 entitled "Whole Spectrum Fluorescence Detection With Ultrafast White Light
22 Excitation" (the "'169 Patent"). The '169 Patent issued on October 2, 2007 to inventors Jing
23 Yong Ye, Theodore B. Norris, and James R. Baker, Jr. from U.S. Patent Application No.
24 11/355,387, filed on Feb. 16, 2006, and Provisional Application No. 60/654,853, filed on
25 February 18, 2005. A true and correct copy of the '169 Patent is attached as Exhibit A to this
26 Complaint.

27 **BACKGROUND**

28 10. University of Michigan is one of the largest and most diverse research universities

1 in the world, and plays a significant role both in generating a steady stream of innovative ideas
2 and in educating the people that together underlie the nation's economic success and quality of
3 life. University of Michigan is internationally recognized as, among other things, a top-tier
4 engineering and biomedical research institution. University of Michigan invests substantial
5 resources into research and development activities, which is reflected by its extensive patent
6 portfolio covering a wide range of technologies from semiconductors to biomedical assays.

7 11. The inventors of the '169 patent are three highly respected university professors
8 and world leading scientists.

9 12. University of Michigan Professor Theodore B. Norris is in the Electrical
10 Engineering and Computer Science Department. Dr. Norris has been director of the University's
11 Center for Photonic and Multiscale Nanomaterials, and is recognized as a leading expert focusing
12 on ultrafast optics and femtosecond lasers, and their applications in optoelectronics and
13 biomedicine.

14 13. Professor James R. Baker was the founding Director of the highly respected
15 University of Michigan Mary H. Weiser Food Allergy Center and is currently an Emeritus
16 Professor of Medicine. Dr. Baker was, for 20 years, the chief of the Division of Allergy and
17 Clinical Immunology at the University of Michigan. Dr. Baker is also a Professor of Biomedical
18 Engineering in the College of Engineering. In 2001, he was inaugurated as the first recipient of
19 the Ruth Dow Doan Endowed Professorship in Biologic Nanotechnology. In 2005, the
20 University of Michigan Board of Regents formed the Michigan Nanotechnology Institute for
21 Medicine and Biological Sciences and appointed Dr. Baker as its first director. His recent
22 accolades include the Distinguished University Innovator Award from the University of Michigan
23 Office of the Vice President for Research and the Damen Award for Distinguished alumnus from
24 the Stritch School of Medicine.

25 14. Professor Jing Yong Ye is currently a Professor of Biomedical Engineering at the
26 University of Texas at San Antonio. Dr. Ye was an associate research scientist at the University
27 of Michigan from 2000 to 2009, where he received the Outstanding Research Scientist Award
28 from the College of Engineering.

1 15. In biological and medical research, there is a technique wherein researchers use
2 fluorescent labels to “tag” molecules of interest within a sample. When the fluorescent labels are
3 excited by light of a specific wavelength, the fluorescent labels absorb the energy and emit light
4 at a different wavelength thus allowing for fluorescent detection of the labels.

5 16. Fluorescent detection allows a researcher to acquire information regarding the
6 quantity as well as the location of a “tagged” molecule within a sample. Further, multiple
7 molecules may each be tagged with different fluorescent labels within a sample allowing one to
8 obtain a variety of information about these various molecules within a single sample. Each
9 florescent label is excited at a specific wavelength. The practice, before the University of
10 Michigan’s ’169 patented invention, had been to use one or more single wavelength lasers to
11 excite a particular fluorescent tag of interest within a sample. The ’169 Patent teaches, among
12 other things, novel techniques of simultaneously exciting multiple fluorescent labels at various
13 wavelengths using a single white light laser along with an innovative time-resolving detector
14 being able to identify and detect each fluorescent label individually.

15 17. The ’169 Patent describes many uses of fluorescent detection technology,
16 including the following:

17 Fluorescence measurements are an invaluable tool for a wide variety of
18 applications in various fields, including analytical chemistry, biochemistry, cell
19 biology, physiology, cardiology, photochemistry, environmental science, and
20 other basic science and clinical research. A primary advantage of fluorescence
21 measurement over absorption measurement is its high selectivity and sensitivity.
22 For example, the dynamics of protein folding and unfolding can be studied using
23 single-molecule fluorescence detection. High throughput fluorescence screening
24 can be performed to find potential drug leads from an extensive library of
25 compounds. Fluorescence emission from ions can be used to quantify their local
26 concentrations in living cells. Membrane structure and function can be studied
27 with fluorescence probes. Drug delivery and its treatment effects can be monitored
28 in living biological systems. Minute traces of fluorescent materials can be detected
and identified for forensic science and homeland security. Binding properties of
biochemical species can be monitored in real time and in situ by fluorescence
measurements.

’169 patent, col. 1:32-51.

1 18. As discussed above, in biological and medical research there is a technique
2 wherein researchers tag molecules of interest within a sample with fluorescent labels. When the
3 fluorescent labels are excited by light of a specific wavelength, the tags absorb the energy and
4 emit light at a different wavelength thus allowing for fluorescent detection of the labels.

5 19. Researchers often want to tag multiple fluorescent molecules within a sample for a
6 variety of reasons including, *inter alia*, to study the binding between different molecules or the
7 quantity of different molecules within a single sample. With the invention of the '169 Patent, a
8 researcher can use a single white light laser and innovative time resolving detection techniques to
9 excite multiple fluorescently tagged molecules within a sample and measure the amount of
10 fluorescence from each tag in one step. This is a significant advance in the field of fluorescence
11 confocal microscopy.

12 20. The '169 Patent describes a novel fluorescent detection technology using a white
13 light laser and a time-resolving detector.

14 According to the principles of the present teachings, a fluorescence detection
15 system for testing a sample having at least one fluorophore is provided having
16 advantageous construction. The fluorescence detection system comprises a white
17 light generation system outputting a white light pulse. The white light pulse has a
18 first frequency range and a first time duration. The white light pulse excites the at
19 least one fluorophore of the sample to emit a fluorescence. The fluorescence has a
20 second frequency range and a second time duration, wherein the first time duration
is less than the second time duration. A time-resolving detector receives the
fluorescence and at least a portion of the white light pulse and separates the
fluorescence from the portion of the white light pulse.

'169 patent, col. 2:36-49.

21 21. Leica makes and sells white light laser microscope systems in the United States
22 employing University of Michigan's '169 Patented invention. Leica sells, for example, a "White
23 Light Laser Confocal Microscope Leica TCS SP8 X" microscope, that employs LightGate, a
24 technique that Leica describes as removing "unwanted signal from the image data" using a time
25 resolving detector as claimed in the '169 Patent. As Leica advertises: "An adjustable time gate
26 switches off the data collection during white light laser pulse. Additionally, non-wanted
27 fluorescence can be removed by adjusting the time gate. This way the highest image contrast
28 without any reflection contribution is obtained." See Leica Microsystems' SP8 X Homepage

1 available at <http://www.leicamicrosystems.com/products/confocal->
2 [microscopes/details/product/leica-tcs-sp8-x/](http://www.leicamicrosystems.com/products/confocal-microscopes/details/product/leica-tcs-sp8-x/).

3 22. Leica has been well aware, since long before this case was filed, that University of
4 Michigan invented the innovative white light laser, time-resolving detector system that Leica
5 employs in its confocal microscopes. The university has requested that Leica refrain from using
6 its patented technology without authorization and invited Leica to take a license and pay a fair
7 royalty for Leica's use of these valuable inventions that are protected by the '169 Patent. Leica
8 has refused to do so. Leica has chosen instead to knowingly profit substantially from its use of
9 the university's patented invention. Leica has refused to acknowledge that the university is the
10 inventor of this innovative technology, refused to take a license, and refused to pay a reasonable
11 royalty for Leica's abundant use of the university's valuable invention that is at the core of
12 Leica's white light laser confocal microscopes.

13 **COUNT I**

14 **(INFRINGEMENT OF U.S. PATENT NO. 7,277,169)**

15 23. University of Michigan incorporates by reference paragraphs 1-22 above.

16 24. Drs. Ye, Norris, and Baker invented a novel manner of using a single source white
17 light laser to excite and detect multiple fluorophores using a time-resolving detector. The
18 inventors patented these innovations in the '169 Patent.

19 25. Upon information and belief, Leica makes, uses, offers for sale, distributes, sells,
20 and/or imports into the United States products that directly infringe, or that employ systems,
21 components, and/or processes that directly infringe the '169 Patent literally or under the doctrine
22 of equivalents, including, namely each and every model of Leica's SP8 confocal microscope
23 family that employs a white light laser, including, for example, without limitation, the TCS SP8
24 X and TCS SP8 STED microscopes.

25 26. Leica's infringement includes infringement of at least claim 1 of the '169 Patent.

26 27. The preamble of claim 1 of the '169 Patent reads: "A fluorescence detection
27 system for testing a sample, said sample having a plurality of fluorophores, said fluorescence
28 detection system comprising ..." '169 patent, col. 7:43-45. Leica's SP8 microscope systems

1 employ “a fluorescence detection system for testing a sample, said sample having a plurality of
2 fluorophores.” According to Leica, in these systems, “[s]amples labeled with multiple
3 fluorophores are helpful in revealing relationships between biological structures.”

4 <https://www.youtube.com/watch?v=h8QcpSiORKM>; [http://www.leica-
5 microsystems.com/products/confocalmicroscopes/details/product/leica-tcs-sp8-x/showcase/](http://www.leica-microsystems.com/products/confocalmicroscopes/details/product/leica-tcs-sp8-x/showcase/).

6 28. According to Leica, its SP8 confocal microscopes employ an “innovative Leica
7 White Light Laser” that is a “single device that produces a continuous spectral output between the
8 wavelengths of 470 and 670 nanometers.” *Id.* As Leica advertises: “The white light laser source
9 of the Leica TCS SP8 X perfectly matches the wavelength of any fluorophore.”

10 <https://www.leica-microsystems.com/products/confocal-microscopes/p/leica-tcs-sp8-x/>. As Leica
11 explains about its SP8 microscopes: “The white light laser, a laser source that covers the full
12 spectrum of visible light, gives you the most flexibility for your multicolor experiments.”

13 [http://www.leicamicrosystems.com/fileadmin/downloads/Leica%20TCS%20SP8%20X/Brochure
14 s/Leica%20TCS%20SP8-Brochure_EN.pdf](http://www.leicamicrosystems.com/fileadmin/downloads/Leica%20TCS%20SP8%20X/Brochures/Leica%20TCS%20SP8-Brochure_EN.pdf) at 13.

15 29. Claim 1 of the ’169 Patent provides: “a single-source white light generation
16 system outputting a supercontinuum white light pulse comprising an entire spectrum of white
17 light, said supercontinuum white light pulse exciting the plurality of fluorophores of the sample to
18 emit fluorescence ...” ’169 patent, col. 7:46-50.

19 30. Leica advertises that its TCS SP8 STED, for example, has “a single-source white
20 light generation system outputting a supercontinuum white light pulse comprising an entire
21 spectrum of white light, said supercontinuum white light pulse exciting the plurality of
22 fluorophores of the sample emit fluorescence.” According to Leica in its marketing materials,
23 including Leica’s own product literature videos: “The innovative Leica White Light Laser is a
24 single device that produces a continuous spectral output between the wavelengths of 470 and 670
25 nanometers.” <https://www.youtube.com/watch?v=h8QcpSiORKM>;
26 [http://www.leicamicrosystems.com/products/confocal-microscopes/details/product/leica-tcs-sp8-
27 x/showcase/](http://www.leicamicrosystems.com/products/confocal-microscopes/details/product/leica-tcs-sp8-x/showcase/). Leica’s product literature, including its promotional videos and brochures, depict a
28 white light laser in the SP8 microscope as a single source. *Id.* [- 8 -](https://downloads.leica-</p></div><div data-bbox=)

1 [microsystems.com/Leica%20TCS%20SP8/Brochures/Leica%20TCS%20SP8%20X-](http://microsystems.com/Leica%20TCS%20SP8/Brochures/Leica%20TCS%20SP8%20X-Flyer_EN.pdf)
2 [Flyer_EN.pdf](http://microsystems.com/Leica%20TCS%20SP8/Brochures/Leica%20TCS%20SP8%20X-Flyer_EN.pdf).

3 31. Leica claims in its SP8 product description: “The white light laser source of the
4 Leica TCS SP8 X perfectly matches the wavelength of any fluorophore.”

5 [http://www.leicamicrosystems.com/products/confocal-microscopes/details/product/leica-tcs-sp8-](http://www.leicamicrosystems.com/products/confocal-microscopes/details/product/leica-tcs-sp8-x/)
6 [x/](http://www.leicamicrosystems.com/products/confocal-microscopes/details/product/leica-tcs-sp8-x/).

7 32. Leica states: “By tuning both excitation and detection, complete excitation
8 emission spectra can be acquired... In addition, the pulsed White Light Laser (WLL) supplies
9 excitation light for fluorescence lifetime measurements.”

10 [http://www.leicamicrosystems.com/products/confocal-microscopes/details/product/leica-tcs-sp8-](http://www.leicamicrosystems.com/products/confocal-microscopes/details/product/leica-tcs-sp8-x/)
11 [x/](http://www.leicamicrosystems.com/products/confocal-microscopes/details/product/leica-tcs-sp8-x/).

12 33. Claim 1 of the ’169 Patent further provides: “a time-resolving detector receiving
13 said fluorescence and at least a portion of said supercontinuum white light pulse, said time-
14 resolving detector separating said fluorescence from said portion of said supercontinuum white
15 light pulse.” ’169 patent, col. 7:51-55.

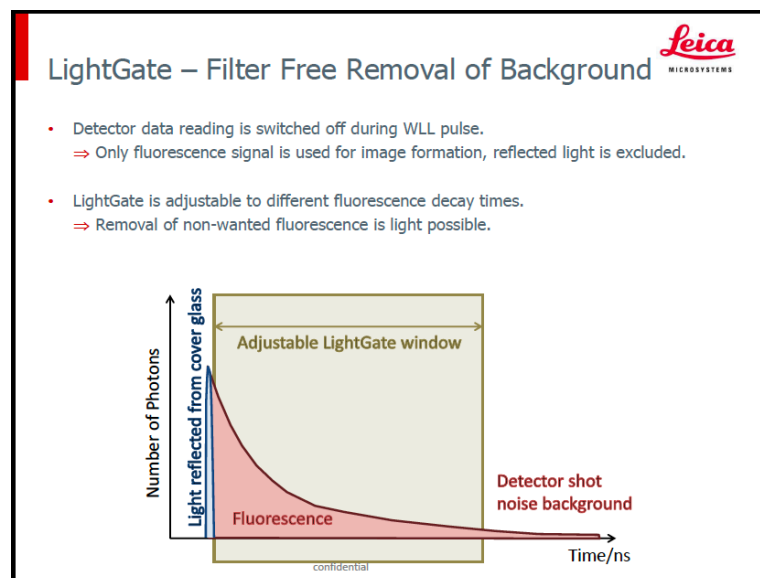
16 34. Leica’s product literature demonstrates that Leica TCS SP8 X has a “time-
17 resolving detector receiving said fluorescence and at least a portion of said supercontinuum white
18 light pulse, said time-resolving detector separating said fluorescence from said portion of said
19 supercontinuum white light pulse.” This functionality is sometimes referred to by Leica as
20 LightGate. [http://www.leicamicrosystems.com/products/confocal-](http://www.leicamicrosystems.com/products/confocal-microscopes/details/product/leica-tcs-sp8-x/)
21 [microscopes/details/product/leica-tcs-sp8-x/](http://www.leicamicrosystems.com/products/confocal-microscopes/details/product/leica-tcs-sp8-x/).

22 35. Leica’s website states, for example, “[a]n adjustable time gate switches off the
23 data collection during the white light laser pulse. Additionally, non-wanted fluorescence can be
24 removed by adjusting the time gate. This way the highest image contrast without any reflection
25 contribution is obtained.” [http://www.leicamicrosystems.com/products/confocal-](http://www.leicamicrosystems.com/products/confocal-microscopes/details/product/leica-tcs-sp8-x/)
26 [microscopes/details/product/leica-tcs-sp8-x/](http://www.leicamicrosystems.com/products/confocal-microscopes/details/product/leica-tcs-sp8-x/).

27 36. Leica’s marketing materials state, for example: “The highest image contrast can be
28 obtained by LightGate. This is an innovative, filter-free method to quench unwanted signals. An

1 adjustable time gate switches off the data collection during the white light laser pulse excluding
 2 any reflected photons from the signal. Additionally, non-wanted fluorescence can be removed by
 3 adjusting the time gate.” [https://downloads.leica-](https://downloads.leica-microsystems.com/Leica%20TCS%20SP8/Brochures/Leica%20TCS%20SP8%20X-Flyer_EN.pdf)
 4 [microsystems.com/Leica%20TCS%20SP8/Brochures/Leica%20TCS%20SP8%20X-](https://downloads.leica-microsystems.com/Leica%20TCS%20SP8/Brochures/Leica%20TCS%20SP8%20X-Flyer_EN.pdf)
 5 [Flyer_EN.pdf](https://downloads.leica-microsystems.com/Leica%20TCS%20SP8/Brochures/Leica%20TCS%20SP8%20X-Flyer_EN.pdf).

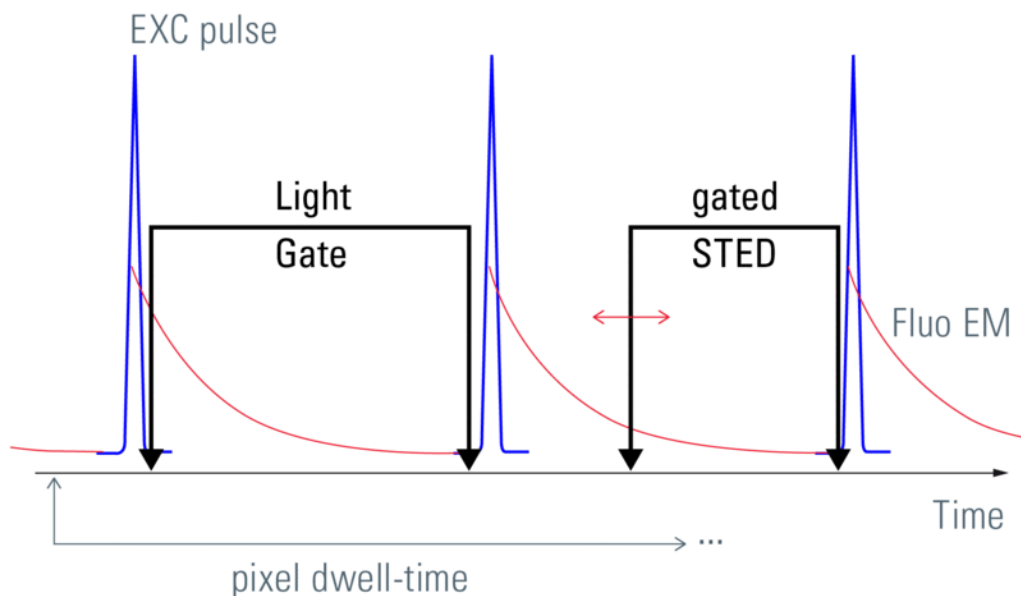
6 37. A video on Leica’s website also describes the time-resolving detector functionality
 7 as follows: “Leica’s LightGate is an adjustable temporal window that removes these unwanted
 8 emissions to ensure that only fluorescent signals are collected for imaging ... For reflections
 9 which only occur very early in the pulse, LightGate can exclude data from this brief period to
 10 prevent it from confounding fluorescent signals and contributing to the image.” [http://www.leica-](http://www.leica-microsystems.com/products/confocalmicroscopes/details/product/leica-tcs-sp8-x/showcase/)
 11 [microsystems.com/products/confocalmicroscopes/details/product/leica-tcs-sp8-](http://www.leica-microsystems.com/products/confocalmicroscopes/details/product/leica-tcs-sp8-x/showcase/)
 12 [x/showcase/](http://www.leica-microsystems.com/products/confocalmicroscopes/details/product/leica-tcs-sp8-x/showcase/); <https://www.youtube.com/watch?v=h8QcpSiORKM>.



23 Ex. B, Leica presentation at slide 44.

24 38. Leica advertises: “Gating the detection signal allows signal collection during the
 25 fluorescence emission time only between excitation pulses. By excluding the pulses, the
 26 background generated by excitation light is efficiently suppressed and independent of any beam
 27 splitting or barrier filtering. This LightGate is a new building block in the concept of the ‘white
 28 confocal’, referring to a fully tunable and filter-free spectral optical sectioning device.” Leica

1 publication at [http://www.leica-microsystems.com/science-lab/gates-open-for-improved-](http://www.leica-microsystems.com/science-lab/gates-open-for-improved-confocal-fluorescence-and-super-resolution-sted/)
 2 [confocal-fluorescence-and-super-resolution-sted/](http://www.leica-microsystems.com/science-lab/gates-open-for-improved-confocal-fluorescence-and-super-resolution-sted/).



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Fig. 3: Gating strategies. Left: LightGate collects only emission photons after the excitation pulse. This efficiently suppresses the reflected light independently of the wavelength. Right: Gated STED collects only late emitted photons to ensure restriction to long fluorescence lifetime events in the center of the illumination pattern and by implication increasing resolution further.

Leica publication: [http://www.leica-microsystems.com/science-lab/gates-open-for-improved-](http://www.leica-microsystems.com/science-lab/gates-open-for-improved-confocal-fluorescence-and-super-resolution-sted/)
 17 [confocal-fluorescence-and-super-resolution-sted/](http://www.leica-microsystems.com/science-lab/gates-open-for-improved-confocal-fluorescence-and-super-resolution-sted/) and Leica marketing materials at
 18 <http://www.leica-microsystems.com/science-lab/white-light-laser/>.

39. Leica's product literature further states the following: "The White Light Laser (WLL) is the optimal excitation source to image any kind of dye combination.... The highest image contrast can be obtained by LightGate. This is an innovative, filter-free method to quench unwanted signals. An adjustable time gate switches off the data collection during the white light laser pulse excluding any reflected photons from the signal. Additionally, non-wanted fluorescence can be removed by adjusting the time gate." [https://downloads.leica-](https://downloads.leica-microsystems.com/Leica%20TCS%20SP8%20X/Brochures/Leica%20TCS%20SP8%20X-Flyer_EN.pdf)
 24 [microsystems.com/Leica%20TCS%20SP8%20X/Brochures/Leica%20TCS%20SP8%20X-](https://downloads.leica-microsystems.com/Leica%20TCS%20SP8%20X/Brochures/Leica%20TCS%20SP8%20X-Flyer_EN.pdf)
 25 [Flyer_EN.pdf](https://downloads.leica-microsystems.com/Leica%20TCS%20SP8%20X/Brochures/Leica%20TCS%20SP8%20X-Flyer_EN.pdf).

40. In addition to Leica's direct infringement, Leica has indirectly infringed and continues to indirectly infringe at least claim 1 of the '169 Patent by inducing direct infringement

1 by customers and third parties who use the SP8 family of products by knowingly, and with
2 specific intent, directing and instructing customers and third parties to assemble and use the SP8
3 family of products in an infringing manner as evidenced by Leica's marketing materials, product
4 literature, manuals, and instructional materials for the SP8 family of products. For example,
5 Leica's marketing materials, product literature, manuals, and instructional materials for the SP8
6 family of products instruct customers to use "a single-source white light generation system
7 outputting a supercontinuum white light pulse comprising an entire spectrum of white light, said
8 supercontinuum white light pulse exciting the plurality of fluorophores of the sample to emit
9 fluorescence" and "a time-resolving detector receiving said fluorescence and at least a portion of
10 said supercontinuum white light pulse, said time-resolving detector separating said fluorescence
11 from said portion of said supercontinuum white light pulse" as shown in the paragraphs above,
12 which are incorporated by reference as if fully stated herein.

13 41. Leica has had knowledge of the '169 Patent since at least June 1, 2016 when
14 University of Michigan informed Leica of its infringement of the '169 Patent. University of
15 Michigan further provided claim charts showing Leica's infringement of several claims of the
16 '169 Patent on or about October 19, 2017 and thereafter. Leica was thus aware of the '169 Patent
17 and its infringement of the '169 Patent prior to the filing of this Complaint. With knowledge of
18 its infringement of the '169 Patent, Leica has specific intent to induce customers to assemble and
19 use the SP8 family of products in an infringing manner. While having knowledge of the '169
20 Patent and its infringement of the '169 Patent, Leica has continued with specific intent to induce
21 infringement of the '169 Patent by its customers and other third parties through its sale of the SP8
22 family of products and its marketing materials, product literature, manuals, and instructional
23 materials for the SP8 family of products.

24 42. Leica also contributorily infringes the '169 Patent, including at least claim 1, by
25 importing, selling, and offering for sale "a single-source white light generation system outputting
26 a supercontinuum white light pulse comprising an entire spectrum of white light" in connection
27 with its SP8 family of products as shown in the paragraphs above, which are incorporated by
28 reference as if fully stated herein. The white light generation system imported, sold, and offered

1 for sale by Leica is a material part of the invention of the '169 Patent. Leica is aware that the
2 white light generation system is especially made and especially adapted for use in infringing the
3 '169 Patent. The white light generation system imported, sold, and offered for sale is not a staple
4 item of commerce suitable for substantial noninfringing use. Leica also contributorily infringes
5 the '169 Patent by importing, selling, and offering for sale "a time-resolving detector" as shown
6 in the paragraphs above, which are incorporated by reference as if fully stated herein. The time-
7 resolving detector imported, sold, and offered for sale, by Leica is a material part of the invention
8 of the '169 Patent. Leica is aware that the time-resolving detector is especially made and
9 especially adapted for use in infringing the '169 Patent. The time-resolving detector imported,
10 sold, and offered for sale is not a staple item of commerce suitable for substantial non-infringing
11 use.

12 43. Leica has directly and indirectly infringed and continues to directly and indirectly
13 infringe one or more claims of the '169 Patent, including at least claim 1 of the '169 Patent,
14 literally and/or under the doctrine of equivalents, by or through making, using, distributing,
15 offering for sale, selling within the United States, and/or importing into the United States the
16 Accused Products.

17 44. As a result of Leica's infringement of the '169 Patent, University of Michigan has
18 suffered monetary damages and is entitled to no less than a reasonable royalty for Leica's use of
19 the claimed inventions of the '169 Patent, together with interest and costs as determined by the
20 Court. University of Michigan will continue to suffer damages in the future unless Leica's
21 infringing activities are enjoined by this Court.

22 45. University of Michigan will be irreparably harmed unless a permanent injunction
23 is issued, enjoining Leica and its agents, employees, representatives, affiliates, and others acting
24 in concert with Leica from infringing the '169 Patent.

25 COUNT II

26 (WILLFUL INFRINGEMENT OF U.S. PATENT NO. 7,277,169)

27 46. University of Michigan incorporates by reference paragraphs 1-45 above.
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1 47. Upon information and belief, Leica received notice and became aware of
2 University of Michigan's '169 Patent as early as April 2013, and thereafter again in June 2016
3 and October 2017. University of Michigan invited Leica to take a license to this valuable
4 patented technology subject to reasonable terms. Leica refused to take a license, and instead
5 continued to knowingly use this technology in violation of the university's rights.

6 48. On April 19, 2013, Leica filed a PCT patent application (WO2013/171024) and
7 U.S. patent application (U.S. Patent No. 9,274,057). The published application that issued as
8 University of Michigan's '169 Patent (*i.e.*, U.S. Publication No. 2006/0187448) was cited during
9 prosecution of both of Leica's PCT and U.S. applications. In regard to WO2013/171024, the
10 Search Report cited U.S. Publication No. 2006/0187448 ("448 Publication"), which issued as
11 the '169 Patent, as "a document of particular relevance." In Leica's U.S. prosecution, the '448
12 Publication was a basis of obviousness rejections of certain claims in the file history for '057
13 patent. Leica's citation of the '169 Patent in Leica's own patent applications demonstrates
14 Leica's knowledge of the '169 Patent's invention as early as year 2013.

15 49. On or about June 1, 2016, University of Michigan provided written notice to Leica
16 that its sales of the SP8 microscope platform infringe the university's '169 Patent. University of
17 Michigan invited Leica to take a license, but Leica refused.

18 50. On or about October 19, 2017, University of Michigan again provided written
19 notice to Leica that its sales of the SP8 microscope platform infringe the university's '169 Patent.
20 University of Michigan again invited Leica to take a license, but Leica refused.

21 51. University of Michigan has repeatedly requested that Leica refrain from using the
22 university's innovative white light laser, time-resolving detector system that Leica employs in its
23 confocal microscopes without authorization, and invited Leica to take a license and pay a fair
24 royalty. Leica has refused to do so.

25 52. Leica has refused to acknowledge that the university is the inventor of this
26 innovative technology, refused to take a license, and refused to pay a reasonable royalty for
27 Leica's abundant use of the university's valuable invention that is at the core of Leica's white
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1 light laser SP8 confocal microscopes. Leica has chosen instead to knowingly profit substantially
2 by willfully infringing University of Michigan's '169 Patented inventions.

3 **PRAYER FOR RELIEF**

4 WHEREFORE, University of Michigan requests the following relief from this Court:

5 (A) A judgment that Defendant is liable for direct and indirect infringement of
6 one or more claims of the '169 Patent;

7 (B) Compensatory damages in an amount according to proof, and in any event
8 no less than a reasonable royalty, including all pre-judgment and post-judgment interest at the
9 maximum rate allowed by law;

10 (C) An order and judgment permanently enjoining Defendant and its officers,
11 directors, agents, servants, employees, affiliates, attorneys, and all others acting in privity or in
12 concert with them, and their parents, subsidiaries, divisions, successors and assigns from further
13 acts of infringement of the patents-in-suit;

14 (D) A judgment that Defendant is a willful infringer and awarding University
15 of Michigan treble damages for willful infringement pursuant to 35 U.S.C. § 284;

16 (E) A judgment that this is an exceptional case and awarding University of
17 Michigan its costs and reasonable attorneys' fees incurred in this action as provided by 35 U.S.C.
18 § 285;

19 (F) Pre-judgment interest;

20 (G) Post-judgment interest; and

21 (H) A judgment granting University of Michigan such further relief as the
22 Court may deem just and proper.

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DATED: November 13, 2019

FEINBERG DAY KRAMER ALBERTI
LIM TONKOVICH & BELLOLI LLP

By: /s/ Robert F. Kramer

Robert F. Kramer

Attorneys for Plaintiff
The Regents of the University of Michigan

DEMAND FOR JURY TRIAL

University of Michigan hereby demands trial by jury on all issues so triable pursuant to
Fed. R. Civ. P. 38(b) and Civil L.R. 3-6(a).

DATED: November 13, 2019

FEINBERG DAY KRAMER ALBERTI
LIM TONKOVICH & BELLOLI LLP

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The Regents of the University of Michigan