Jesse Hindman, Cal. Bar No. 222935
HINDMAN APC
402 W. Broadway, Suite 2700
San Diego, CA 92101
Telephone: (619) 255-4078
Facsimile: (619) 230-1839
Email: jesse@hindmanapc.com

Donald R. Ware, Mass. Bar No. 516260
Email: dware@foleyhoag.com
admitted *pro hac vice*
Barbara A. Fiacco, Mass. Bar No. 633618
Email: bfiacco@foleyhoag.com
admitted *pro hac vice*
Marco J. Quina, Mass. Bar No. 661660
Email: mquina@foleyhoag.com
admitted *pro hac vice*
FOLEY HOAG LLP
155 Seaport Boulevard
Boston, MA 02210
Phone: (617) 832-1000
Fax: (617) 832-7000

Attorneys for Plaintiffs

IN THE UNITED STATES DISTRICT COURT

FOR THE SOUTHERN DISTRICT OF CALIFORNIA

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, BECTON, DICKINSON AND COMPANY, SIRIGEN, INC., and SIRIGEN II LIMITED

Plaintiffs,

v.

AFFYMETRIX, INC. and LIFE TECHNOLOGIES CORP.,

Defendants.

Case No.

PLAINTIFFS' FIRST AMENDED COMPLAINT

JURY TRIAL DEMANDED

COMPLAINT

Plaintiffs The Regents of the University of California ("The Regents"), Becton, Dickinson and Company ("BD"), Sirigen, Inc. ("Sirigen"), and Sirigen II Limited ("Sirigen II") (collectively, "Plaintiffs") file this Complaint against Defendants Affymetrix, Inc. ("Affymetrix") and Life Technologies Corp. ("Life"). In support of their claims, Plaintiffs allege as follows:

Nature of the Action

1. This is an action for patent infringement brought under the patent laws of the United States, 35 U.S.C. § 1 et seq. Plaintiffs seek a judgment that Defendants have infringed and continue to infringe, directly and indirectly, United States Patent No. 9,085,799 ("the '799 patent"); United States Patent No. 8,110,673 ("the '673 patent"); and United States Patent No. 8,835,113 ("the '113 patent") (collectively, the "UCSB Patents") as well as United States Patent No. 9,547,008 ("the '008 patent"); United States Patent No. 9,139,869 ("the '869 patent"); United States Patent No. 8,575,303 ("the '303 patent"); and United States Patent No. 8,455,613 ("the '613 patent") (collectively, the "Sirigen Patents") (the UCSB and Sirigen Patents, together, are the "Asserted Patents"). By way of remedy, Plaintiffs seek damages and preliminary and permanent injunctive relief.

2. The Asserted Patents disclose innovative new polymers, systems, and methods based on the discovery of high brightness polymer dyes, which allow scientists to efficiently detect the presence, in a sample, of biological materials of interest. The UCSB patents claim inventions that were made by scientists at University of California Santa Barbara ("UCSB") and subsequently licensed to BD. Subsequent polymer development work at Sirigen led to the Sirigen Patents, which likewise are licensed to BD. These innovations resulted in the creation of new classes of fluorescent research reagents called "polymer dyes" and "polymer tandem dyes." Such dyes fluoresce much more brightly than traditional fluorescent dyes.

3. One important application of the inventions is in flow cytometry, a technology that is used to measure, sort, or count cell populations and biomarkers. UCSB and Sirigen's inventions enable scientists using flow cytometry to more easily identify small cell populations that previously might go undetected, or to distinguish a multitude of cell types or cell markers that previously could be indistinguishable, when traditional fluorescent dyes were used. For BD, this pioneering technology has opened the door to new business opportunities and provided a competitive advantage, allowing it to build market leadership and strengthen its brand as the innovator in research reagents.

4. Defendants, however, have developed and launched copycat products they call "Super Bright Dyes." Despite their knowledge of some or all of the Asserted Patents, Defendants are continuing to develop additional Super Bright Dyes, exploiting pioneering technology to reap the rewards the patent system reserves to innovators. Since December 2016, they have launched hundreds of new reagent products based on infringing polymer dyes, marketing them as "comparable" or "alternatives" to BD's licensed products. In June 2017, Defendants promised their customers that "many more" such products would be released in the future, and in December 2017 they did just that, launching hundreds more infringing products. On information and belief, Defendants are planning to continue launching additional infringing products in 2018 unless their acts of infringement are prevented by court order.

Parties

5. The Regents is charged by California law with the duty of administering the University of California as a public trust, pursuant to Article IX § 9 of the California Constitution.

6. BD is a New Jersey corporation having its principal place of business at 1 Becton Drive, Franklin Lakes, NJ 07417. BD has a regular and established place of business at 11077 North Torrey Pines Road, La Jolla, CA.

7. Sirigen is a California corporation having its principal place of business at 7330 Carroll Road Suite 150, San Diego, CA 92121. Sirigen is a wholly-owned subsidiary of BD.

8. Sirigen II is a United Kingdom private limited company having its principal place of business at 1030 Eskdale Road, Winnersh Triangle, Wokingham, Berkshire, England, RG41 5TS. Sirigen II is a wholly-owned subsidiary of BD.

9. On information and belief, Affymetrix is a Delaware corporation having its principal place of business at 3420 Central Expressway, Santa Clara, CA. On information and belief, Affymetrix has a regular and established place of business at 10255 Science Center Dr., San Diego, CA.

10. On information and belief, Life is a Delaware corporation having its principal place of business at 5791 Van Allen Way, Carlsbad, CA 92008.

11. On information and belief, Defendants are wholly owned subsidiaries of Thermo Fisher Scientific, Inc., a Delaware corporation.

Jurisdiction and Venue

12. This Court has subject matter jurisdiction over this action under 28 U.S.C. §§ 1331 and 1338(a).

13. This Court has personal jurisdiction over Affymetrix because, on information and belief, Affymetrix has a regular and established place of business at 3420 Central Expressway, Santa Clara, CA 95051, and it has engaged in, and made meaningful preparations to engage in, infringing conduct in California.

14. This Court has personal jurisdiction over Life because, on information and belief, Life has its principal place of business at 5791 Van Allen Way, Carlsbad, CA 92008, and it has engaged in, and made meaningful preparations to engage in, infringing conduct in California.

15. Venue is proper in this district under 28 U.S.C. § 1400(b) because both Affymetrix and Life have committed acts of infringement and have a regular and established place of business in this district.

The Patents

16. In biological research, scientists identify cells and other molecular entities by detecting various biomarkers. An effective way to detect such markers involves the use of fluorescent dyes (also known as fluorochromes or fluorophores). A fluorochrome is a chemical compound, or a discrete unit within a chemical compound, that, when illuminated by light of a particular wavelength (that is, a particular color), can absorb that light to enter an excited state and then emit light at a different wavelength. This emitted light is called fluorescence. Each fluorochrome has a characteristic band of wavelengths for the light it can absorb, and a different band of wavelengths for the light it can emit.

17. The use of fluorochromes allows scientists to label biological materials of interest in a variety of research applications. One such application involves using an instrument called a "flow cytometer," which can characterize, count, or sort the various cell types in a sample of blood or other bodily fluid. The sample is placed in a stream of fluid that enables the cells to flow through a detector single file.

18. With flow cytometry, fluorochromes are chemically bound to various different antibodies, each of which can bind only to a particular protein. If the target protein is present on the cell, the antibody will bind to the protein, and the fluorochrome attached to the antibody will be detected when light (such as from a laser) is shone onto the sample. If the target protein is not on the cell, the antibody will have no attachment point, and no fluorescence will be detected. By binding fluorochromes having different absorption and emission wavelengths to different antibodies, scientists can monitor multiple aspects of a biological system simultaneously, by illuminating the sample with various wavelengths of light and observing what different wavelengths of light, i.e., what different colors of light, are emitted.

19. Historically, most fluorescent dyes have been either small molecules

or fluorescent proteins. More recently, however, a new class of fluorochrome was developed, referred to as a polymer dye. Polymer dyes have an extended and repeated chemical structure that includes multiple chromophores that can interact with each other through the polymer's conjugated electronic system. This makes them much better collectors of light and much brighter fluorochromes.

20. In the early 2000s, the inventors of the UCSB Patents, members of Professor Guillermo Bazan's research group at the University of California, Santa Barbara ("UCSB"), discovered water-soluble polymer dyes that could very efficiently transfer their energy to traditional small molecule fluorochromes. In these multi-chromophore systems, called "polymer tandem dyes", the polymer dye would absorb light at its characteristic absorption wavelengths, and the small molecule fluorochrome, after receiving energy transfer from the polymer, would then emit light at its characteristic wavelength. This technological advance increased the combinations of excitation and emission wavelengths available for researchers to use, and took advantage of the multi-fold increase in brightness that polymer dyes provide. This innovation by the inventors has enabled scientists using flow cytometry to more reliably detect small cell populations within a sample, which would otherwise register only dimly in a flow cytometer, thus increasing the number of such populations that can be studied and the quality of the data that researchers could obtain.

21. On July 21, 2015, the United States Patent and Trademark Office issued the '799 patent, entitled "Methods and Compositions for Detection and Analysis of Polynucleotides Using Light Harvesting Multichromophores." The Regents owns by assignment the entire right, title, and interest in and to the '799 patent. A true and correct copy of the '799 patent is attached as Exhibit A.

22. The claims of the '799 patent are generally directed to a method of analyzing a sample using a system that combines a water-soluble polymer dye and a fluorochrome. When these two components are chemically bonded, they are

referred to as a polymer tandem dye. The polymer dye is capable of entering into an excited state, and the fluorochrome is capable of receiving energy from that excited state. The system is constructed such that the transfer of energy from the polymer to the fluorochrome results in at least a four-fold enhancement of emission from the fluorochrome.

23. On February 7, 2012, the United States Patent and Trademark Office issued the '673 patent, entitled "Aggregation Sensor and Solutions and Kits Comprising the Same." The Regents owns by assignment the entire right, title, and interest in and to the '673 patent. A true and correct copy of the '673 patent is attached as Exhibit B.

24. The claims of the '673 patent are generally directed to a chemical compound that combines a water-soluble polymer dye and a fluorochrome. The polymer dye is capable of entering into an excited state, and the fluorochrome is capable of receiving energy from that excited state. The polymer dye and the fluorochrome are chemically bonded to one another, and the polymer dye must contain at least three chromophores for every one fluorochrome attached to it.

25. On September 16, 2014, the United States Patent and Trademark Office issued the '113 patent, entitled "Methods and Compositions for Assaying a Sample for an Aggregant." The Regents owns by assignment the entire right, title, and interest in and to the '113 patent. A true and correct copy of the '113 patent is attached as Exhibit C.

26. The claims of the '113 patent are generally directed to a method of using the compound claimed in the '673 patent. The compound of the '673 patent is combined with a sample. Then the sample is subjected to a fluorescence measurement by illuminating the sample with light (such as from a laser) at a wavelength that the polymer dye can absorb, and detecting the light emitted from the fluorochrome.

27. After the initial development of water-soluble polymer dyes and

polymer tandem dyes at UCSB, the inventors of the Sirigen Patents made further improvements in polymer dyes and polymer tandem dyes.

28. On January 17, 2017, the United States Patent and Trademark Office issued the '008 patent, entitled "Reagents for Directed Biomarker Signal Amplification." Sirigen II owns by assignment the entire right, title, and interest in and to the '008 patent. A true and correct copy of the '008 patent is attached as Exhibit D.

29. The claims of the '008 patent are generally directed to water soluble polymer dyes and water-soluble polymer tandem dyes.

30. On September 22, 2015, the United States Patent and Trademark Office issued the '869 patent, entitled "Reagents for Directed Biomarker Signal Amplification." Sirigen II owns by assignment the entire right, title, and interest in and to the '869 patent. A true and correct copy of the '869 patent is attached as Exhibit E.

31. The claims of the '869 patent are generally directed to methods of using water soluble polymer dyes or water-soluble polymer tandem dyes that are conjugated to a sensor biomolecule. A sample is provided that is suspected of containing a target biomolecule. The sample is contacted with the sensor biomolecule, then the sample is illuminated with light and observed to see whether light is emitted from the polymer dye or polymer tandem dye.

32. On November 5, 2013, the United States Patent and Trademark Office issued the '303 patent, entitled "Reagents for Directed Biomarker Signal Amplification." Sirigen II owns by assignment the entire right, title, and interest in and to the '303 patent. A true and correct copy of the '303 patent is attached as Exhibit F.

33. The claims of the '303 patent are generally directed to water soluble polymer dyes and water-soluble polymer tandem dyes.

34. On June 4, 2013, the United States Patent and Trademark Office issued

the '613 patent, entitled "Reagents for Directed Biomarker Signal Amplification." Sirigen II owns by assignment the entire right, title, and interest in and to the '613 patent. A true and correct copy of the '613 patent is attached as Exhibit G.

35. The claims of the '303 patent are generally directed to water soluble polymer dyes and water-soluble polymer tandem dyes.

Becton Dickinson and the BD Horizon Brilliant™ Dyes

36. BD is a leading global medical technology company, founded in 1897, that develops, manufactures and sells medical devices, instrument systems and reagents. BD is dedicated to improving people's health throughout the world. BD serves healthcare institutions, life science researchers, clinical laboratories, pharmaceutical companies, and the general public.

37. BD Biosciences is a business unit within BD. BD Biosciences is a world leader in bringing innovative diagnostic and research tools to life scientists, clinical researchers, and laboratories. BD Biosciences focuses on advancing the science associated with cellular analysis. BD Biosciences products include fluorescence-activated cell sorters and analyzers, as well as reagent systems for those instruments that include antibodies bound to fluorescent dyes.

38. BD is the exclusive licensee of the '799, '673, and '113 patents owned by The Regents.

39. Sirigen is the exclusive licensee of the '008, '869, '303, and '613 patents owned by Sirigen II. Sirigen has, in turn, exclusively licensed those patents to BD in the field of cell-based flow cytometry immunoassays (antibody or protein based).

40. BD's current products include the BD Horizon Brilliant™ dyes, which are a series of polymer dyes and associated polymer tandem dyes for use in biological research. Building on the polymer dye technology developed at USCB and Sirigen, the BD Horizon Brilliant™ dyes are some of the brightest dyes in the industry, and allow researchers to use one laser to excite multiple colors of dye.

For example, the BD Horizon Brilliant™ UltraViolet (BUV) line of products includes five different fluorochromes (one polymer base dye and four polymer tandem dyes) that are all activated by a 355-nm wavelength ultraviolet laser but emit light at different wavelengths. Because they can be bound to antibodies having specificity for different proteins marking different cells, these products greatly increase the number of biomarkers and cell types that can be detected using a single laser. The BD Horizon Brilliant™ Violet (BV) product line includes eight different fluorochromes (three polymer base dyes and five polymer tandem dyes) that are all activated by a 405-nm wavelength violet laser and can be used to detect a variety of different biomarkers and cell types.

Defendants and their Infringing Super Bright Dyes

41. Since at least December 2016, Defendants have been selling research reagents that include a polymer dye, denominated Super Bright 436, and additional research reagents that include certain polymer tandem dyes based on Super Bright 436: Super Bright 600, Super Bright 645, Super Bright 702, and Super Bright 780. Defendants also sell a product denominated Super Bright Staining Buffer that, on information and belief, includes a version of Super Bright 436 that is attached to a quencher, i.e., a chemical subunit that substantially eliminates the fluorescence of Super Bright 436. The Staining Buffer is used to prevent interactions between or among the Super Bright tandem dyes. On information and belief, the Staining Buffer differs from the Super Bright tandem dyes only in having a quencher instead of a fluorophore attached to the base Super Bright 436 polymer. Defendants also use these reagents themselves, for example, in their internal research and development program, which includes performing flow cytometry using these reagents. By making, using, and selling products incorporating Super Bright 436, Super Bright 600, Super Bright 645, Super Bright 702, Super Bright 780, and the Super Bright Staining Buffer, and making and using similar products in their research and development (collectively the "Accused Products"), Defendants are

infringing the Asserted Patents.

42. Defendants conduct an ongoing internal research and development program in which they make and use a variety of high-brightness polymer dyes, polymer tandem dyes, and quenched polymers (the "Development Dyes"), including high-brightness violet polymer dyes and high brightness ultraviolet polymer dyes, as part of their product development process. For example, as a part of their product development process, Defendants perform flow cytometry using the Development Dyes. On information and belief, by making and using the Development Dyes, Defendants are infringing the Asserted Patents.

43. Defendants contract with a third party manufacturer for the chemical synthesis of the Accused Products and the Development Dyes. Their manufacturer also uses the Accused Products and the Development Dyes, for example, by testing the dyes in the manufacturer's own research and development program. Defendants are inducing the third party manufacturer to infringe the Asserted Patents by making and using the Accused Products and the Development Dyes.

44. Defendants' marketing materials blatantly promote the Accused Products as equivalent or superior alternatives to specific dyes in the BD Horizon Brilliant™ Violet line. Super Bright 600 is marketed, inter alia, as being "comparable in brightness to Brilliant Violet 605." Super Bright 645 is marketed, inter alia, as being "comparable, and sometimes superior in brightness to Brilliant Violet 650 . . . with less spill over into other violet channels." Super Bright 702 is marketed, inter alia, as being "similar in brightness to Brilliant Violet 711 . . . with reduced compensation and less spillover into the Brilliant Violet 786 channel." Super Bright 780 is marketed, inter alia, as being an "alternative to Brilliant Violet 786 or Brilliant Violet 785 conjugates" and as "provid[ing] increased resolution of positive and negative populations." Defendants' marketing materials also provide spectral and other direct comparisons between the Super Bright dyes and BD's Horizon Brilliant™ Violet line.

45. Accused Product Super Bright 436 is a water-soluble conjugated polymer dye. Super Bright 436 is a component of each of the other Accused Products. On information and belief, the accused Development Dyes include Super Bright 436 or water-soluble conjugated polymers similar to Super Bright 436. Each of the Accused Products other than Super Bright 436 also includes an additional fluorochrome or quencher. In those Accused Products, the polymer dye can transfer energy from its excited state to the fluorochrome or quencher. As explained above, the different fluorochromes provide fluorescence at different wavelengths. The polymer dye in the Accused Products has a conjugated, delocalized electronic structure.

46. On information and belief, the polymer dye in the Accused Products is chemically bonded to the fluorochrome. On information and belief, the polymer dye includes three chromophores for each fluorochrome bonded to it.

47. On information and belief, in Super Bright 600, Super Bright 645, Super Bright 702, and Super Bright 780, the energy transfer from the polymer dye to the fluorochrome provides a greater than four-fold increase in fluorescence emission from the signaling chromophore than can be achieved by direct excitation of the fluorochrome alone. On information and belief, the accused Development Dyes also provide a greater than four-fold increase in fluorescence emission.

48. In the instructions for Super Bright Dyes, Defendants direct users to contact a sample with the dye, illuminate the sample with a light source, and detect whether light is emitted from the sample.

49. On information and belief, Defendants manufacture the Accused Products in the United States, import the Accused Products into the United States, market the Accused Products in the United States, offer the Accused Products for sale in the United States, and/or sell the Accused Products in the United States.

50. Defendants have been aware of the UCSB patents since at least March 27, 2017, when those patents were listed by prosecution counsel for Affymetrix in

an Information Disclosure Statement ("IDS") filed in the patent office in connection with U.S. Patent Application No. 15/469,952.

51. Defendants have been aware of the Sirigen patents since at least the filing of this First Amended Complaint.

Count I: Infringement of U.S. Patent No. 9,085,799

52. Plaintiffs repeat and reallege the allegations set forth in paragraphs 1 through 51 above as though fully set forth herein.

53. The '799 patent has one independent claim, claim 1, which recites:

A method comprising:

(a) contacting a sample with a light harvesting multichromophore system, the system comprising:

i) a signaling chromophore; and

ii) a water-soluble conjugated polymer comprising a delocalized electronic structure, wherein the polymer can transfer energy from its excited state to the signaling chromophore to provide a greater than 4 fold increase in fluorescence emission from the signaling chromophore than can be achieved by direct excitation of the signaling chromophore in the absence of the polymer;

(b) applying a light source to the sample; and

(c) detecting whether light is emitted from the signaling chromophore.

54. Defendants have infringed, and continue to actively infringe, at least claims 1 and 3 of the '799 patent under 35 U.S.C. § 271(a) by using the Accused Products and the Development Dyes, for example in their internal research and development programs.

55. Defendants have induced, and continue to actively induce, infringement of at least claims 1 and 3 of the '799 patent under 35 U.S.C. § 271(b). By at least March 27, 2017, Defendants knew of the '799 patent, and that their continuing conduct and communications induce their manufacturer and their customers to use the Accused Products to directly infringe the '799 patent. For

instance, Defendants instruct, direct, and encourage customers of the Accused Products on the use of the Accused Products with the knowledge that such use infringes the '799 patent and intending that others perform the infringing activities. Defendants also cause their manufacturer to make and use the Accused Products and the Development Dyes in a manner that Defendants know infringes the '799 patent. On information and belief, such conduct by Defendants was intended to and actually resulted in direct infringement by their manufacturer and their customers, either literally or under the doctrine of equivalents.

56. Defendants have and continue to contributorily infringe at least claims 1 and 3 of the '799 patent under 35 U.S.C. § 271(c) by selling and/or offering for sale in the United States, and/or importing into the United States the Accused Products, a material part of the invention of the '799 patent, knowing that the Accused Products are especially made or adapted to infringe the '799 patent, and are not a staple article or commodity of commerce suitable for substantial non-infringing use. On information and belief, such conduct by Defendants was intended to, and actually resulted in, direct infringement by their customers, either literally or under the doctrine of equivalents.

57. Plaintiffs have suffered damages as a result of Defendants' direct and indirect infringement of the '799 patent and will continue to suffer damages as long as those infringing activities continue.

58. Plaintiffs have been and will continue to be irreparably harmed by Defendants' direct and indirect infringement of the '799 patent unless and until such infringement is enjoined by this Court.

Count II: Infringement of U.S. Patent No. 8,110,673

59. Plaintiffs repeat and reallege the allegations set forth in paragraphs 1 through 51 above as though fully set forth herein.

60. The '673 patent has one independent claim, claim 1, which recites:

An aggregation sensor soluble in a polar medium comprising:

(a) a conjugated polymer comprising

a plurality of first optically active units forming a conjugated system, having a first absorption wavelength at which the first optically active units absorbs light to form an excited state, and

a plurality of solubilizing functionalities; and

(b) one or more second optically active units that can receive energy from the excited state of the first optically active unit;

said aggregation sensor comprising at least three first optically active units per second optically active unit;

wherein the second optically active unit is grafted to the conjugated polymer.

61. Defendants have and continue to infringe at least claims 1-3, 5, 7-12, and 14-20 of the '673 patent under 35 U.S.C. § 271(a).

62. Defendants have induced, and continue to actively induce, infringement of at least claims 1-3, 5, 7-12, and 14-20 of the '673 patent under 35 U.S.C. § 271(b). By at least March 27, 2017, Defendants knew of the '673 patent, and that their continuing conduct and communications induce their manufacturer to infringe the '673 patent by making, using, and selling the Accused Products and the Development Dyes. On information and belief, such conduct by Defendants was intended to and actually resulted in direct infringement by their manufacturer and their customers, either literally or under the doctrine of equivalents.

63. Defendants have and continue to contributorily infringe at least claims 1-3, 5, 7-12, and 14-20 of the '673 patent under 35 U.S.C. § 271(c) by selling and/or offering for sale in the United States, and/or importing into the United States the Accused Products, a material part of the invention of the '673 patent, knowing that the Accused Products are especially made or adapted to infringe the '673 patent, and are not a staple article or commodity of commerce suitable for substantial non-infringing use. On information and belief, such conduct by

Defendants was intended to, and actually resulted in, direct infringement by their customers, either literally or under the doctrine of equivalents.

64. On information and belief, each of the Accused Products and the Development Dyes comprises a conjugated polymer comprising a plurality of first optically active units forming a conjugated system, having a first absorption wavelength at which the first optically active units absorb light to form an excited state, and a plurality of solubilizing functionalities.

65. On information and belief, each of the Accused Products and the Development Dyes comprises one or more second optically active units that can receive energy from the excited state of the first optically active unit.

66. On information and belief, each of the Accused Products and the Development Dyes comprises at least three first optically active units per second optically active unit.

67. On information and belief, in each of the Accused Products and the Development Dyes, the second optically active unit is grafted to the conjugated polymer.

68. Plaintiffs have suffered damages as a result of Defendants direct and indirect infringement of the ’673 patent and will continue to suffer damages as long as those infringing activities continue.

69. Plaintiffs have been and will continue to be irreparably harmed by Defendants’ direct and indirect infringement of the ’673 patent unless and until such infringement is enjoined by this Court.

Count III: Infringement of U.S. Patent No. 8,835,113

70. Plaintiffs repeat and reallege the allegations set forth in paragraphs 1 through 51 above as though fully set forth herein.

71. The ’113 patent has one independent claim, claim 1, which recites:

A method of assaying a sample for an aggregant, the method comprising:

(a) combining the sample with an aggregation sensor comprising

(i) a polymer comprising a plurality of first optically active units forming a conjugated system, having a first absorption wavelength at which the first optically active units absorb light to form an excited state that can emit light of a first emission wavelength, and a plurality of solubilizing functionalities; and

(ii) one or more second optically active units that can receive energy from the excited state of the first optically active unit;

wherein said aggregation sensor comprises at least three first optically active units per second optically active unit and the second optically active unit is grafted to the conjugated system;

(b) contacting the sample with light of the first absorption wavelength; and

(c) detecting the optical properties of the aggregation sensor to assay the sample for the aggregant.

72. Defendants have infringed, and continue to actively infringe, at least claims 1-5, 10, 22, and 25-27 of the ’113 patent under 35 U.S.C. § 271(a) by using the Accused Products and the Development Dyes, for example in their internal research and development programs.

73. Defendants have induced, and continue to actively induce infringement of at least claims 1-5, 10, 22, and 25-27 of the ’113 patent under 35 U.S.C. § 271(b). Defendants knew of the ’113 patent by at least March 27, 2017, and that their continuing conduct and communications induce their manufacturer and their customers to use the Accused Products to directly infringe the ’113 patent. For instance, Defendants instruct, direct, and encourage customers of the Accused Products on the use of the Accused Products with the knowledge that such use infringes the ’113 patent and intending that others perform the infringing activities. Defendants also cause their manufacturer to use the Accused Products and the Development Dyes in a manner that Defendants know infringes the ’113 patent. On information and belief, such conduct by Defendants was intended to and actually resulted in direct infringement by their manufacturer and their customers, either literally or under the doctrine of equivalents.

74. Defendants have and continue to contributorily infringe at least claims 1-5, 10, 22, and 25-27 of the '113 patent under 35 U.S.C. § 271(c) by selling and/or offering for sale in the United States, and/or importing into the United States, the Accused Products, a material part of the invention of the '113 patent, knowing that the Accused Products are especially made or adapted to infringe the '113 patent, and are not a staple article or commodity of commerce suitable for substantial non-infringing use. On information and belief, such conduct by Defendants was intended to, and actually resulted in, direct infringement by their customers, either literally or under the doctrine of equivalents.

75. On information and belief, each of the Accused Products and the Development Dyes comprises a conjugated polymer comprising a plurality of first optically active units forming a conjugated system, having a first absorption wavelength at which the first optically active units absorb light to form an excited state, and a plurality of solubilizing functionalities.

76. On information and belief, each of the Accused Products and the Development Dyes comprises one or more second optically active units that can receive energy from the excited state of the first optically active unit.

77. On information and belief, each of the Accused Products and the Development Dyes comprises at least three first optically active units per second optically active unit.

78. On information and belief, in each of the Accused Products and the Development Dyes, the second optically active unit is grafted to the conjugated polymer.

79. The instructions for the Accused Products direct their users to combine a sample with the dye, contact the sample with light of the first absorption wavelength, and detect the optical properties of the Accused Product to assay the sample for the aggregant. Defendants also cause their manufacturer to combine a sample with the dye, contact the sample with light of the first absorption

wavelength, and detect the optical properties of the Accused Product to assay the sample for the aggregant.

80. Plaintiffs have suffered damages as a result of Defendants' direct and indirect infringement of the '113 patent and will continue to suffer damages as long as those infringing activities continue.

81. Plaintiffs have been and will continue to be irreparably harmed by Defendants' direct and indirect infringement of the '113 patent unless and until such infringement is enjoined by this Court.

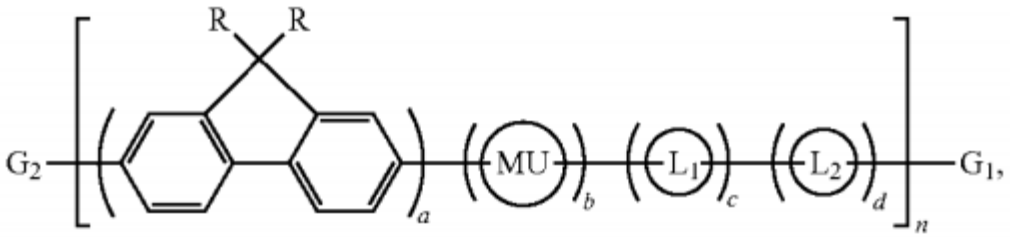
Count IV: Infringement of U.S. Patent No. 9,547,008

82. Plaintiffs repeat and reallege the allegations set forth in paragraphs 1 through 51 above as though fully set forth herein.

83. The '008 patent has one independent claim, claim 1, which recites:

A water soluble conjugated polymer having the structure of Formula (Ia):

(Ia)



wherein:

each R is independently a side group capable of imparting solubility in water;

MU is a polymer modifying unit or band gap modifying unit that is evenly or randomly distributed along the polymer main chain and is optionally substituted with one or more optionally substituted substituents selected from halogen, hydroxyl, C_1-C_{12}alkyl, C_2-C_{12} alkene, C_2-C_{12} alkyne, C_3-C_{12} cycloalkyl, C_1-C_{12}haloalkyl, C_1-C_{12} alkoxy, C_2-C_{18}(hetero)aryloxy, C_2-C_{18}(hetero)arylamino, $(CH_2)_{x'}(OCH_2CH_2)_{y'}OCH_3$ where each x′ is independently an integer from 0-20, y′ is independently an integer from 0 to 50, or a C_2-C_{18} (hetero)aryl group;

optional linkers L_1 and L_2 are each independently an aryl or a heteroaryl group evenly or randomly distributed along the polymer main chain and are

substituted with one or more pendant chains terminated with: i) a functional group selected from amine, carbamate, carboxylic acid, carboxylate, maleimide, activated esters, N-hydroxysuccinimidyl, hydrazines, hydrazide, hydrazones, azide, alkyne, aldehydes, thiols, and protected groups thereof for conjugation to a molecule or biomolecule; or ii) a conjugated organic dye or biomolecule;

G_1 and G_2 are each independently selected from hydrogen, halogen, alkyne, optionally substituted aryl, optionally substituted heteroaryl, halogen substituted aryl, boronic acid substituted aryl, boronic ester substituted aryl, boronic ester, boronic acid, optionally substituted fluorene and aryl or heteroaryl substituted with one or more pendant chains terminated with: i) a functional group selected from amine, carbamate, carboxylic acid, carboxylate, maleimide, activated esters, N-hydroxysuccinimidyl, hydrazines, hydrazids, hydrazones, azide, alkyne, aldehydes, thiols, and protected groups thereof for conjugation to a molecule or biomolecule; or ii) a conjugated organic dye or biomolecule;

wherein the polymer comprises at least 1 functional group selected from amine, carbamate, carboxylic acid, carboxylate, maleimide, activated esters, N-hydroxysuccinimidyl, hydrazines, hydrazids, hydrazones, azide, alkyne, aldehydes, and thiols within G_1, G_2, L_1 or L_2, or a conjugated organic dye or biomolecule;

n is an integer from 1 to about 10,000; and

a, b, c and d define the mol % of each unit within the structure which each can be evenly or randomly repeated and where a is a mol % from 10 to 100%, b is a mol % from 0 to 90%, and each c and d are mol % from 0 to 25%.

84. Defendants have infringed, and continue to actively infringe, either literally or under the doctrine of equivalents, at least claims 1-5, 7, 12-16, 18, 20, 21, 25, 27, 28, and 33-36 of the ’008 patent.

85. Defendants have induced, and continue to actively induce, infringement, of at least claims 1-5, 7, 12-16, 18, 20, 21, 25, 27, 28, and 33-36 of the ’008 patent. By at least the date of service of the Amended Complaint, Defendants knew of the ’008 patent, and that their continuing conduct and communications induce their manufacturer to infringe the ’008 patent by making, using, and selling the Accused Products and the Development Dyes. On information and belief, such conduct by Defendants was intended to and actually

resulted in direct infringement, either literally or under the doctrine of equivalents, by their manufacturer and their customers.

86. On information and belief, each of the Accused Products and the Development Dyes comprises a water-soluble conjugated polymer having a structure that meets the structure of Formula (Ia) recited in claim 1 of the '008 patent, either literally or under the doctrine of equivalents. To the extent the structure of the water soluble conjugated polymer in the Accused Products and/or the Development Dyes does not literally meet an element of Formula (Ia), that feature of the water soluble conjugated polymer is insubstantially different from the claim element, and performs substantially the same function in substantially the same way to yield substantially the same result.

87. Plaintiffs have suffered damages as a result of Defendants direct and indirect infringement of the '008 patent and will continue to suffer damages as long as those infringing activities continue.

88. Plaintiffs have been and will continue to be irreparably harmed by Defendants' direct and indirect infringement of the '008 patent unless and until such infringement is enjoined by this Court.

Count V: Infringement of U.S. Patent No. 9,139,869

89. Plaintiffs repeat and reallege the allegations set forth in paragraphs 1 through 51 above as though fully set forth herein.

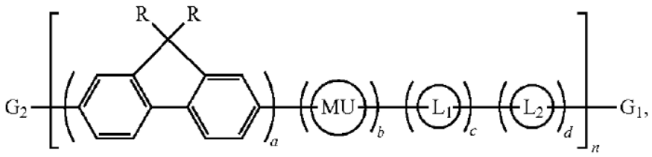
90. The '869 patent has two independent claims, claims 1 and 36.

91. Claim 1 of the '869 patent recites:

An assay method for detecting a target biomolecule in a sample comprising:

providing a sample that is suspected of containing a target biomolecule;

providing a conjugated polymer complex comprising sensor biomolecule conjugated to a water soluble conjugated polymer having the structure of Formula (Ia):



wherein:

each R is independently a side group capable of imparting solubility in water;

MU is a polymer modifying unit or band gap modifying unit that is evenly or randomly distributed along the polymer main chain and is optionally substituted with one or more optionally substituted substituents selected from halogen, hydroxyl, C_1-C_{12} alkyl, C_2-C_{12}alkene, C_2-C_{12} alkyne, C_3-C_{12} cycloalkyl, C_1-C_{12} haloalkyl, C_1-C_{12} alkoxy, C_2-C_{18} (hetero)aryloxy, C_2-C_{18} (hetero)arylamino, $(CH_2)_{x'}(OCH_2CH_2)_yOCH_3$ where each x′ is independently an integer from 0-20, y′ is independently an integer from 0 to 50, or a C_2-C_{18} (hetero)aryl group;

each optional linker L_1 and L_2 are aryl or hetroaryl groups evenly or randomly distributed along the polymer main chain and are substituted with one or more pendant chains terminated with a functional group selected from amine, carbamate, carboxylic acid, carboxylate, maleimide, activated esters, N-hydroxysuccinimidyl, hydrazines, hydrazids, hydrazones, azide, alkyne, aldehydes, thiols, and protected groups thereof for conjugation to another substrate, molecule or biomolecule;

G_1 and G_2 are each independently selected from hydrogen, halogen, alkyne, optionally substituted aryl, optionally substituted heteroaryl, halogen substituted aryl, boronic acid substituted aryl, boronic ester substituted aryl, boronic esters, boronic acids, optionally substituted fluorine and aryl or hetroaryl substituted with one or more pendant chains terminated with a functional group, molecule or biomolecule selected from amine, carbamate, carboxylic acid, carboxylate, maleimide, activated esters, N-hydroxysuccinimidyl, hydrazines, hydrazids, hydrazones, azide, alkyne, aldehydes, thiols, and protected groups thereof for conjugation to another substrate, molecule or biomolecule;

wherein the polymer comprises at least 1 functional group selected from amine, carbamate, carboxylic acid, carboxylate, maleimide, activated esters, N-hydroxysuccinimidyl, hydrazines, hydrazids, hydrazones, azide, alkyne, aldehydes, and thiols within G_1, G_2, L_1 or L_2 that allows, for functional conjugation to another molecule, substrate or biomolecule;

n is an integer from 1 to about 10,000; and

a, b, c and d define the mol % of each unit within the structure which each can be evenly or randomly repeated and where a is a mol % from 10 to 100%, b is a mol % from 0 to 90%, and each c and d are mol % from 0 to 25%;

wherein the sensor biomolecule is capable of interacting with the target

biomolecule or a target-associated biomolecule and wherein the polymer is optionally conjugated to a signaling chromophore;

contacting the sample with the sensor biomolecule and the conjugated polymer in a solution under conditions in which the sensor biomolecule can bind to the target biomolecule or a target-associated biomolecule if present;

applying a light source to the sample that can excite the polymer; and detecting whether light is emitted from the conjugated polymer complex.

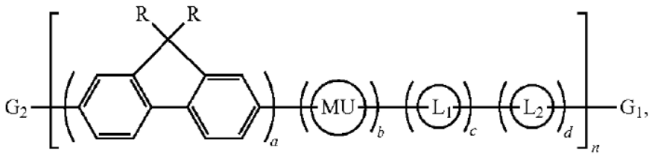
92. Claim 36 recites:

A flow cytometry system comprising:

a flow cytometer;

a sample that is suspected of containing a target biomolecule;

a sensor protein conjugated to a water soluble conjugated polymer having the structure of Formula (Ia):



wherein:

each R is independently a non-ionic side group capable of imparting solubility in water;

MU is a polymer modifying unit or band gap modifying unit that is evenly or randomly distributed along the polymer main chain and is optionally substituted with one or more optionally substituted substituents selected from halogen, hydroxyl, C_1-C_{12} alkyl, C_2-C_{12}alkene, C_2-C_{12} alkyne, C_3-C_{12} cycloalkyl, C_1-C_{12} haloalkyl, C_1-C_{12}alkoxy, C_2-C_{18} (hetero)aryloxy, C_2-C_{18} (hetero)arylamino, $(CH_2)_{x'}(OCH_2CH_2)_{y'}OCH_3$ where each x′ is independently an integer from 0-20, y′ is independently an integer from 0 to 50, or a C_2-C_{18}(hetero)aryl group;

each optional linker L_1 and L_2 are aryl or hetroaryl groups evenly or randomly distributed along the polymer main chain and are substituted with one or more pendant chains terminated with a functional group selected from amine, carbamate, carboxylic acid, carboxylate, maleimide, activated esters, N-hydroxysuccinimidyl, hydrazines, hydrazids, hydrazones, azide, alkyne, aldehydes, thiols, and protected groups thereof for conjugation to another substrate, molecule or biomolecule;

G_1 and G_2 are each independently selected from hydrogen, halogen, alkyne, optionally substituted aryl, optionally substituted heteroaryl, halogen substituted aryl, boronic acid substituted aryl, boronic ester substituted aryl, boronic esters,

boronic acids, optionally substituted fluorine and aryl or hetroaryl substituted with one or more pendant chains terminated with a functional group, molecule or biomolecule selected from amine, carbamate, carboxylic acid, carboxylate, maleimide, activated esters, N-hydroxysuccinimidyl, hydrazines, hydrazids, hydrazones, azide, alkyne, aldehydes, thiols, and protected groups thereof for conjugation to another substrate, molecule or biomolecule;

wherein the polymer comprises at least 1 functional group selected from amine, carbamate, carboxylic acid, carboxylate, maleimide, activated esters, N-hydroxysuccinimidyl, hydrazines, hydrazide, hydrazones, azide, alkyne, aldehydes, and thiols within G_1, G_2, L_1 or L_2 that allows, for functional conjugation to another molecule, substrate or biomolecule;

n is an integer from 1 to about 10,000; and

a, b, c and d define the mol % of each unit within the structure which each can be evenly or randomly repeated and where a is a mol % from 10 to 100%, b is a mol % from 0 to 90%, and each c and d are mol % from 0 to 25%;

wherein said polymer is optionally conjugated at least one signaling chromophore and

wherein the sensor protein is capable of interacting with the target biomolecule or a target-associated biomolecule.

93. Defendants have infringed, and continue to actively infringe, either literally or under the doctrine of equivalents, at least claims 1-4, 7, 11, 12-18, 23, 24, 26, 28-31, and 36 of the ’869 patent by using the Accused Products and the Development Dyes, for example in their internal research and development programs.

94. Defendants have induced and continue to actively induce infringement of at least claims 1-4, 7, 11, 12-18, 23, 24, 26, 28-31, and 36 of the ’869 patent. Defendants knew of the ’869 patent by at least the date of service of the Amended Complaint, and that their continuing conduct and communications induce customers of the Accused Products to directly infringe the ’869 patent. For instance, Defendants instruct, direct, and encourage customers of the Accused Products on the use of the Accused Products with the knowledge that such use infringes the ’869 patent and intending that others perform the infringing activities.

Defendants also cause their manufacturer to make and use the Accused Products and the Development Dyes in a way that Defendants know infringes the '869 patent. On information and belief, such conduct by Defendants was intended to and actually resulted in direct infringement, either literally or under the doctrine of equivalents, by their manufacturer and their customers.

95. Defendants have and continue to contributorily infringe at least claims 1-4, 7, 11, 12-18, 23, 24, 26, 28-31, and 36 of the '869 patent by selling and/or offering for sale in the United States, and/or importing into the United States, the Accused Products, a material part of the invention of the '869 patent, knowing that the Accused Products are especially made or adapted to infringe the '869 patent, and are not a staple article or commodity of commerce suitable for substantial non-infringing use. On information and belief, such conduct by Defendants was intended to, and actually resulted in, direct infringement, either literally or under the doctrine of equivalents, by their customers.

96. On information and belief, each of the Accused Products and the Development Dyes comprises a conjugated polymer complex comprising a sensor biomolecule conjugated to a water soluble conjugated polymer that meets the structure of Formula (Ia) recited in claims 1 and 36 of the '869 patent, either literally or under the doctrine of equivalents. To the extent the structure of the water soluble conjugated polymer in the Accused Products and/or the Development Dyes does not literally meet an element of Formula (Ia), that feature of the water soluble conjugated polymer that is insubstantially different from the claim element, and performs substantially the same function in substantially the same way to yield substantially the same result.

97. The instructions for the Accused Products direct their users to contact a sample suspected of containing a target molecule with the conjugated polymer complex under conditions in which the sensor biomolecule can bind to the target biomolecule or a target-associated biomolecule if present; then to apply a light

source to the sample that can excite the polymer and detect whether light is emitted from the conjugated polymer complex, as recited in claim 1 of the '869 patent.

98. The instructions for the Accused Products direct their users to use the Accused products as described in a flow cytometer, thus causing the creation of a flow cytometry system comprising a flow cytometer, a sample that is suspected of containing a target biomolecule, and the conjugated polymer complex, as recited in claim 36 of the '869 patent.

99. Plaintiffs have suffered damages as a result of Defendants' direct and indirect infringement of the '869 patent and will continue to suffer damages as long as those infringing activities continue.

100. Plaintiffs have been and will continue to be irreparably harmed by Defendants' direct and indirect infringement of the '869 patent unless and until such infringement is enjoined by this Court.

Count VI: Infringement of U.S. Patent No. 8,575,303

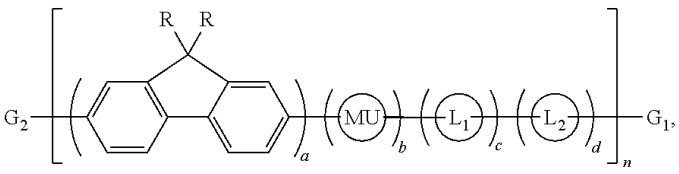
101. Plaintiffs repeat and reallege the allegations set forth in paragraphs 1 through 51 above as though fully set forth herein.

102. The '303 patent has three independent claims, claims 1, 27, and 33.

103. Claim 1 of the '303 patent, for example, recites:

A water soluble conjugated polymer having the structure of Formula (Ia):

(Ia)



wherein:

each R is independently a non-ionic side group capable of imparting solubility in water in excess of 10 mg/mL;

MU is a polymer modifying unit or band gap modifying unit that is evenly or randomly distributed along the polymer main chain and is optionally substituted with one or more optionally substituted substituents selected from halogen, hydroxyl, C_1-C_{12} alkyl, C_2-C_{12}alkene, C_2-C_{12} alkyne, C_3-C_{12} cycloalkyl, C_1-C_{12} haloalkyl, C_1-C_{12} alkoxy, C_2-C_{18} (hetero)aryloxy, C_2-C_{18} (hetero)arylamino, $(CH_2)_{x'}(OCH_2CH_2)_{y'}OCH_3$ where each x′ is independently an integer from 0-20, y′ is

independently an integer from 0 to 50, or a C_2-C_{18} (hetero)aryl group;

each optional linker L_1 and L_2 are aryl or heteroaryl groups evenly or randomly distributed along the polymer main chain and are substituted with one or more pendant chains terminated with a functional group selected from amine, carbamate, carboxylic acid, carboxylate, maleimide, activated esters, N-hydroxysuccinimidyl, hydrazines, hydrazids, hydrazones, azide, alkyne, aldehydes, thiols, and protected groups thereof for conjugation to another substrate, molecule or biomolecule;

G_1 and G_2 are each independently selected from hydrogen, halogen, alkyne, optionally substituted aryl, optionally substituted heteroaryl, halogen substituted aryl, boronic acid substituted aryl, boronic ester substituted aryl, boronic esters, boronic acids, optionally substituted fluorine and aryl or heteroaryl substituted with one or more pendant chains terminated with a functional group, molecule or biomolecule selected from amine, carbamate, carboxylic acid, carboxylate, maleimide, activated esters, N-hydroxysuccinimidyl, hydrazines, hydrazids, hydrazones, azide, alkyne, aldehydes, thiols, and protected groups thereof for conjugation to another substrate, molecule or biomolecule;

wherein the polymer comprises at least 1 functional group selected from amine, carbamate, carboxylic acid, carboxylate, maleimide, activated esters, N-hydroxysuccinimidyl, hydrazines, hydrazids, hydrazones, azide, alkyne, aldehydes, and thiols within G_1, G_2, L_1 or L_2 that allows, for functional conjugation to another molecule, substrate or biomolecule;

n is an integer from 1 to about 10,000; and

a, b, c and d define the mol % of each unit within the structure which each can be evenly or randomly repeated and where a is a mol % from 10 to 100%, b is a mol % from 0 to 90%, and each c and d are mol % from 0 to 25%.

104. Defendants have infringed, and continue to actively infringe, either literally or under the doctrine of equivalents, at least claims 1-9, 12, 14-23, 25- 27, 30-37, and 40 of the ’303 patent.

105. Defendants have induced, and continue to actively induce, infringement of at least claims 1-9, 12, 14-23, 25- 27, 30-37, and 40 of the ’303 patent. By at least the date of service of the Amended Complaint, Defendants knew of the ’303 patent, and that their continuing conduct and communications induce their manufacturer to infringe the ’303 patent by making, using, and selling the Accused Products and the Development Dyes. On information and belief, such

conduct by Defendants was intended to and actually resulted in direct infringement, either literally or under the doctrine of equivalents, by their manufacturer and their customers.

106. On information and belief, each of the Accused Products comprises a water-soluble conjugated polymer having the structure of Formula (Ia) recited in claim 1 of the '303 patent, either literally or under the doctrine of equivalents. To the extent the structure of the water soluble conjugated polymer in the Accused Products and/or the Development Dyes does not literally meet an element of Formula (Ia), that feature of the water soluble conjugated polymer that is insubstantially different from the claim element, and performs substantially the same function in substantially the same way to yield substantially the same result.

107. Plaintiffs have suffered damages as a result of Defendants direct and indirect infringement of the '303 patent and will continue to suffer damages as long as those infringing activities continue.

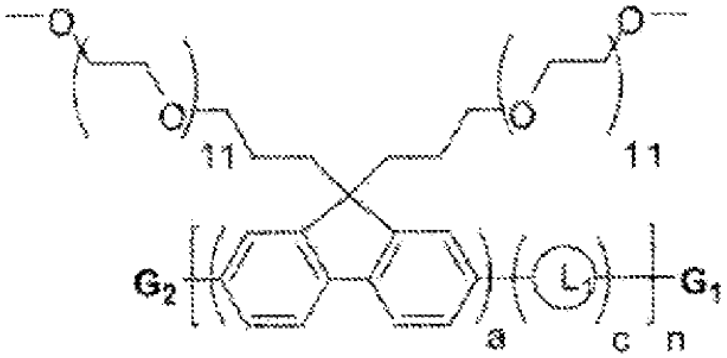
108. Plaintiffs have been and will continue to be irreparably harmed by Defendants' direct and indirect infringement of the '303 patent unless and until such infringement is enjoined by this Court.

Count VII: Infringement of U.S. Patent No. 8,455,613

109. Plaintiffs repeat and reallege the allegations set forth in paragraphs 1 through 51 above as though fully set forth herein.

110. The '613 patent has one independent claim, claim 1, which recites:

A water soluble conjugated polymer having the structure of Formula (Ia):

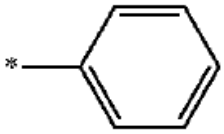


wherein:

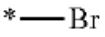
G_1 and G_2 are each independently selected from the group consisting of 1-9 having the structures:

1

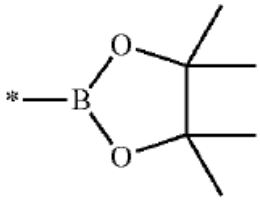
2



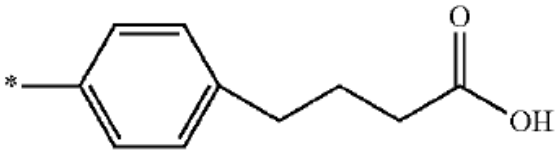
3



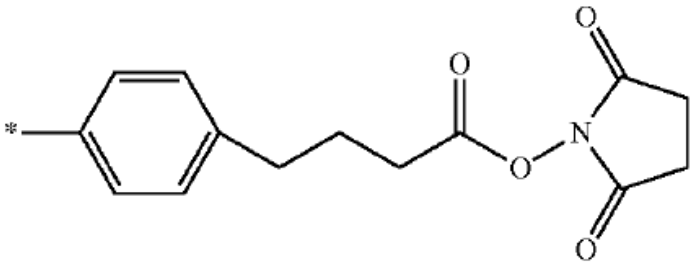
4



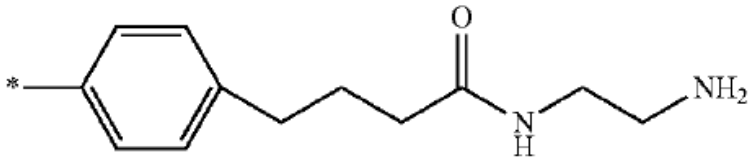
5



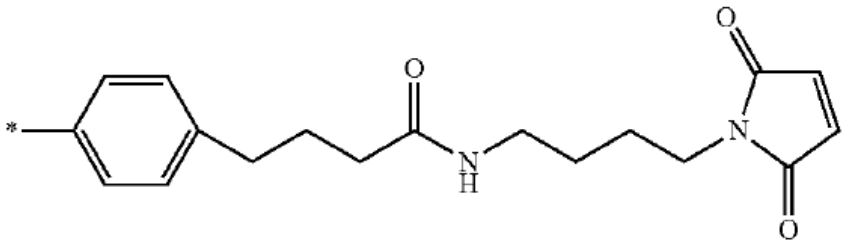
6



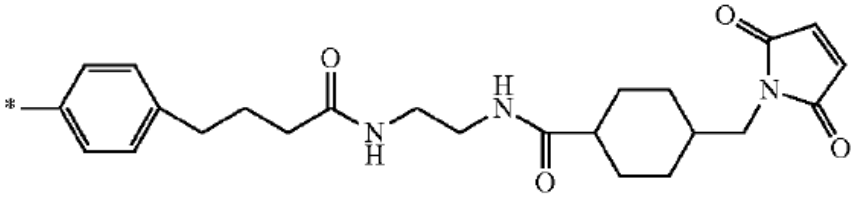
7



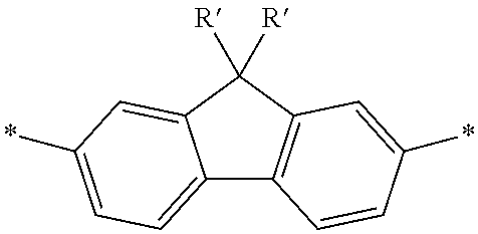
8



9



linker L_1 is



and is evenly or randomly distributed along the polymer main chain, wherein each R′ is independently a halogen, C_1-C_{12} alkyl, or (C_1-C_{12}alkyl)NH_2;

and n is an integer from 1 to about 10,000; and

a and c define the mol % of each unit within the structure which each can be evenly or randomly repeated and where a is a mol % from about 75 to about 99% and c is mol % from about 1 to about 25%.

111. Defendants have infringed, and continue to actively infringe, either literally or under the doctrine of equivalents, at least claims 1-13 of the ’613 patent.

112. Defendants have induced, and continue to actively induce, infringement of at least claims 1-13 of the ’613 patent. By at least the date of service of the Amended Complaint, Defendants knew of the ’613 patent, and that their continuing conduct and communications induce their manufacturer to infringe the ’613 patent by making, using, and selling the Accused Products and the Development Dyes. On information and belief, such conduct by Defendants was intended to and actually resulted in direct infringement, either literally or under the

doctrine of equivalents, by their manufacturer and their customers.

113. On information and belief, each of the Accused Products includes a water-soluble conjugated polymer having a structure that meets the structure of Formula (Ia) recited in claim 1 of the '613 patent, either literally or under the doctrine of equivalents. To the extent the structure of the water soluble conjugated polymer in the Accused Products and/or the Development Dyes does not literally meet an element of Formula (Ia), that feature of the water soluble conjugated polymer that is insubstantially different from the claim element, and performs substantially the same function in substantially the same way to yield substantially the same result.

114. Plaintiffs have suffered damages as a result of Defendants direct and indirect infringement of the '613 patent and will continue to suffer damages as long as those infringing activities continue.

115. Plaintiffs have been and will continue to be irreparably harmed by Defendants' direct and indirect infringement of the '613 patent unless and until such infringement is enjoined by this Court.

JURY DEMAND

116. Plaintiffs demand a jury trial in this matter.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs respectfully request that the Court:

A. Enter judgment that Defendants have infringed the '799, '673,'113, '008, '869, '303, and '613 patents;

B. Enter a preliminary injunction enjoining Defendants, their officers, directors, servants, managers, employees, agents, attorneys, successors and assignees, and all persons in active concert or participation with any of them, from further acts of infringement of the '799 patent, under 35 U.S.C. § 283;

C. Enter a permanent injunction enjoining Defendants, their officers, directors, servants, managers, employees, agents, attorneys, successors and

assignees, and all persons in active concert or participation with any of them, from further acts of infringement of the '799, '673,'113, '008, '869, '303, and '613 patents, under 35 U.S.C. § 283;

D. Award damages adequate to compensate Plaintiffs for Defendants' infringement together with pre-judgment and post-judgment interest and costs, under 35 U.S.C. § 284;

E. Enter judgment that this case is exceptional and award Plaintiffs their reasonable attorneys' fees, costs, and expenses, under 35 U.S.C. § 285; and

F. Award such other and further relief as this Court may deem just and proper.

Dated: February 9, 2018

Respectfully submitted,

By */s/ Jesse Hindman*

Attorney for Plaintiffs
Email: jesse@hindmanapc.com