



5. MatTek Corporation is a Massachusetts corporation with its principal place of business located at 200 Homer Avenue, Ashland, MA 01721.

6. Visikol, Inc. is a Delaware corporation with its principal place of business located at 53 Frontage Road, Suite 120, Shelbourne Building, Hampton, NJ 08827, USA.

7. Defendant Organovo, Inc. is a Delaware corporation with its principal place of business located at 440 Stevens Avenue, Suite 200 Solana Beach, CA 92075.

### **JURISDICTION AND VENUE**

8. This action arises under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, and the Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202. Subject matter jurisdiction is based upon 28 U.S.C. §§ 1331 and 1338(a).

9. This Court has general and specific jurisdiction over Organovo at least because Organovo is at home in the State of Delaware, where it is incorporated.

10. Venue is proper in this District under 28 U.S.C. § 1391 at least because Organovo resides in this judicial District. Organovo is incorporated in the State of Delaware.

### **BACKGROUND**

11. Founded in 2016, Cellink is the world leading bioconvergence company providing innovative and cutting-edge technologies, products, and services for our customers to create, understand and master biology. Cellink is the frontrunner in the evolving life science universe where it together with its customers develop game-changing solutions by combining biology and technology to create the future of medicine.

12. As discussed in further detail below, Organovo has asserted that Cellink must take licenses to certain patents that allegedly cover certain Cellink bioprinting products. Without such licenses, Organovo alleges that Cellink does not have freedom to operate.

**THE PATENTS-IN-SUIT**

13. The '952 patent states on its cover that it was issued on October 6, 2015 to named inventors Keith Murphy of Los Angeles, CA; Scott Dorfman of San Diego, CA; Nathan Smith of Ferntree Gully, AU; Larry Bauwens of Lilydale, AU; Ian Sohn of Glen Iris, AU; Tim McDonald of Mount Waverly, AU; Chris Leigh-Lancaster of Murrumbeena, AU; and Richard Jin Law of Newbury Park, CA. The '952 patent also states that the initial assignee was Organovo, Inc. of San Diego, CA. On information and belief, Organovo is the owner by assignment of the '952 patent. A true and correct copy of the '952 patent is attached hereto as Exhibit 1.

14. The '369 patent states on its cover that it was issued on January 2, 2018 to named inventors Keith Murphy of Palos Verdes Estates, CA; Scott Dorfman of Baltimore, MD; Nathan Smith of Ferntree Gully, AU; Larry Bauwens of Lilydale, AU; Ian Sohn of Glen Iris, AU; Tim McDonald of Mount Waverly, AU; Chris Leigh-Lancaster of Murrumbeena, AU; and Richard Jin Law of Stamford, CT. The '369 patent also states that the initial assignee was Organovo, Inc. of San Diego, CA. On information and belief, Organovo is the owner by assignment of the '369 patent. A true and correct copy of the '369 patent is attached hereto as Exhibit 2.

15. The '880 patent states on its cover that it was issued on January 13, 2015 to named inventors Keith Murphy of Palos Verdes Estates, CA; Scott Dorfman of San Diego, CA; Nathan Smith of Ferntree Gully, AU; Larry Bauwens of Lilydale, AU; Ian Sohn of Glen Iris, AU; Tim McDonald of Mount Waverly, AU; Chris Leigh-Lancaster of Murrumbeena, AU; and Richard Jin Law of Newbury Park, CA. The '880 patent also states that the initial assignee was Organovo, Inc. of San Diego, CA. On information and belief, Organovo is the owner by assignment of the '880 patent. A true and correct copy of the '880 patent is attached hereto as Exhibit 3.

16. The '339 patent states on its cover that it was issued on January 5, 2016 to named inventors Keith Murphy of Los Angeles, CA; Scott Dorfman of Baltimore, MD; Nathan Smith of Ferntree Gully, AU; Larry Bauwens of Lilydale, AU; Ian Sohn of Glen Iris, AU; Tim McDonald of Mount Waverly, AU; Chris Leigh-Lancaster of Murrumbena, AU; and Richard Jin Law of Stamford, CT. The '339 patent also states that the initial assignee was Organovo, Inc. of San Diego, CA. On information and belief, Organovo is the owner by assignment of the '339 patent. A true and correct copy of the '339 patent is attached hereto as Exhibit 4.

17. The '654 patent states on its cover that it was issued on May 30, 2006 to named inventors Thomas Boland of Suwanee, GA; William Crisp Wilson, Jr. of Easley, SC; and Tao Xu of Clemson, SC. The '654 patent also states that the initial assignee was Clemson University of Clemson, SC. [REDACTED]

[REDACTED] A true and correct copy of the '654 patent is attached hereto as Exhibit 5.

18. The '116 patent states on its cover that it was issued on September 5, 2017 to named inventors Gabor Forgacs of Potsdam, NY; Karoly Jakab of Columbia, MO; Adrian Neagu of Columbia, MO; and Vladimir Mironov of Mount Pleasant, SC. The '116 patent also states that the initial assignee was The Curators of the University of Missouri of Columbia, MO; and MUSC Foundation for Research Development of Charleston, SC. [REDACTED]

[REDACTED]. A true and correct copy of the '116 patent is attached hereto as Exhibit 6.

19. The '043 patent states on its cover that it was issued on April 19, 2016 to named inventors Keith Murphy of Palos Verdes Estates, CA; Stephen Pentoney, Jr. of Chino Hills, CA; Frank Lin of San Diego, CA; Vivian Gorgen of San Diego, CA; Clay Platt of Lake Forest, CA; Harry Scott Rapoport of San Diego, CA; Samir Damle of North Tustin, CA; Vaidehi Joshi of San Deigo, CA; and Sharon C. Presnell of Poway, CA. The '043 patent also states that the initial assignee was Organovo, Inc. of San Diego, CA. owner by assignment of the '043 patent. A true and correct copy of the '043 patent is attached hereto as Exhibit 7.

**DISPUTE BETWEEN CELLINK AND**  
**ORGANOVO CONCERNING THE PATENTS-IN-SUIT**

20. Organovo, by its general counsel, sent a letter to Cellink on March 19, 2019 calling Cellink's attention to the '654 patent, the '116 patent, and the '369 patent, asserting that "these patents cover the sale and use of the bioprinting technology Cellink is currently marketing, including the Bio X bioprinter [the Accused Products]." A true and correct copy of the March 19, 2019 letter is attached hereto as Exhibit 8.

21. The parties subsequently engaged in discussions regarding the '654 patent, '116 patent and the '369 patent in relation to the Accused Products. During a teleconference in April 2019, Organovo asserted that its patents covered the Accused Products, but Cellink disputed this allegation. There was no further contact between the parties after Organovo withdrew from discussions in March 2020 following a change in management at Organovo.

22. On March 22, 2021, Cellink reached out to Organovo in good faith to reinstate negotiations with Organovo regarding the '654 patent, '116 patent and the '369 patent in relation to the Accused Products. A true and correct copy of email communications between the parties between March 22, 2021 and April 29, 2021 is attached hereto as Exhibit 9.

23. On March 30, 2021, Cellink provided a [REDACTED]

[REDACTED]

[REDACTED] A true and correct copy of the March 30, 2021 [REDACTED]  
[REDACTED] is attached hereto as Exhibit 10.

24. In a letter dated April 7, 2021, Organovo stated that it owns a patent portfolio in the bioprinter space which includes over 32 issued US patents and 10 pending US applications, and over 78 granted patents outside of the US. Organovo indicated that Cellink was infringing the '654 patent, the '116 patent, the '369 patent, and its whole bioprinter space patent portfolio when it indicated that Organovo could “agree to a flat license fee to address any past sales of such products or services” but would expect “paid running royalties for future sales.” A true and correct copy of Organovo’s April 7, 2021 response is attached hereto as Exhibit 11.

25. Between April 16 and May 1, 2021, the parties engaged in negotiations over an NDA to protect the parties’ respective confidential information, as reflected in Exhibit 9. The parties executed the NDA on or around May 1, 2021. A true and correct copy of the executed NDA is attached hereto as Exhibit 12.

26. [REDACTED], Organovo sent a [REDACTED] to Cellink, reaffirming its position on infringement, by requesting [REDACTED]

[REDACTED]

[REDACTED]. A true and correct copy of [REDACTED]  
[REDACTED] is attached hereto as Exhibit 13.

27. On [REDACTED], Cellink responded with a [REDACTED] to Organovo, proposing [REDACTED] A true and correct copy of the [REDACTED]  
[REDACTED] attached hereto as Exhibit 14.

28. On [REDACTED], Organovo sent a [REDACTED] to Cellink, reaffirming its position on infringement by requesting [REDACTED]. A true and correct copy of [REDACTED] is attached hereto as Exhibit 15.

29. On [REDACTED] Cellink sent [REDACTED] to Organovo proposing [REDACTED]. A true and correct copy of [REDACTED] is attached hereto as Exhibit 16.

30. [REDACTED] for Cellink informed Organovo that it intended to file petitions for inter partes review [REDACTED]. A true and correct copy of the [REDACTED] letter is attached hereto as Exhibit 17. Organovo [REDACTED] Cellink's [REDACTED], [REDACTED]. A true and correct copy of email correspondence between the parties [REDACTED] is attached hereto as Exhibit 18.

31. Despite its efforts to reach a business solution with Organovo, Cellink has steadfastly maintained that it does not infringe any claim of the Patents-in-Suit.

32. Accordingly, an actual and justiciable controversy exists between Cellink and Organovo concerning whether Cellink infringes one or more claims of any of the Patents-in-Suit. Cellink now seeks a declaratory judgment that Cellink does not infringe the claims of the Patents-in-Suit.

**CLAIMS FOR RELIEF**

**COUNT ONE**

**DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE '952 PATENT**

33. This is a claim for declaratory judgment of non-infringement of the '952 patent. The allegations of the foregoing paragraphs above are repeated as though fully set forth herein.

34. Cellink is not infringing and has not infringed, directly or indirectly, literally or under the doctrine of equivalents, willfully or otherwise, any claim of the '952 patent.

35. As a result of the acts described in the preceding paragraphs, there exists a controversy of sufficient immediacy and reality to warrant the issuance of a declaratory judgment.

36. The '952 patent has one independent claim. Independent claim 1 recites:

1. A bioprinter comprising:

- a) one or more printer heads, wherein each printer head comprises a means for receiving and holding at least one cartridge, and wherein each cartridge comprises a deposition orifice and a bio-ink, the bio-ink comprising a solid or semi-solid composition comprising living cells;
- b) a means for dispensing the bio-ink of a selected cartridge by application of pressure to extrude the bio-ink of the selected cartridge through the deposition orifice;
- c) a means for determining a position of the selected cartridge in space; and
- d) a programmable computer processor for regulating the dispensing of the bio-ink communicatively coupled to the means for determining a position of the selected cartridge and the means for dispensing the bio-ink.



37. None of Cellink's Accused Products include every claimed feature of independent claim 1 in the '952 patent. Cellink's Accused Products do not include, among other things, the claimed "programmable computer processor for regulating the dispensing of the bio-ink communicatively coupled to the means for determining a position of the selected cartridge and the means for dispensing the bio-ink."

38. For at least these reasons, Cellink has not infringed and does not infringe any claim of the '952 patent.

39. A judicial declaration is necessary and appropriate so that Cellink may ascertain its rights regarding the '952 patent.

## **COUNT TWO**

### **DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE '369 PATENT**

40. This is a claim for declaratory judgment of non-infringement of the '369 patent. The allegations of foregoing paragraphs above are repeated as though fully set forth herein.

41. Cellink is not infringing and has not infringed, directly or indirectly, literally or under the doctrine of equivalents, willfully or otherwise, any claim of the '369 patent.

42. As a result of the acts described in the preceding paragraphs, there exists a controversy of sufficient immediacy and reality to warrant the issuance of a declaratory judgment.

43. The '369 patent has two independent claims. Independent claim 1 recites:
1. A method of printing a three-dimensional (3D) structure, the method comprising:
    - (a) providing a 3D printer, the printer comprising:
      - i. one or more printer heads, wherein a printer head comprises a means for receiving and holding at least one cartridge, wherein the cartridge comprises at least one deposition

orifice and contents comprising a bio-ink, wherein the bio-ink comprises cell solutions, cells suspensions, or cell concentrations;

ii. a means for dispensing the contents of at least one cartridge;

iii. a receiving surface for receiving a first layer of the materials dispensed from the at least one cartridge;

iv. a programmable computer processor communicatively connected to the means for dispensing, the programmable computer processor for positioning the one or more printer heads in three dimensions and regulating the dispensing of the contents of the at least one cartridge; and

v. a means for calibrating the position of the at least one cartridge or the at least one deposition orifice;

(b) providing the materials to be dispensed;

(c) encoding the printer with a 3D structure to be printed, wherein the 3D structure is a tissue construct;

(d) dispensing from the deposition orifice the materials to be dispensed, wherein the materials to be dispensed comprise cell solutions, cells suspensions, or cell concentrations, wherein the dispensing is by extrusion;

(e) depositing a first layer of the dispensed materials on the receiving surface; and

(f) repeating the depositing step by depositing subsequent dispensed material on the first and any subsequent layers of deposited material, thereby depositing layer upon layer of dispensed materials in a geometric arrangement according to the 3D structure.

44. Independent claim 4 includes similar features to independent claim 1.

45. None of Cellink's Accused Products perform every claimed feature of any independent claim of the '369 patent. Cellink's Accused Products do not provide, among other things, the claimed limitation (a)(iv) of claim 1, "a programmable computer processor communicatively connected to the means for dispensing, the programmable computer processor for positioning the one or more printer heads in three dimensions and regulating the dispensing of the contents of the at least one cartridge."

46. For at least these reasons, Cellink has not infringed and does not infringe any claim of the '369 patent.

47. A judicial declaration is necessary and appropriate so that Cellink may ascertain its rights regarding the '369 patent.

### **COUNT THREE**

#### **DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE '880 PATENT**

48. This is a claim for declaratory judgment of non-infringement of the '880 patent. The allegations of the foregoing paragraphs above are repeated as though fully set forth herein.

49. Cellink is not infringing and has not infringed, directly or indirectly, literally or under the doctrine of equivalents, willfully or otherwise, any claim of the '880 patent.

50. As a result of the acts described in the preceding paragraphs, there exists a controversy of sufficient immediacy and reality to warrant the issuance of a declaratory judgment.

51. The '880 patent has one independent claim. Independent claim 1 recites:

1. A three-dimensional bioprinter comprising:
  - a. one or more printer heads, wherein a printer head comprises a means for receiving and holding at least one cartridge, wherein a cartridge comprises at least one deposition

orifice and contents comprising a bio-ink, wherein the bio-ink comprises solid or semi-solid aggregates of living cells;

b. a means for calibrating a position in space of the at least one cartridge or the at least one deposition orifice utilizing a laser and a laser detector;

c. a means for extruding the contents of the at least one cartridge by application of pressure, utilizing a piston;

d. a receiving surface for receiving the extruded contents of the at least one cartridge; and

e. a programmable computer processor communicatively connected to the means for calibrating and the means for extruding, the programmable computer processor for positioning the one or more printer heads in three dimensions and regulating the extrusion of the contents of the at least one cartridge.

52. None of Cellink's Accused Products include every claimed feature of independent claim 1. Cellink's Accused Products do not include, among other things, the claimed "means for calibrating a position in space of the at least one cartridge or the at least one deposition orifice utilizing a laser and a laser detector."

53. For at least these reasons, Cellink has not infringed and does not infringe any claim of the '880 patent.

54. A judicial declaration is necessary and appropriate so that Cellink may ascertain its rights regarding the '880 patent.

**COUNT FOUR**

**DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE '339 PATENT**

55. This is a claim for declaratory judgment of non-infringement of the '339 patent. The allegations of the foregoing paragraphs above are repeated as though fully set forth herein.

56. Cellink is not infringing and has not infringed, directly or indirectly, literally or under the doctrine of equivalents, willfully or otherwise, any claim of the '339 patent.

57. As a result of the acts described in the preceding paragraphs, there exists a controversy of sufficient immediacy and reality to warrant the issuance of a declaratory judgment.

58. The '339 patent has one independent claim. Independent claim 1 recites:

1. A three-dimensional bioprinter comprising:
  - a. one or more printer heads, wherein a printer head comprises a means for receiving and holding at least one cartridge, wherein a cartridge comprises at least one deposition orifice and contents comprising a bio-ink, wherein the bio-ink comprises a solid or semi-solid composition of living cells;
  - b. a means for calibrating a position in space of the at least one cartridge or the at least one deposition orifice utilizing an optical detector;
  - c. a means for extruding the contents of the at least one cartridge by application of pressure;
  - d. a receiving surface for receiving the extruded contents of the at least one cartridge; and
  - e. a programmable computer processor communicatively connected to the means for calibrating and the means for extruding, the programmable computer processor for

positioning the one or more printer heads in three dimensions and regulating the extrusion of the contents of the at least one cartridge.

59. None of Cellink's Accused Products include every claimed feature of independent claim 1. Cellink's Accused Products do not include, among other things, the claimed "means for calibrating a position in space of the at least one cartridge or the at least one deposition orifice utilizing an optical detector."

60. For at least these reasons, Cellink has not infringed and does not infringe any claim of the '339 patent.

61. A judicial declaration is necessary and appropriate so that Cellink may ascertain its rights regarding the '339 patent.

#### **COUNT FIVE**

#### **DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE '654 PATENT**

62. This is a claim for declaratory judgment of non-infringement of the '654 patent. The allegations of the foregoing paragraphs above are repeated as though fully set forth herein.

63. Cellink is not infringing and has not infringed, directly or indirectly, literally or under the doctrine of equivalents, willfully or otherwise, any claim of the '654 patent.

64. As a result of the acts described in the preceding paragraphs, there exists a controversy of sufficient immediacy and reality to warrant the issuance of a declaratory judgment.

65. The '654 patent has five independent claims. Independent claim 1 recites: A method for forming an array of viable cells, said method comprising ink-jet printing a cellular composition containing cells onto a substrate, wherein at least about 25% of said

cells remain viable on said substrate after incubation for 24 hours at 37° C. in a 5% CO<sub>2</sub>/95% O<sub>2</sub> environment.

66. None of Cellink's Accused Products include every claimed feature of independent claim 1. Cellink's Accused Products do not include, among other things, the claimed "ink-jet printing."

67. For at least these reasons, Cellink has not infringed and does not infringe any claim of the '654 patent.

68. A judicial declaration is necessary and appropriate so that Cellink may ascertain its rights regarding the '654 patent.

### **COUNT SIX**

#### **DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE '116 PATENT**

69. This is a claim for declaratory judgment of non-infringement of the '116 patent. The allegations of the foregoing paragraphs above are repeated as though fully set forth herein.

70. Cellink is not infringing and has not infringed, directly or indirectly, literally or under the doctrine of equivalents, willfully or otherwise, any claim of the '116 patent.

71. As a result of the acts described in the preceding paragraphs, there exists a controversy of sufficient immediacy and reality to warrant the issuance of a declaratory judgment.

72. The '116 patent has one independent claim. Independent claim 1 recites:

1. A method of producing a tissue construct, comprising depositing cell aggregates from a dispensing device, and allowing the cell aggregates to fuse.

73. None of Cellink's Accused Products include every claimed feature of independent claim 1. Cellink's Accused Products do not include, among other things, the claimed "depositing cell aggregates form a dispensing device."

74. For at least these reasons, Cellink has not infringed and does not infringe any claim of the '116 patent.

75. A judicial declaration is necessary and appropriate so that Cellink may ascertain its rights regarding the '116 patent.

### **COUNT SEVEN**

#### **DECLARATORY JUDGMENT OF NON-INFRINGEMENT OF THE '043 PATENT**

76. This is a claim for declaratory judgment of non-infringement of the '043 patent. The allegations of the foregoing paragraphs above are repeated as though fully set forth herein.

77. Cellink is not infringing and has not infringed, directly or indirectly, literally or under the doctrine of equivalents, willfully or otherwise, any claim of the '043 patent.

78. As a result of the acts described in the preceding paragraphs, there exists a controversy of sufficient immediacy and reality to warrant the issuance of a declaratory judgment.

79. The '043 patent has one independent claim. Independent claim 1 recites:

1. A bioprinter comprising one or more coaxial nozzles with an N-value of two or more configured to control the deposition of materials to form one or more constructs having a pre-determined three-dimensional geometry, wherein each coaxial nozzle has concentric flow wherein each coaxial nozzle comprises at least two independent inputs for at least two different materials and at least two independent outputs configured to prepare a coaxial tube comprising a core layer and a mantle layer, any two adjacent layers having a different



composition of materials with respect to each other, and the materials being selected from a bio-ink, or a combination of bio-ink and support material, wherein the bio-ink comprises living cells.

80. None of Cellink's Accused Products include every claimed feature of independent claim 1. Cellink's Accused Products do not include, among other things, the claimed "one or more coaxial nozzles with an N-value of two or more" or "wherein each coaxial nozzle comprises at least two independent inputs for at least two different materials and at least two independent outputs."

81. For at least these reasons, Cellink has not infringed and does not infringe any claim of the '043 patent.

82. A judicial declaration is necessary and appropriate so that Cellink may ascertain its rights regarding the '043 patent.

### **JURY TRIAL DEMAND**

Pursuant to Rule 38 of the Federal Rules of Civil Procedure and D. Del. LR 38.1, Cellink hereby demands a trial by jury of all issues so triable in this action.

### **PRAYER FOR RELIEF**

WHEREFORE, Cellink prays for the following relief:

A. The Court enter a declaratory judgment that Cellink is not infringing and has not infringed, directly or indirectly, literally or under the doctrine of equivalents, willfully or otherwise, any claim of each of the Patents-in-Suit;

B. Preliminarily and permanently enjoining Organovo, its officers, agents, servants, employees, and attorneys, and those persons in active concert or participation with it who receive actual notice by personal service or otherwise, from asserting or threatening to assert

against Cellink or its customers, potential customers, or users of any Cellink products, any charge of infringement of any claims of the Patents-in-Suit;

C. The Court declare this case “exceptional” under 35 U.S.C. 285 and award to Cellink its costs and attorneys’ fees; and

D. The Court grant to Cellink such other and further relief as this Court may deem just and proper.

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