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JOHN R. WILSON and WILSON WOLF		)	
MANUFACTURING CORPORATION,		)	
		)	
	Plaintiffs,	)	Civil Action No. _____
v.		)	
		)	
CORNING, INC.,		)	
		)	
	Defendant.	)	
		)	
		)	

Plaintiffs John R. Wilson (“John Wilson” or “Wilson”) and Wilson Wolf Manufacturing Corporation (“Wilson Wolf”), for their Complaint against Corning, Inc. (“Corning”), hereby allege as follows.

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### **JURISDICTION AND VENUE**

4. This Court has personal jurisdiction over Corning because Corning does business in Minnesota and has appointed an agent for service of process in Minnesota.

5. This Court has federal question jurisdiction, pursuant to 28 U.S.C. §1331, over Plaintiffs' claims for correction of named inventors on certain United States Patents, for declaratory judgment of patent invalidity, and for patent infringement, as these claims arise under the laws of the United States, namely the federal patent statute, 35 U.S.C. §§256, 271. This Court has diversity jurisdiction, pursuant to 28 U.S.C. §1332, over Plaintiffs' state law claims for, breach of contract, unjust enrichment and constructive trust, and misappropriation of trade secrets, as the matter in controversy exceeds the sum or amount of \$75,000.00 and the action is brought by citizens of Minnesota against a citizen of New York. This Court also has supplemental jurisdiction, pursuant the 28 U.S.C. §1367(a), over Plaintiffs' state law claims, as they so relate to Plaintiffs' federal claims that they form a part of the same case or controversy.

6. Venue is proper in this District, pursuant to 28 U.S.C. §1391(b)(1), because Corning resides in this District pursuant to 28 U.S.C. §1391(c)(2). Venue is also proper in this District pursuant to 28 U.S.C. §1391(b)(2), because a substantial part of the events giving rise to the claim occurred, and a substantial part of property that is the subject of the action is situated, in this District.

## **BACKGROUND**

### **I. John Wilson & Wilson Wolf Develop Innovative Technologies for Cell Culture**

7. John Wilson is an entrepreneur and leader in the design and development of technologies for cell culture.

8. Cell culture involves the growth of cells in a laboratory environment

9. Cell culture is critical to many fields of bio-medical science. Cell culture is critical, for example, where cells must be grown for purposes of scientific investigation and research, for commercial production of cell secretions such as monoclonal antibodies, or for the clinical and/or experimental treatment of human patients. Cell culture is used, for example, in connection with islet transplantation to treat type 1 diabetes or adoptive cell therapies to treat diseases such as cancer.

10. John Wilson and Wilson Wolf have developed a number of cell culture technologies, resulting in products that are commercially successful and represent significant advances over the state of the art.

11. John Wilson is a named inventor on numerous U.S. patents pertaining to cell culture and related fields.

12. The typical Wilson Wolf business model involves identifying cell culture efficiency problems and inventing solutions to those problems. Wilson Wolf often applies for Small Business Innovation Research (“SBIR”) grants offered by the National Institutes of Health (“NIH”), in order to fund the research and development of its solutions.

13. SBIR grant applications are accepted on a national basis. To be awarded an SBIR grant, the application must compete with other applications in a review process conducted by experts in the field.

14. A key objective of the NIH SBIR grant program is to commercialize inventions that are deemed most likely to advance health care and reduce costs to society. Part of the scoring criteria includes how likely the applicant organization is to commercialize the innovation. Thus, the SBIR program encourages the small businesses to collaborate with larger, more established entities in order to bring innovative solutions to market more quickly.

15. Wilson Wolf uses patents and patent applications to protect its technology and uses non-disclosure agreements to allow collaboration with larger entities while guarding against technology theft.

## **II. John Wilson & Wilson Wolf Develop Gas Permeable Cell Culture Technology**

16. The greatest quantity of devices sold into the cell culture market are devices that rely on gas residing above medium, and for which cells gravitate to the bottom of the device. Such devices are commonly referred to as cultureware, and primarily consist of tissue culture flasks.

17. In use, cultureware such as flasks allow cells to gravitate to the bottom of the device where they are submerged under liquid medium. The medium provides nutrients to cells such as glucose. Gas resides above the medium and provides a source of oxygen. Oxygen from the gas travels to the cells by entering the medium at the gas-liquid interface. In order for an adequate supply of oxygen to be available to the cells,

device medium should not exceed 3 millimeters in height as measured from the bottom of the cultureware.

18. The traditionally shallow depth of liquid medium led to inefficient use of space. For example, Corning recommended a 45 to 67.5 ml working volume for its standard T-225 cm<sup>2</sup> flask. With the recommended working volume, only a small fraction of the space the flask occupies provides media to grow cells; the remaining volume is just gas.

19. The traditional limits on the amount of cell culture liquid medium in a flask meant that multiple flasks had to be cultured and maintained in order to get a given volume of culture. For example, to obtain a 1000 ml culture, one would need to culture between about 15 and 22 T-225 cm<sup>2</sup> flasks. The requirement that 15 to 22 devices be fed increases labor costs and contamination risks.

20. The inefficient use of space in a cell culture flask is compounded by the fact that cells are typically cultured in an incubator. The incubator provides a controlled temperature and controlled gas environment. Incubator space is often limited. Only so many flasks can fit within a given volume of incubator space. As a result, when flask space is used inefficiently, incubator space is also used inefficiently.

21. John Wilson together with other Wilson Wolf staff developed a gas permeable cell culture device that solved the problems of the then-existing products.

22. The innovative gas permeable device had a number of advantages.

23. First, the use of a gas permeable membrane eliminated the need for a gas-liquid interface.

24. Second, because there was no need to store air above the cell culture liquid, the height of the device could be reduced, allowing for more efficient use of incubator space.

25. Third, because the cells in the device could “breathe” through a lower gas permeable membrane, one could have more than just a few millimeters of cell culture media above the cells. A greater media height provides cells with more nutrients and allows for less frequent feeding and handling.

26. Fourth, the use of a gas permeable membrane allows for better control and equilibration of the pH once the device is placed inside the cell culture device.

27. Lastly, with the elimination of the gas-liquid interface, multiple cell culture shelves of gas permeable material could be stacked on top of each other, each shelf separated from the next by a gas compartment that would allow each shelf to breathe.

28. John Wilson and Wilson Wolf documented the gas permeable cell culture inventions in U.S. Provisional Patent Application No. 60/509,651 (“the ‘651 Provisional Application”), filed in October 2003, in an SBIR grant application filed with NIH on February 19, 2004, and in U.S. Provisional Patent Application No. 60/873,347 (“the ‘347 Provisional Application”), filed on December 7, 2006. Copies of the ‘651 and ‘347 Provisional Applications are attached as Exhibits A and B, respectively, and are incorporated by reference.

29. The ‘651 Provisional Application discloses that when a cell culture chamber is provided with a gas permeable floor, the gas-liquid interface and the volume of air enclosed by traditional cell culture devices can be eliminated, resulting in more

efficient use of space. In addition, the '651 Provisional Application discloses that the use of a gas permeable lower surface allows for the use of more cell culture medium per square centimeter of cell culture surface. In other words, the '651 Provisional Application discloses that the use of a gas permeable surface eliminates the height limitations that the then-conventional wisdom imposed on cell culture media. The result, the '651 Provisional Application explains, is that more cells are cultured per square centimeter of device footprint than in traditional devices.

30. The '651 Provisional Application provides, in part: "It has been discovered that when cells reside upon a lower gas permeable material, and the height of medium is well beyond that dictated by conventional wisdom, more suspension cells can be cultured per square centimeter of device footprint than can be cultured per square centimeter using conventional gas permeable devices. It has also been discovered that when a wall of a device is gas permeable, the gas/liquid interface is not necessary for gas exchange. This applies to suspension and adherent cell culture.

31. The '651 Provisional Application also discloses that "[i]f the multiple shelved tissue culture flasks could culture adherent cells without the gas/liquid interface, a much more efficient use of space in addition to reduced handling would result. For example, the distance between each cell attachment shelf could be reduced because the only thing between them would be medium, not gas and medium. That would have the effect of reducing the device height without reducing the amount of cells residing in it, because surface area and the amount of medium available to feed the cells remains the same. If desired, the amount of medium residing between the cell attachment scaffolds

could increase, which would potentially allow a culture to reach confluence with no feeding at all. A multiple shelved device that could function in this manner would have several advantages relative to the traditional device, including a wider range of medium volume to surface area options, much more efficient use of labor and incubator space, reduced contamination risk, and cost reductions in sterilization, shipping, storage and disposal. \* \* \* Furthermore, it could be made small or large, allowing unlimited linear scale up for the multiple well formats and beyond.”

32. Wilson Wolf’s February 19, 2004, Small Business Innovation Research grant application, describes a cell culture device with multiple, vertically stacked cell culture chambers with gas permeable membranes. The device had side openings which allowed air to circulate between each of the cell culture chambers. Each gas permeable membrane was supported by a shelf support that was outfitted with projections to create air space between the gas permeable membrane and the wall of the support. In addition, the wall of the support had a number of gas access openings, so that ambient gas could reach the gas permeable membranes of each cell culture chamber.

33. The SBIR grant application contained a confidential description and depictions of the cell culture device, including the following:



## 2. Backup: Multi Level High O<sub>2</sub> Device (MLD)

This device configuration provides more surface area than the SLD while allowing the islets to reside in a single device. Vertically stacked gas permeable shelves provide the surface area increase. Surface area can be added by increasing the number of gas permeable shelves, so scale up can be accomplished by simply making the device taller.

Figure 6 shows the sequence of MLD operation. The MLD has a manifold 500, islet compartments 510, gas permeable shelves 520, and shelf supports 530. As shown in Figure 6A, islets are deposited into the MLD by way of islet access port 540 and the MLD is oriented to allow islets to uniformly distribute into the islet compartments by gravity. In Figure 6C, manifold 500 is driven against the access openings of islet compartments 510 to trap islets in islet compartments 510, and excess gas is driven from the device by way of sterile vent filter 525. The MLD is gently shaken to distribute islets uniformly in the medium above each of gas permeable shelves 520, placed in the horizontal position, and the islets deposit by gravity in a uniformly distributed pattern upon gas permeable shelves 520.

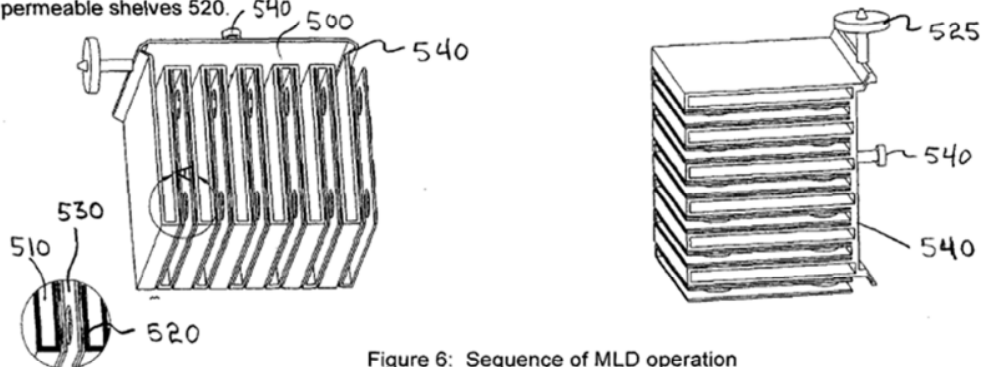


Figure 6: Sequence of MLD operation

Manifold wall 540 is configured to be initially positioned a fixed distance from the inlets to each of islet compartments 510, creating manifold 500. Islets and medium are added to the MLD by way of access port 560. As with the SLD, access port 560 can be configured for medium and islets to be added by pouring, pipette, or sterile connection using a Terumo connector device. Access port 560 is designed to ensure that a breach in sterility or leak does not occur if the device is temporarily oriented in the non-vertical position during shipping.

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34. In the drawing below, color has been added to show the portions containing cells and cell culture liquid (pink) and gas (blue):

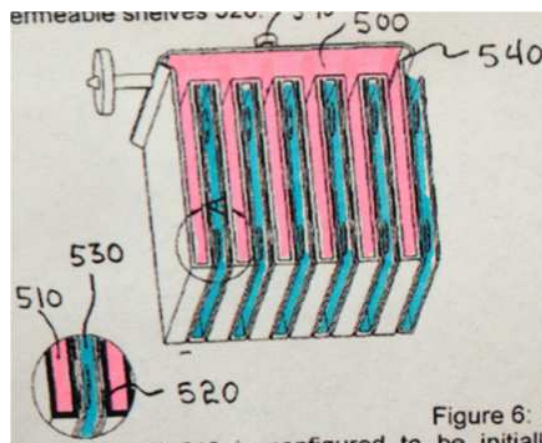
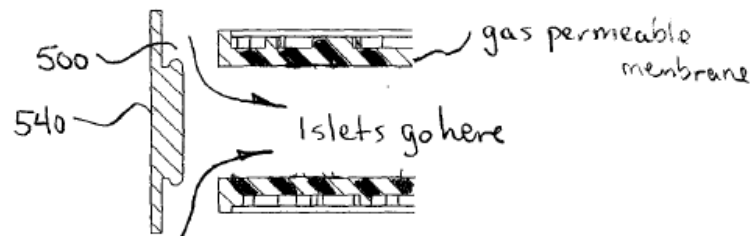


Figure 6: Sequence of MLD operation

35. A drawing from the SBIR grant application showing how the gas permeable cell compartments house cells residing on a gas permeable membrane is shown

below. This picture shows how, if desired, the upper and lower compartment can be comprised of gas permeable material.



36. A drawing from the SBIR grant application, showing details for the support shelf, the side openings, and the gas flow path to and from the gas permeable membranes is reproduced below.

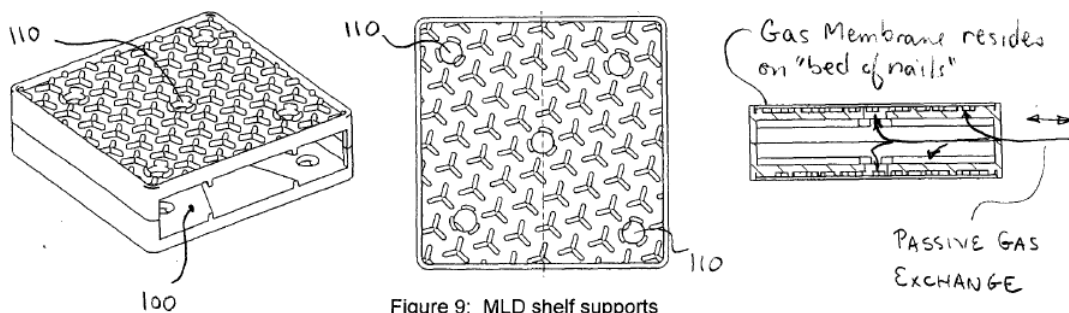
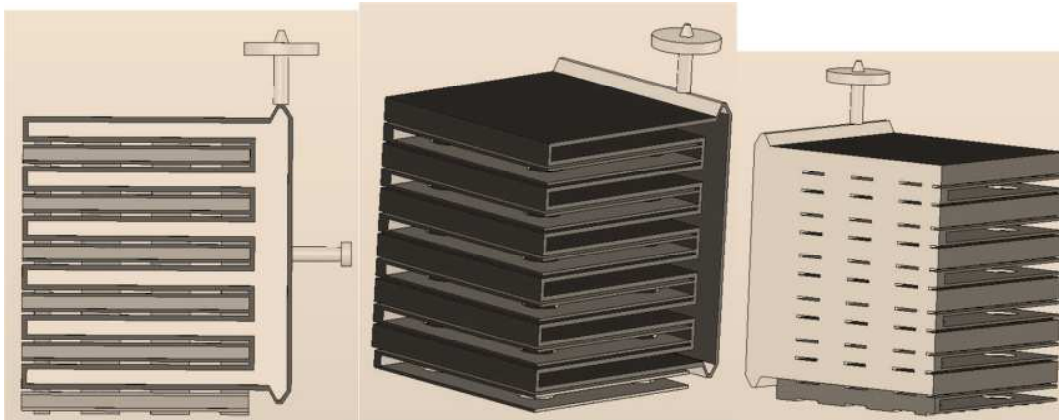


Figure 9: MLD shelf supports  
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37. John Wilson created a three-dimensional computer model of a multi-level gas permeable device using a computer modeling program. Various pictures within the SBIR grant application were created by rotating the 3D model into the desired position, and printing the outlines of the 3D model. The resulting black and white images were then included in the SBIR grant application. At the time the grant was submitted, SBIR rules prevented color renditions. Images of the 3D model in various positions are shown below.



38. A portion of the SBIR grant application, shown below, indicates the gas permeable configurations proposed in the applications have the capacity to create a more space efficient culture environment than traditional culture devices without loss of cell function.

In direct comparisons, **3000 IEQ cultured at high density on silicone were able to create insulin independence in diabetic mice, while the same number of islets cultured at high density on styrene were not.** This held true even when islets cultured on styrene were implanted at two-fold quantities.

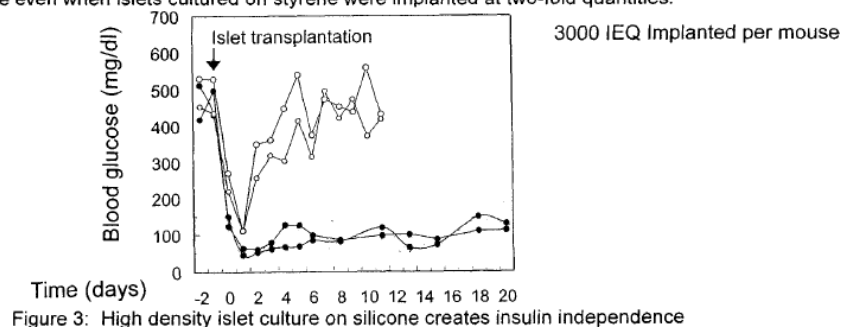


Figure 3: High density islet culture on silicone creates insulin independence

Referring to Figure 3, highly purified porcine islets were cultured for 24 hrs at a density of 2500 IEQ/cm<sup>2</sup> in standard wells vs. custom silicone bottom wells. Flask controls were at a low density of 200 IEQ/cm<sup>2</sup>. Post culture, islet viability was assessed by oxygen consumption rate. As predicted, islets cultured at high density in standard wells had 50% viability relative to islets cultured at low density in flasks and islets cultured high density in silicone bottom wells. This confirmed the utility of silicone rubber in providing oxygen and alleviating hypoxia-induced death. More importantly when 3000 or 6000 IEQ of the islets cultured at high density in traditional silicone were implanted in mice, none cured diabetes (open circles). In contrast, those cultured on high density silicone cured 100% of the mice when implanted at 3000 IEQ (filled circles).

39. Wilson Wolf filed portions of the Grant Application, including the figures reproduced above and the related text, as part of the '347 Provisional Application.

### **III. Corning Seeks Collaboration with Wilson Wolf Under a Confidentiality Agreement**

40. About late 2003, John Wilson attended a trade show in San Francisco. At that trade show he met with representatives of Corning. Corning sells products used in cell culture. The Corning representatives asked if they could visit Wilson Wolf to learn more about the cell culture technologies being developed there, with the possibility of collaborating with Wilson Wolf regarding those technologies.

41. John Wilson agreed to meet with Corning in Minnesota. Prior to the meeting Wilson Wolf and Corning entered into a non-disclosure agreement effective as of January 6, 2004 (the “Agreement”). A copy of the Agreement is attached as Exhibit C, and is incorporated herein by reference.

42. The Agreement provides that it is effective for a period of two years, and provides that information disclosed pursuant to the Agreement may not be further disseminated or disclosed by the receiving party for a period of five years.

43. The Agreement is designed to protect, among other information, “information relating to [Wilson Wolf’s] expertise in inventing and developing cell culture devices and processes for growing cells,” disclosed by Wilson Wolf to Corning. Exhibit C, ¶ 1.

44. The Agreement provides for some exemptions to the requirement that the receiving party not further disclose confidential information. For example, Section 4(a)-(d) of the Agreement provides exemptions for information that the receiving party can prove by corroborated evidence: a) was independently developed; b) was publicly

available at the time of disclosure without any breach of the agreement; c) was rightfully obtained from a third party without any obligation of secrecy; or d) was publicly released pursuant to court order after reasonable notice to the disclosing party. The Agreement also provides, however, that no party shall use or disclose any confidential information in reliance on the foregoing exemptions, unless it first gives fourteen days advance notice of its intent to do so.

#### **IV. Wilson Wolf Provides Valuable Technical Information to Corning With the Understanding That Corning Would Not Use Or Disclose It Without Wilson Wolf's Consent**

45. On or about March 5, 2004, John Wolf met with Corning's Mark Beck, Lydia Kenton, and Debra Hoover.

46. Corning's Mark Beck opened the meeting with an extensive description of the Corning history, including the philanthropic endeavors of the Corning family.

47. During that meeting, Mark Beck emphasized that Corning relied upon and cherished its own intellectual property and fully respected the intellectual property of others, and that Corning would never misappropriate such intellectual property, and that this attitude had come to be ingrained in the Corning culture.

48. During that meeting, in reliance on the Agreement and on Mark Beck's statements regarding Corning's respect for intellectual property rights of others, John Wilson gave Corning representatives an extensive overview of Wilson Wolf's intellectual property, confidential technical information and product designs, including that related to a variety of cell culture products.

49. At the meeting, Wilson Wolf's technologies under discussion were identified, in writing, as Confidential under the Agreement.

50. During that meeting, after John Wilson had given the overview, Mark Beck asked Debra Hoover for her thoughts on the Wilson Wolf technology. She responded that it had the capacity to change the face of cell culture.

51. Thereafter, Corning submitted their summary of the meeting to Wilson Wolf. The summary states "[d]iscussed new product options for cell culture/scale-up with John i.e. scalable disposable products," and "John's methodology for his scaleable products is centered around the gas/liquid interface".

52. As noted above, Wilson Wolf filed the SBIR grant application on or about February 19, 2004. On or about August 17, 2004, John Wilson received notice from NIH that Wilson Wolf's SBIR grant application had been reviewed by a Special Emphasis Panel and "judged to be excellent." The review indicated "this application has a good chance of success and (sic) for the development of a commercial product." NIH awarded Wilson Wolf a grant in the amount of \$933,000 to pursue the technology described in the grant application.

53. In August 2004, at the request of Corning, John Wilson traveled to Corning's Kennebunk, Maine facility to meet with numerous Corning personnel, including Allison Tanner, Phil Carey, Mark Beck, Deb Hoover and Jeff Mooney, to present an overview of Wilson Wolf's technology and continue the discussion about collaborations for commercialization.

54. At that meeting, John Wilson provided a document describing Wilson Wolf's various technologies. The Wilson Wolf technologies were identified in writing as Confidential under the Agreement. The general attributes of products described in the SBIR grant application were included in that overview. Although details of the products described in the SBIR grant application were not disclosed in this meeting, as time did not permit, they were described at a later date to Corning staff, including Allison Tanner.

55. As the meeting unfolded, Corning began to focus on one form of a "multi-layered flask" similar to that described in Wilson Wolf's '651 Provisional Application, which had been provided to Corning in advance of the meeting as a confidential document. Specifically, the Wilson Wolf '651 Provisional Application, designated in writing as confidential, had been provided to Debra Hoover on or about August 16, 2004 and, on information and belief, Corning further circulated the Wilson Wolf '651 Provisional Application to other Corning personnel, including Allison Tanner.

56. Of the various technologies presented by Wilson Wolf, Corning was most interested in a multi-layered flask with multiple, vertically stacked cell culture shelves and gas permeable membranes as disclosed in the '651 Provisional Application.

57. Pursuant to the Agreement, Wilson Wolf disclosed its technology pertaining to such gas permeable cell culture technology to Corning. Wilson Wolf identified the information pertaining to its gas permeable cell culture technology as confidential, in writing.

58. As part of the confidential relationship between Wilson Wolf and Corning, John Wilson educated Corning staff on the concepts underlying the Wilson Wolf gas permeable cell culture technology.

59. As part of the education process undertaken pursuant to the Agreement, on or about October 26, 2004, Wilson sent Corning a letter enclosing a copy of Wilson Wolf's U.S. Patent Application No. 10/961,814 ("the '814 Patent Application"), which was filed on October 8, 2004, and claims priority to the '651 Provisional Application. Wilson identified the '814 Patent Application, in writing, as confidential under the Agreement.

60. Corning's Allison Tanner was on the team that was studying and evaluating Wilson Wolf's technology.

61. On or about December 10, 2004, Corning staff, including Allison Tanner, Ron Verkleeren and Joe Wall visited John Wilson at the Wilson Wolf facility in New Brighton, Minnesota.

62. At that meeting John Wilson presented additional confidential information relating to Wilson Wolf's gas permeable technology.

63. Having won the SBIR grant, Wilson Wolf continued to work on the device described in the SBIR grant application.

64. In January 2005 and thereafter, John Wilson had numerous exchanges with Allison Tanner as they developed an experimental matrix for evaluation of a multi-shelf cell culture flask. The device being evaluated had a gas permeable wall. Wilson Wolf provided Allison Tanner with drawings of the prototypes that it had created for use in its



prior evaluations and John Wilson explained the overall concept of the prototypes and various aspects of the design features to Allison Tanner, including features disclosed in the '651 Provisional Application and the Small Business Innovation Research Grant Application.

65. Pursuant to the Agreement, Wilson Wolf manufactured a number of multi-shelf, gas permeable cell culture flasks. Wilson Wolf manufactured the test and control flasks and performed cell culture testing and reported the results to Corning.

66. Also as part of the education process, undertaken pursuant to the confidential relationship, Wilson Wolf explained that gas transfer was important both for cellular respiration and also to maintain a suitable pH in the cell culture device. John Wilson explained to Allison Tanner that maximum gas transfer is obtained with multiple cell culture shelves, with gas permeable floors and ceilings, separated by gas compartments – as shown in his SBIR grant application. Wilson further explained that a device with multiple cell culture shelves and a single gas permeable wall could provide adequate gas transfer for various applications at lower manufacturing cost.

67. Knowing that the gas permeable Wilson Wolf prototypes that Corning was evaluating were not as gas permeable as those of the SBIR grant application, John Wilson explained to at least Allison Tanner that a high amount of gas permeability in a device is far superior to a non-gas permeable device when pH needs to be restored to a safe level quickly. John Wilson pointed out that putting gas permeable slots in the existing Wilson Wolf prototype configuration would be an example of such a highly gas permeable device. In essence, John Wilson described the device configuration of Wilson Wolf's

SBIR grant application to Allison Tanner as an example of a gas permeable device that would restore pH very quickly and reduce potential pH problems.

68. Communications and testing continued from late 2004 or early 2005 through about April 2005.

69. About April 2005, Corning staff, including Allison Tanner, took the position that Wilson Wolf's gas permeable multi-shelf cell culture flask had no value, and expressed this view to John Wilson on multiple occasions during April 2005.

70. On or about June 15, 2005, Corning's Ron Verkleeren called John Wilson to discuss the gas permeable multi-shelf cell culture flask. Verkleeren indicated that he believed there was an invention there and wondered whether John Wilson would sign on as a co-inventor.

71. Wilson Wolf and Corning came to no agreement regarding the Wilson Wolf technology and discussions ceased after John Wilson's phone conversation with Ron Verkleeren on or about June 15, 2005.

72. At no point did Wilson Wolf give Corning permission to use, disclose or patent the Wilson Wolf technology.

73. Wilson Wolf disclosed its technology to Corning with the express understanding that it was to be held in strict confidence, and not used commercially by Corning, or disclosed to any third party.

74. Corning obtained access to Wilson Wolf's technology under circumstances giving rise to a duty to maintain the secrecy and limit the use and dissemination of that information. In particular, Corning obtained access pursuant to the Agreement, and only

after Corning's Mark Beck explained that Corning would never misappropriate the intellectual property of another. Moreover, Wilson Wolf identified the information as confidential.

75. In disclosing its technology to Corning, Wilson Wolf reposed trust and confidence in Corning.

76. Corning has billions of dollars in annual sales, and vastly greater access to legal resources than Wilson or Wilson Wolf.

77. Wilson and Wilson Wolf trusted that Corning would honor its commitment and not simply walk off with the Wilson Wolf technology.

78. Once the technology was disclosed to Corning, Corning obtained superiority over Wilson and Wilson Wolf.

79. A fiduciary relationship existed between Wilson and Wilson Wolf on the one hand and Corning on the other.

#### **IV. Corning Files Secretly Files Patent Applications Claiming Wilson Wolf's Technology.**

80. On July 26, 2005, while the Agreement was still in force, Corning filed U.S. Provisional Patent Application No. 60/702,896 ("the '896 Provisional Application"), which describes a multiple shelf cell culture device with each shelf having a gas permeable floor exposed to the atmosphere.

81. Allison Tanner is named an inventor on Corning's '896 Provisional Application.

82. The flask described in the '896 Provisional Application is the same flask previously conceived by John Wilson, which he described to Allison Tanner.

83. The '896 Provisional Application contains information that Wilson Wolf disclosed to Corning pursuant to the Agreement.

84. The '896 Provisional Application states, for example, that the use of a gas permeable membrane can eliminate the need for the gas/liquid interface and the void space above the cell culture medium, resulting in more efficient use of space, all of which was previously taught in Wilson Wolf's '651 Provisional Application filed in 2003 and provided to Corning in 2004.

85. The Corning '896 Provisional Application further states that the use of gas permeable membrane allows for any volume of media to be used and the height of media in the device is unrestricted, and that by completely filling the cell growth chambers with media, the cells have access to optimal nutrient exchange, all of which was previously taught in Wilson Wolf's '651 Provisional Application filed in 2003 and provided to Corning in 2004.

86. Despite its obligations under the Agreement, Corning did not advise Wilson Wolf, prior to filing the '896 Provisional Application, that it was relying on any of the exemptions contained in Section 4 of the Agreement.

87. Despite its obligations under the Agreement, Corning did not give Wilson Wolf a copy of the '896 Provisional Application before or after it was filed.

88. On May 30, 2008, Corning filed U.S. Provision Patent Application No. 61/130,522 ("the '522 Provisional Application").

89. The '522 Provisional Application contains confidential information that John Wilson communicated to Tanner and Corning pursuant to the Agreement.

90. For example, the Corning '522 Provisional Application states that traditionally "media volume [in a cell culture flask] is restricted to an area within the flask permissive to the diffusion of oxygen," and that therefore the volume of the container is inefficiently used, all as previously taught in Wilson Wolf's '651 Provisional Application filed in 2003 and provided to Corning in 2004.

91. As another example, the Corning '522 Provisional Application discloses a device with vertically stacked cell culture chambers with gas permeable floors with air spaces to allow free gas exchange between the ambient atmosphere and the gas permeable membrane, all as previously taught in Wilson Wolf's '651 Provisional Application filed in 2003 and provided to Corning in 2004, and as John Wilson taught to Allison Tanner, as part of the confidential relationship between Wilson Wolf and Corning.

92. The '522 Provisional Application names Allison Tanner as an inventor. The '522 Provisional Application was filed within five years of John Wilson's disclosure of that information to Tanner and Corning.

93. Despite its obligations under the Agreement, Corning did not advise Wilson Wolf, prior to filing the '522 Provisional Application, that it was relying on any of the exemptions contained in Section 4 of the Agreement.

94. Despite its obligations under the Agreement, Corning did not give Wilson Wolf a copy of the '522 Provisional Application before or after it was filed.

95. The '896 Provisional Application and the '522 Provisional Application have resulted in a number of United States Patents issued to Corning, which disclose and claims inventions conceived in whole or part by John Wilson and/or other Wilson Wolf staff.

96. Despite its obligations under the Agreement, Corning fraudulently concealed from Wilson and Wilson Wolf the fact that it was filing patent applications, and obtaining patents, disclosing and claiming Wilson Wolf's technology.

97. The Corning '896 Provisional Application and subsequent utility patent applications claiming priority to it have resulted in issuance to Corning of U.S. Patent No. 7,745,209 on June 20, 2010, and U.S. Patent No. 8,273,572 on September 25, 2012. Additional utility applications claiming priority to the '896 Provisional Application remain pending in the United States Patent Office.

98. The Corning '522 Provisional Application and subsequent utility applications claiming priority to it have resulted in issuance to Corning of U.S. Patent No. 8,178,345 on May 15, 2012. Additional utility applications which claim priority to the '522 Provisional Application remain pending in the United States Patent Office.

**V. Corning Launches A “Revolutionary” New Line Of Cell Culture Products Based On Wilson Wolf's Technology**

99. Corning has introduced a new line of products, including the HYPERFlask cell culture vessels and the HYPERStack cell culture vessels, which use the gas permeable technology that Wilson and Wilson Wolf disclosed to Corning pursuant to the Agreement.

100. In a press release introducing the product, Corning described the HYPERFlask as having a “Revolutionary new design” that provides ten times the cell growth area in the footprint of a standard 175 cm<sup>2</sup> flask. See Exhibit D.

101. The HYPERFlask and HYPERStack cell culture vessel has ten cell culture shelves with gas permeable lower membranes. Air spaces allow gas exchange through the gas permeable membrane and into the cell culture medium.

**COUNT I**  
**DECLARATORY JUDGMENT OF INVALIDITY, OR CORRECTION OF**  
**INVENTORSHIP, REGARDING THE ‘209 PATENT**  
**(35 U.S.C. §§102, 256)**

102. John Wilson and Wilson Wolf reallege and incorporate by reference the allegations contained in Paragraphs 1 to 101 of this Complaint.

103. Wilson Wolf is the owner of all right, title, and interest in the inventions disclosed and claimed in the ‘651 Provisional Application and the ‘347 Provisional Application, and all other patent applications claiming priority to them.

104. Being recognized as an inventor on United States Patents is a significant business credential for entrepreneurs in technical fields, like John Wilson. Being listed as an inventor on a United States Patent indicates that the inventor was a participant in the development of technology that is a new, useful and non-obvious improvement over the state of the art. Being named an inventor is a significant credential and accomplishment for a technology entrepreneur like John Wilson, much like publishing in a peer reviewed journal is a significant credential and accomplishment for an academic.

105. John Wilson and/or other Wilson Wolf staff contributed to the conception of one or more claims of the '209 Patent, including but not limited to claims 1 and 16 of the '209 Patent.

106. At a minimum, John Wilson and/or other Wilson Wolf staff contributed the elements of a cell growth apparatus with a plurality of cell growth chambers with gas permeable, liquid impermeable membrane, and opposing surface and at least one side wall connected to the gas permeable membrane and the opposing surface, and a tracheal space in communication with the gas permeable membrane and a tracheal space with peripheral supports at the peripheral edge of the tracheal space, with the supports being spaced apart to create gaps to allow air flow from the external environment into the tracheal space, as recited in Claim 1 of the '209 Patent.

107. At a minimum, John Wilson and/or other Wilson Wolf staff contributed the elements of a cell growth apparatus with at least one cell grown chamber having a gas permeable liquid impermeable membrane, an opposing surface, and at least one side wall connected to the gas permeable membrane and the opposing surface, and a tracheal space in communication with the gas permeable membrane, and a tracheal space with peripheral supports at the peripheral edge of the tracheal space, with the supports being spaced apart to create gaps to allow air flow from the external environment into the tracheal space, as recited in Claim 16 of the '209 Patent.

108. John Wilson and/or other Wilson Wolf staff are not named as inventors on the '209 Patent.



109. John Wilson and/or other Wilson Wolf staff were omitted as inventors on the '209 Patent without any deceptive intent on their part.

110. The '209 Patent should be correct to omit Corning staff as inventors and to, instead, name John Wilson and/or other Wilson Wolf staff as the only inventor(s), pursuant to 35 U.S.C. §256.

111. To the extent that the '209 Patent cannot be corrected to name only John Wilson and/or other Wilson Wolf staff as inventor(s), the '209 Patent should be invalidated pursuant to, among other provisions of the patent statute, 35 U.S.C. §102(f), on the ground that the named inventors did not themselves invent the claimed subject matter.

112. In addition, or in the alternative, one or more claims of the '209 Patent should be invalidated pursuant to, among other provisions of the patent statute, 35 U.S.C. §102(e) based on Wilson Wolf's '651 Provisional Application and '814 Patent Application.

**COUNT II**  
**CORRECTION OF INVENTORSHIP ON THE '572 PATENT**  
**(35 U.S.C. §256)**

113. John Wilson and Wilson Wolf reallege and incorporate by reference the allegations contained in Paragraphs 1 to 112 of this Complaint.

114. John Wilson and/or other Wilson Wolf staff contributed to the conception of one or more claims of the '572 Patent, including but not limited to claim 1 of the '572 Patent.

115. At a minimum, John Wilson and/or other Wilson Wolf staff contributed the elements of a method of culturing cells in a cell growth apparatus with a plurality of cell growth chambers with gas permeable, liquid impermeable membrane, an opposing surface and at least one side wall connected to the gas permeable membrane and the opposing surface, and a tracheal space in communication with the gas permeable membrane and a tracheal space with peripheral supports at the peripheral edge of the tracheal space, with the supports being spaced apart to create gaps to allow air flow from the external environment into the tracheal space, as recited in Claim 1 of the '572 Patent.

116. John Wilson and other Wilson Wolf staff are not named as inventors on the '572 Patent.

117. John Wilson and other Wilson Wolf staff were omitted as inventors on the '572 Patent without any deceptive intent on their part.

118. The '572 Patent should be correct to name John Wilson and/or other Wilson Wolf staff as sole or joint inventor(s) pursuant to 35 U.S.C. §256.

**COUNT III**  
**CORRECTION OF INVENTORSHIP ON THE '345 PATENT**  
**(35 U.S.C. §256)**

119. John Wilson and Wilson Wolf reallege and incorporate by reference the allegations contained in Paragraphs 1 to 118 of this Complaint.

120. John Wilson and/or other Wilson Wolf staff contributed to the conception of one or more claims of the '345 Patent, including but not limited to claim 2 of the '345 Patent.

121. At a minimum, John Wilson and/or other Wilson Wolf staff contributed the elements of a cell culture apparatus having a plurality of stacked cell culture chambers, comprising at least a first and second cell culture chambers, with each chamber formed by a top surface, and an opposing bottom surface spaced apart from the top surface, with each chamber having a sidewall around the chamber and extending between the top and bottom surface, and a tracheal space between the bottom surface of the one chamber and the top surface of the other chamber, as recited in Claim 2 of the '345 Patent, as filed and allowed in the Patent Office. (Though the issued patent apparently contains a typographical error by which Claim 2 reads as follows, with the bracketed words omitted: "The apparatus according to claim 1, [comprising a tracheal] space between the first bottom surface and the second top surface.")

122. John Wilson and other Wilson Wolf staff are not named as inventors on the '345 Patent.

123. John Wilson and other Wilson Wolf staff were omitted as inventors on the '345 Patent without any deceptive intent on their part.

124. The '345 Patent should be correct to name John Wilson and/or other Wilson Wolf staff as sole or joint inventor(s) pursuant to 35 U.S.C. §256.

#### **COUNT IV** **BREACH OF CONTRACT**

125. John Wilson and Wilson Wolf reallege and incorporate by reference the allegations contained in Paragraphs 1 to 124 of this Complaint.

126. The Agreement was a valid and binding contract between Corning and Wilson Wolf.

127. The Agreement imposed a continuing duty of non-disclosure and non-use on Corning.

128. Corning breached the Agreement by filing the '896 and '347 Provisional Applications, by filing utility patent applications claiming priority to the '896 and '347 Provisional Applications, and by commercializing and using technology that Wilson Wolf disclosed pursuant to the Agreement.

129. Corning concealed from Wilson Wolf the fact that it had filed the '896 and '347 Provisional Applications and related utility patent applications.

130. Corning concealed the fact that it had filed provisional and utility patent applications disclosing and claiming Wilson Wolf's technology despite the fact that the Agreement itself requires that a receiving party intends to rely on an exemption permitting use or disclosure of information to provide advance notice to the disclosing party.

131. Corning's failure to disclose the fact that it had filed provisional and utility patent applications disclosing and claiming Wilson Wolf's technology constitutes fraudulent concealment.

132. Because patent applications are confidential, unless and until published, Wilson Wolf could not have independently learned of Corning's patent applications, until they were published.

133. The first Corning patent application disclosing and claiming Wilson Wolf technology to publish was Application No. 11/433,859, which the Patent Office published on February 1, 2007.

134. Corning has repeatedly breached the Agreement.

135. Corning's breach of the Agreement has harmed Wilson Wolf in an amount to be determined at trial.

**COUNT V**  
**UNJUST ENRICHMENT & CONSTRUCTIVE TRUST**

136. John Wilson and Wilson Wolf reallege and incorporate by reference the allegations contained in Paragraphs 1 to 135 of this Complaint.

137. Corning has been unjustly enriched by its unlawful and unauthorized use of Wilson Wolf technology.

138. Corning has obtained valuable patent applications and patents through its unlawful and unauthorized use of information disclosed by Wilson Wolf pursuant to the Agreement.

139. Allowing Corning to maintain the benefit of these patents and patent applications would be unjust and unwarranted.

140. Corning's domestic and international patents and patent applications disclosing or claiming Wilson Wolf technology should be held in constructive trust for the benefit of Wilson Wolf.

**COUNT VI**  
**MISAPPROPRIATION OF TRADE SECRETS**  
**MINN. STAT. 325C.01**

141. John Wilson and Wilson Wolf reallege and incorporate by reference the allegations contained in Paragraphs 1 to 140 of this Complaint.

142. At the time Wilson Wolf disclosed its gas permeable cell culture technology to Corning, that technology was a trade secret.

143. Wilson Wolf's gas permeable cell culture technology was a closely guarded secret that derived independent economic value from not being known or readily ascertainable by proper means, by others who could obtain economic value from its disclosure and use.

144. Wilson Wolf took steps to protect the confidentiality of its gas permeable cell culture technology, including the use of confidentiality agreements with its staff.

145. Wilson Wolf's Small Business Innovation Grant Application was itself confidential pursuant to the governing regulations.

146. Wilson Wolf disclosed its trade secrets to Corning in strict confidence, pursuant to the Agreement.

147. As of October 2004, Wilson Wolf had on file with the Patent Office the '651 Provisional Application. Wilson Wolf understood that if it chose to pursue a United States utility patent application based on the '651 Provisional Application, then the disclosure in '651 Provisional Application could be made public.

148. Corning misappropriated Wilson Wolf's trade secrets as part of a continuing and ongoing scheme.

149. Corning initially misappropriated Wilson Wolf's trade secrets by including them in provisional and utility patent applications filed for the benefit and on behalf of Corning.

150. Because Corning filed utility patent applications describing Wilson Wolf's trade secrets, those trade secrets were disclosed with the publication of the utility patent applications.

151. Corning also misappropriated Wilson Wolf's trade secrets by obtaining allowance of claims that cover Wilson Wolf's trade secrets.

152. The issuance of patents with claims that cover the Wilson Wolf trade secrets is an act of misappropriation separate and apart from the prior disclosure of those trade secrets. Disclosure enables others to see what had previously been secret, but it does not give the disclosing party exclusive rights in the trade secret. A patent gives the owner a statutory right to exclude others from practicing the technology claimed in the patent.

153. By obtaining patents covering Wilson Wolf's technology, however, Corning has manufactured a statutory right to exclude others—including potentially Wilson Wolf itself—from practicing inventions that Wilson Wolf developed and disclosed to Corning.

154. By obtaining patents with claims covering Wilson Wolf's technology, Corning has engaged in a new act of misappropriation. This new act of misappropriation could not have been predicted from the publication of the application, because publication does not indicate whether or what claims will be allowed. Many applications

never result in any issued patent at all. Even if a patent issues, the claims that will be allowed cannot be predicted until just prior to issuance. While the Corning patent applications contain disclosure taken from Wilson Wolf, they disclose other information that did not come from Wilson Wolf. Thus one could not assume that patents resulting from the applications would necessarily claim Wilson Wolf technology.

155. Corning's '572 Patent, claims technology that was a Wilson Wolf trade secret at the time it was disclosed to Corning pursuant to the Agreement. The '572 Patent issued to Corning on September 25, 2012.

156. Corning's '209 Patent, claims technology that was a Wilson Wolf trade secret at the time it was disclosed to Corning pursuant to the Agreement. The '209 Patent issued to Corning on June 29, 2012.

157. Corning's '345 Patent claims technology that was a Wilson Wolf trade secret at the time it was disclosed to Corning pursuant to the Agreement. The '345 Patent issued to Corning on May 15, 2012.

158. Corning was under an express duty not to use or disclose Wilson Wolf's trade secrets.

159. Corning acquired access to Wilson Wolf's trade secrets under circumstances giving rise to a duty to maintain its secrecy or limit its use.

160. Corning has misappropriated Wilson Wolf's trade secrets in violation of state law, including but not limited to the Minnesota Trade Secrets Act, Minn. Stat. 325C.01, et seq.



161. As a direct and proximate result of Corning's misappropriation of trade secrets, Wilson Wolf has been injured in an amount to be determined at trial.

162. As a direct and proximate result of Corning's misappropriation of trade secrets, Corning has been unjustly enriched in an amount to be determined at trial.

163. Corning's misappropriation of trade secrets has been willful and malicious, and has continued despite complaints from Wilson Wolf.

**COUNT VII**  
**PATENT INFRINGEMENT**

164. John Wilson and Wilson Wolf reallege and incorporate by reference the allegations contained in Paragraphs 1 to 163 of this Complaint.

165. Wilson Wolf owns all right, title and interest in U.S. Patent No. 8,158,426 ("the '426 patent") and U.S. Patent No. 8,158,427 ("the '427 patent"), both of which are entitled "Cell Culture Methods and Devices Utilizing Gas Permeable Materials," and both of which issued on April 17, 2012. The '426 and '427 patents claim methods of culturing cells.

166. The '426 and '427 patents are valid, subsisting and in full force and effect. Copies of the '426 and '427 patents are attached as Exhibits E and F, respectively.

167. Corning has had knowledge of, and been aware of the '426 and '427 patents, at least as early as June 5, 2012.

168. Despite knowledge of the '426 and '427 patents, Corning is infringing, directly or indirectly, literally, under the doctrine of equivalents, contributorily, and/or through active inducement of others, one or more claims of the '426 and '427 patents,

including through the use, offer and sale of the HYPERFlask and HYPERStack cell culture products.

169. Use of the Corning HYPERFlask and HYPERStack cell culture products, in accordance with the instructions provided by Corning, results in direct infringement of the '426 and '427 patents.

170. Corning's infringement is ongoing, and will irreparably harm Wilson Wolf unless enjoined.

171. Corning's infringement has harmed Wilson Wolf in an amount to be determined at trial.

**WHEREFORE**, John Wilson and Wilson Wolf pray for relief as follows:

A. An Order correcting inventorship on the '209 Patent to list John Wilson and/or other Wilson Wolf staff as the only inventors, or in the alternative, invalidating the '209 Patent.

B. An Order correcting inventorship on the '572 Patent to list John Wilson and/or other Wilson Wolf staff as the sole or joint inventors.

C. An Order correcting inventorship on the '345 Patent to list John Wilson and/or other Wilson Wolf staff as the sole or joint inventors.

D. Awarding Wilson Wolf damages for breach of contract in an amount to be determined.

E. Imposing a constructive trust in favor of Wilson Wolf on all Corning patents and patent applications that improperly disclose and claim technology developed by Wilson Wolf.

F. Awarding Wilson Wolf damages and requiring Corning to disgorge profits for misappropriation of trade secrets, in amounts to be determined at trial.

G. Awarding Wilson Wolf damages for patent infringement in an amount to be determined at trial, and enjoining Corning, preliminarily and permanently, from further infringement.

H. Awarding treble damages for misappropriation of trade secrets and for willful patent infringement pursuant to Minn. Stat. §325C.03 and 35 U.S.C §284.

I. Awarding John Wilson and Wilson Wolf their reasonable costs and attorneys fee pursuant to Minn. Stat. §325C.04 and 35 U.S.C. §285.

J. Awarding John Wilson and Wilson Wolf such other and further relief as may be just and equitable.

**JURY DEMAND**

Plaintiffs demand a trial by jury of all issues so triable.

Dated: January 25, 2013

WINTHROP & WEINSTINE, P.A.

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