

UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MARYLAND  
NORTHERN DIVISION

AVITECH, L.L.C.,	)	
	)	
Plaintiff,	)	Civil Action No. WMN 04-CV-3082
	)	
v.	)	
	)	
EMBREX, INC.,	)	
	)	<u>Jury Trial Demanded</u>
Defendant.	)	
_____	)	

**[PROPOSED] FIRST AMENDED COMPLAINT**

Plaintiff Avitech, L.L.C. (“Avitech”), by its undersigned attorneys, brings this action against Defendant Embrex, Inc. (“Embrex”), and complains and alleges as follows:

**NATURE OF THE CASE**

1. This is an action for declaratory relief pursuant to 28 U.S.C. §§ 2201 and 2202, to declare U.S. Patent No. 5,136,979 (“the ‘979 patent”) not infringed, invalid and unenforceable under the federal patent laws; and for injunctive, monetary and equitable relief pursuant to Sections 4 and 16 of the Clayton Act, 15 U.S.C. §§ 15, 26, to remedy, prevent and enjoin violations of Section 2 of the Sherman Antitrust Act, 15 U.S.C. § 2. A copy of the ‘979 patent is attached hereto as **Exhibit 1**.

2. An actual controversy exists between the parties with respect to the validity, infringement and enforceability of the ‘979 patent as evidenced by, among other things, Embrex’s initiation of an action claiming that the *Intelliject®* in-ovo injection system manufactured by

Avitech infringes the '979 patent, styled *Embrex, Inc. v. Avitech, L.L.C.*, No. 1:04CV00693 (M.D.N.C., filed August 3, 2004) (hereinafter "the North Carolina action").

### **JURISDICTION AND VENUE**

3. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331, 1337(a) and 1338(a).

4. Venue is proper in this District for the patent claim under the provisions of 28 U.S.C. §§ 1391(c) and 1400 and; and venue for the antitrust claim is proper in this District under both the special antitrust venue provisions of 15 U.S.C. § 22 and the general venue provisions of 28 U.S.C. § 1391(b).

5. Embrex is subject to the personal jurisdiction of this Court because, *inter alia*, it regularly makes, uses, offers to sell, and sells products within the State of Maryland and otherwise has continuous and systematic contacts with this jurisdiction.

### **PARTIES**

6. Plaintiff Avitech is a Maryland limited liability company that has its principal place of business in Hebron, Maryland.

7. Defendant Embrex is a North Carolina corporation that has its principal executive offices at Durham, North Carolina.

### **Count I** **DECLARATION OF PATENT INVALIDITY, NON-INFRINGEMENT AND UNENFORCEABILITY**

8. For many years Embrex was the exclusive licensee, with the right to sue for patent infringement, under U.S. Patent No. 4,458,630, issued July 10, 1984, which names Sharma et al. as the inventors (hereinafter, "the Sharma Patent"). The claims of the Sharma patent relate to a

method for controlling an immunizable disease in avian species such as chickens by injecting a vaccine into an embryonic egg (“in ovo injection”). The Sharma patent includes no claims covering a machine, an apparatus, or an article of manufacture, or parts thereof.

9. Embrex claims to be the owner of the ‘979 patent, issued August 11, 1992, entitled *Modular Injection Systems for Avian Embryos*, which relates to an injection apparatus and method for injecting poultry eggs of varying sizes and which may be presented to the injection apparatus in differing orientations. Embrex has developed and sells an automated in ovo injection machine known as *Inovoject* that it claims is based upon the Sharma and ‘979 patents.

10. Embrex has long enjoyed and continues to enjoy a monopoly in the provision of automated in ovo injection machines in that until Avitech’s emergence Embrex faced no competition in the market for automated in ovo injection machines. Currently, Embrex in ovo injection systems inoculate in excess of eighty percent (80%) of all eggs produced and nearly one hundred (100) percent of all eggs inoculated in the United States. The only alternative to use of automated equipment is manual, post-hatch administration of vaccines, which is not an effective substitute for such automation because it is significantly less efficacious, more time consuming and a more costly method of vaccination.

11. The Sharma patent expired in June 2002. Since then Avitech has developed and begun marketing a competing in ovo injection system known as the *Intelliject*® machine that combines several new technologies to insure maximum biosecurity, accuracy, and vaccine stability. This system is designed for use in a high-production capacity environment such as a modern poultry production plant.

12. Maryland's Eastern shore is home to one of the leading poultry producers in the United States. This producer is a long-time user of Embrex's in ovo injection machines. During 2003-04, it conducted side-by-side field tests in Maryland of both Avitech's *Intelliject*® and Embrex's *Inovoject* machines. In or about the last week of July 2004, the producer informed Embrex that Avitech would become a future supplier of in ovo injection machines to its plants. Several days later, Embrex filed the North Carolina Action against Avitech.

13. Upon information and belief, Embrex has maliciously and falsely publicized to potential customers of Avitech and others within the poultry production industry that the *Intelliject*® machine infringes its '979 patent, with the implied threat of legal liability if they do business with Avitech, in an attempt to interfere with Avitech's goodwill and advantageous business relations with them.

14. Upon information and belief, the '979 patent, and each claim thereof, is invalid and void under one or more of the conditions for patentability set forth in Title 35 of the U.S. Code, including but not limited to sections 101, 102, 103, and 112 thereof.

15. The *Intelliject*® machine manufactured by Avitech does not infringe any claim of the '979 patent, and said claims are so limited in terms and in light of prior art, and by virtue of limitations necessarily placed upon such claims during prosecution of the underlying application in the U.S. Patent and Trademark Office, as to render said claims ineffective in scope to cover the *Intelliject*® machine.

16. Embrex instituted the North Carolina Action and threatened Avitech's customers without reasonable and good faith belief that the *Intelliject*® machine infringes the '979 patent,

and in deliberate and wanton disregard of facts and information known to Embrex indicating that the '979 patent is invalid and/ or is not infringed by the *Intelliject*® machine.

17. For the aforesaid reasons Embrex knew or should have known that the '979 patent was invalid and/ or not infringed. This is an exceptional case within the meaning of 35 U.S.C. § 285.

18. By reason of Embrex's wrongful conduct, the '979 patent is unenforceable against Avitech.

WHEREFORE, Plaintiff Avitech demands judgment in its favor and against Defendant Embrex as follows:

A. That the Court declare, adjudge and decree that the manufacture, sale, offer of sale, and the delivery of Avitech's *Intelliject*® system or any component thereof is not an act of infringement, contributory infringement or inducement of infringement of the '979 patent in violation of 35 U.S.C. § 271;

B. That the Court declare, adjudge and decree that the '979 patent is invalid, void and unenforceable;

C. That the Court enjoin Defendant preliminarily and permanently from making further or other threats of patent infringement or actions for patent infringement against Avitech and any of its customers and potential customers;

D. That the Court retain jurisdiction over Embrex and the subject matter of this action for purposes of supervising Embrex's compliance with the final judgment;

E. That the Court award Avitech its costs and attorneys' fees in bringing and maintaining this action; and

F. That the Court grant such other and further relief as it shall deem just and proper.

**Count II**

**VIOLATION OF FEDERAL AND STATE ANTITRUST LAWS**

19. Avitech restates and realleges Paragraphs 1 - 18 inclusive and hereby incorporates the same by reference as if fully alleged herein.

20. There is a separate and distinct relevant product market and/or sub-market for the provision of in ovo injection machines.

21. The United States as a whole is a relevant geographic market for the sale and lease of in ovo injection machines.

22. Embrex possesses monopoly power and/or there is a dangerous probability that it will obtain such power, as evidenced by its dominant share of the relevant market and by its possession of power to raise prices above competitive levels and/ or to exclude competitors. The market has few suppliers and is highly concentrated by any measure of market concentration. In such a market, when a producer like Avitech incurs injury by reason of anti-competitive conduct such as that complained of here, the competitive process generally is harmed.

23. Embrex has maintained a monopoly in, and attempted to control, the aforesaid relevant market by, among other things, asserting the '979 patent against Avitech and instituting the North Carolina Action, which was later transferred to this Court and consolidated with this action; threatening Avitech's actual and potential customers with adverse legal and business consequences if they use Avitech's machine; falsely claiming that Avitech's machine infringes the '979 patent; and disparaging Avitech's business, products and prospects.

24. Embrex's claim that the injection apparatus in Avitech's *Intelliject*® machine infringes the '979 patent is objectively baseless for at least the reasons alleged below.

25. **The '979 patent: overview.** The '979 patent is directed to an injection apparatus and method for injecting vaccine into objects such as eggs. There are prior patents, publications and other prior art directed to such egg injection apparatus and method. The '979 patent is, therefore, directed to a specific alleged improvement. A copy of the '979 patent is attached hereto as **Exhibit 1**.

26. **The alleged improvement of the '979 patent.** The object of the injection apparatus of the '979 patent is the accurate and precise injection of eggs to the same height and location when the eggs may be of varying sizes and may be presented to the injection apparatus in somewhat different orientations. (*See* '979 patent (Exhibit 1) at column 1, lines 7-18)

(a) **Prior art.** The '979 patent states that egg injection assemblies known prior to the '979 patent "permitted a slight variation of vertical travel to accommodate eggs of slightly different sizes". (*Id.*, col. 2, ls. 8-13) Such prior art assemblies, however, did not address an alleged problem when the eggs "may be positioned slightly off of a direct vertical orientation; *i.e.*, they are tilted." (*Id.*, col. 2, ls. 33-34)

(b) **The invention employs horizontally and vertically "floating" injection modules.** The alleged invention of the '979 patent was to provide an injection apparatus "in which individual eggs are injected from floating injection modules in which each module can orient itself both horizontally and vertically to an individual egg even where the eggs are of different sizes and may be presented in

slightly different orientations to the other modules.” (*Id.*, col. 1, ls. 7-13) The ‘979 patent also refers to the injection modules as injectors.

27. **An injector at rest.** As can be seen in the drawings of the ‘979 patent, the injectors are designated by reference numeral 22. (‘979 patent (Exhibit 1) at Sheet 1) The injectors are supported in vertically aligned openings in two spaced-apart but connected plates, *i.e.*, in openings 21 of a tooling plate 20 (the lower plate) and openings 57 in a stabilizer plate 56 (the upper plate). The injectors have an upper portion 24 and a lower portion 23. The upper body is rectangular in cross-section and its four corners rest on the top of the tooling plate (*see id.*, Figure 4) when the tooling plate and stabilizer plate are in their uppermost or starting position.

28. **Floating enabled: disengagement of injector from plate.** The invention claimed in the ‘979 patent depends upon an injection apparatus in which the injectors disengage from the tooling plate. That is, once eggs are positioned beneath the injectors 22, the tooling plate 20, stabilizer plate 56 and resting injectors are lowered. When the lower portion 23 of the injector strikes the egg to be injected, the injector stops while the plates continue to proceed downwardly, and the injector completely disengages from the tooling plate. “At this point, the injector 22 is free to move in a translational direction independent of the tooling plate 20 to seek and come to rest upon the topmost portion of an egg, even if that egg is slightly tilted.” (‘979 patent (Exhibit 1) at col. 3, ls. 58-67) Once the injectors are in position, the bladders 60 of the stabilizer plate are inflated (*see id.*, Figures 5, 6 and 10) and the egg can then be punched by punch 31 and thereafter injected through needle 32. Once the punch and needle are retracted back into the injector, and the punching and injection operation complete, the pressurization of



the bladders is released and the tooling plate and stabilizer plate move upwardly to their uppermost position. As the tooling plate moves upwardly, its openings 21 engage the base of the rectangular upper portion 24 of the injectors to raise the injectors away from the top of the injected eggs. (*See id.*, col. 3, l. 67 through col. 4, l. 4)

29. **Floating achieved: translational movement of an injector.** The invention claimed in the '979 patent depends upon an injection apparatus in which there is translational movement of the injectors:

(a) **“Object and Summary of Invention” of the ‘979 patent.** The patent states (Exhibit 1, starting at column 2, at line 44) that each injection needle “be aligned with an egg not only with respect to the height of individual eggs, but also with eggs that may be misaligned with respect to the vertical.” (*Id.*, col. 2, ls. 46-54) The alleged invention of the ‘979 patent meets the aforesaid object by having the injector disengage from the tooling plate when it contacts the egg such that when “the injector disengages from the tooling plate, it is free to move in a translational direction independent of the tooling plate to therefore more accurately meet the top portion of an egg that may be partially misaligned with respect to the vertical.” (*Id.*, col. 2, ln.55 through col. 3, ln.4);and

(b) **Object of the patent restated.** Later, the ‘979 patent again states that “one of the objects of the invention is to provide a means by which the portion of the injector that meets an egg can move in a translational fashion, as well as in a vertical fashion.” (*Id.*, col. 4, ls. 59-62) This object is achieved by making the diameter of the opening 21 in the tooling plate 20 “somewhat larger than the

diameter of the circular cross-section of the lower portion 23" of the injector 22. This "respective difference in size between the opening 21 and the injector 22 permits the lower portion 23 of the injector 22 to move in translational fashion within the opening 21 in the tooling plate (FIG.5)." (*Id.*, col. 4, ls. 65 through col. 5, ln.6) This freedom of the injector 22 to move in a translational direction is "indicated by the phantom lines in FIG.5 independently of the tooling plate to thereby orient properly with respect to an egg 64 regardless of any misorientation of the egg 64." (*Id.*, col. 6, ln.59 through col.7, ln.3)

30. **Avitech's machine: injectors do not float, they remain vertical.** In contrast to the disengagement of the injectors from the tooling plate and the injectors' freedom to move in a horizontal or translational direction to accommodate tilted eggs in the structure of the '979 patent, the injectors in Avitech's *Intelliject*® machine do not disengage from their support plate and are not free to move in a horizontal or translational direction independent of the support plate.

31. **Avitech's patent application.** The first iteration of Avitech's *Intelliject*® machine was disclosed in Avitech's initial U.S. patent application, which was filed in the U.S. Patent and Trademark Office (PTO) on September 12, 2001 and published by the PTO as U.S. Pub. No. 20030056729 (the "Avitech published application") on March 27, 2003, more than 16 months before Embrex filed the North Carolina action. A copy of Avitech's published application is attached hereto as **Exhibit 2**. The structure and operation of Avitech's accused injection apparatus can be summarized by reference to the drawings of Avitech's published application.

32. **Structure of Avitech's injectors.** By reference to drawing Figures 5 and 7 of Avitech's published application, the injection assembly 131 is positioned adjacent to the front of the *Intelliject*® machine 100. The injection assembly does not include a separate tooling plate. Instead, it includes a single support plate 200 made of two mating half plates 330 and 332. The support plate is approximately three-quarters of an inch thick. The relationship between injectors 204 and the support plate is best illustrated in Figures 23 and 24 of the drawing. These Figures show that the injectors include a larger diameter cylindrical upper portion 378 and a smaller diameter cylindrical lower portion 376. When the support plate and injectors are in their uppermost starting position, the ledge 390 of the upper section rests on the top surface 392 of the support plate. When the support plate moves downwardly and the lowermost edge 414 of nipple 230 contacts an egg in a tray, the injector is free to move up in a vertical direction with respect to the support plate.

33. **By design, Avitech's injectors do not disengage and cannot move horizontally.** Avitech's injection apparatus is specifically designed: (a) so that the injectors do not disengage from the plate; and (b) so that the injectors are not free to move horizontally or translationally independent of the support plate. This is accomplished by having the openings 202 in plate 200 sized to the approximate diameter of the cylindrical lower portion 376 of injectors 204 so that the injectors can slide vertically in the openings but do not disengage from and do not move horizontally (translationally) with respect to the support plate. *See* Figures 23 and 24 of the published application (**Exhibit 2**).

34. **No horizontal movement of the injectors is permitted.** When the support plate 200 reaches its most downward position, the gripper rings 212 are inflated to firmly grip the

injectors. The gripper rings are cylindrical in shape and more than one-half inch in height. They ensure that the injectors are firmly gripped in the vertical position for injection of eggs. The injector then causes the needle 208 to extend and pierce the eggshell consistently in a vertical direction to inject the vaccine into the egg; the egg cannot be injected other than in a vertical direction. There is no separate punch in Avitech's injector corresponding to punch 31 of Embrex's '979 patent. Once the injection operation is complete and the needle retracts into the injector, and the support plate 200 is lifted, which raises the injectors 204 to their uppermost starting position away from the injected eggs.

35. **Summary: Avitech's machine is not covered by the subject matter of the '979 patent.** As a result, the injection apparatus of Avitech's *Intelliject*® machine cannot achieve the stated object of the '979 patent to move horizontally (or translationally) in order to meet the topmost portion of those eggs that may be misaligned with respect to the vertical. Rather, the injectors 204 of Avitech's *Intelliject*® machine always address the eggs in the same vertical direction regardless of whether the egg is tilted.

36. **Embrex's infringement claims.** The claims at the end of the '979 patent actually define the subject matter covered by the '979 patent. The '979 patent includes 21 claims. In its verified Answer to Interrogatory No. 5 of Avitech's First Set of Interrogatories, Embrex states that it contends that only claims 1, 2, 10, 11 and 12 are infringed. Of the five claims asserted by Embrex to be infringed, only claim 1 is independent. Dependent claims 2, 10, 11 and 12 depend directly from claim 1 and, therefore, as a matter of law cannot be infringed if claim 1 is not infringed.

37. **No infringement of claim 1 because no adjustment for different egg orientations.** Claim 1 expressly states that the claimed injection apparatus “is particularly suitable for accurate and precise injection of eggs to the same depth and location when the eggs are of varying sizes and may be presented to the injection apparatus in somewhat different orientations.” (‘979 patent (Exhibit 1) at col. 8, ls. 44-48) The injection apparatus of Avitech’s *Intelliject*® machine does not adjust translationally when eggs are presented to the injection apparatus in somewhat different orientations.

38. **No infringement of claim 1 because no tooling plate.** Claim 1 of the ‘979 patent goes on to require that the claimed injection apparatus must have “a generally horizontally oriented tooling plate.” (‘979 patent (Exhibit 1) at col. 8, ls. 48-50) The injection apparatus of Avitech’s *Intelliject*® machine does not include a separate, generally horizontally oriented tooling plate.

39. **No infringement of claim 1 because no disengagement of injector from plate.** Claim 1 of the ‘979 patent goes on to require that the tooling plate proceed downwardly after the injector stops upon contact with the egg “until said injector disengages from said tooling plate”. (‘979 patent (Exhibit 1) at col. 8, ls. 60-63) This limitation in claim 1 was specifically referenced by the patent examiner in the “Examiner’s Statement of Reasons for Allowance” during PTO prosecution of the ‘979 patent. A copy of the Notice of Allowability from the PTO prosecution file of the ‘979 patent, which at page 2 contains the aforesaid Examiner’s Statement, is **Exhibit 3** hereto. The injector 204 in the injection apparatus of Avitech’s *Intelliject*® machine does not disengage from the support plate 200.

40. **No infringement of claim 1 because no freedom to move translationally.**

Claim 1 of the '979 patent goes on to require further that the injector must also be "free to move in a translational direction independent of said tooling plate." ('979 patent (Exhibit 1) at col. 8, ls. 63-65) This limitation in claim 1 was also specifically referenced by the patent examiner in the aforesaid Examiner's Statement. The injector 204 of the injection apparatus in Avitech's *Intelliject*® machine is never free to move in a translational direction independent of its support plate 200.

41. **No reasonable basis to claim infringement.** For at least the reasons alleged above, no reasonable person having ordinary skill in the art could objectively conclude that the injection apparatus of Avitech's *Intelliject*® machine infringes claim 1 of the '979 patent or any of the claims dependent thereon asserted by Embrex to be an infringement.

42. **Embrex's knowledge of non-infringement.** Prior to filing the North Carolina Action, Embrex knew that Avitech's *Intelliject*® system did not infringe the '979 patent in the foregoing ways, among others, and/or acted in reckless disregard of the aforesaid facts which were known to Embrex, because its agents and employees had, among other things:

- (a) examined and studied Avitech's *Intelliject*® machine at trade shows;
- (b) examined and studied Avitech's product literature and publicly disclosed information about the *Intelliject*® machine;
- (c) scrutinized working versions of the *Intelliject*® machine during November, 2003 – July 2004 when side-by-side field-testing was ongoing in Maryland at a customer's facilities;
- (d) studied Avitech's published application which disclosed the structure and operation of Avitech's injection apparatus; and

- (e) upon information and belief, Embrex had conducted other and further competitive product intelligence gathering activities directed at learning the nature and structure of Avitech's technology.

43. **Embrex's infringement action is objectively baseless.** A reasonable person and/or litigant in possession of the foregoing facts and information, acting with due care and normal diligence, would necessarily and readily conclude that the injection apparatus of Avitech's Intelliject® machine is not covered by any claim of the Embrex '979 patent and, therefore, does not infringe the patent. Accordingly, no reasonable litigant armed with Embrex's knowledge at the time could realistically expect success on the merits of an infringement action against Avitech based upon the '979 patent.

44. Upon information and belief, within days of filing the North Carolina action and thereafter, Embrex communicated to its many customers and to Avitech's customers and potential customers, and otherwise published, the filing of the North Carolina action and the existence of the present patent infringement controversy in order to impede Avitech's commercialization of its competing *Intelliject*® machine and to deter such customers from doing business with Avitech.

45. Embrex's North Carolina Action was objectively baseless and a "sham" lawsuit brought in bad faith with specific intent to monopolize the aforesaid relevant market, and there is a dangerous probability that Embrex will succeed in obtaining a monopoly thereby. The purpose and effect of this conduct is to interfere directly with the business and property of Avitech, including its contractual and advantageous business relations with poultry producers and others, and to impose collateral injury upon Avitech's business and property rather than to obtain a justifiable legal remedy.

46. Avitech is a direct competitor of Embrex in the aforesaid relevant market.

Embrex's monopolizing and/or attempt to monopolize the relevant market has injured competition and caused, and will continue to cause, damage to Avitech because, among other things, of having incurred legal and professional fees and costs associated with defending the North Carolina Action. Any adverse publicity, delay, expense or other collateral injury or damage imposed upon Avitech by reason of Embrex's sham lawsuit and wrongful conduct would and will inure directly, substantially and immediately to Embrex's competitive advantage and benefit, and Embrex knew and believes this.

47. The conduct of Embrex complained of herein violates the antitrust laws of the Section 2 of the Sherman Act, 15 U.S.C. § 2, and its equivalent provision under Maryland law.

48. Unless preliminarily and permanently enjoined by this Court, Embrex will continue to violate the aforesaid laws.

WHEREFORE, Plaintiff Avitech demands judgment in its favor and against Defendant Embrex as follows:

A. That the Court declare, adjudge and decree that Defendant has monopolized and/or attempted to monopolize trade and commerce in violation of Section 2 of the Sherman Act, 15 U.S.C. § 2 and/or the equivalent provision under Maryland law;

B. That the Court award Avitech treble the amount of its actual damages plus interest;

C. That the Court issue a permanent injunction enjoining Defendant, and its officers, agents, directors, employees, and all other persons acting on its behalf or in active concert or participation with it or them, directly or indirectly, with any of them who receive notice, from continuing to violate the antitrust laws;



D. That the Court retain jurisdiction over Embrex and the subject matter of this action for purposes of supervising Embrex's compliance with the final judgment;

E. That the Court award Avitech its costs and attorneys' fees, including interest thereon, in bringing and maintaining this action; and

F. That the Court grant such other and further relief as it shall deem just and proper.

**DEMAND FOR JURY TRIAL**

Plaintiff hereby requests a jury trial on all the triable issues raised in this Complaint.

Respectfully submitted,

AVITECH, L.L.C.

/s/

By \_\_\_\_\_  
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