

510(k) Summary of Safety & Effectiveness

This 510(k) Summary of Safety and Effectiveness for the EBI XFIX DFS[®] Rail System is provided as required per Section 513(I)(3) of the Federal Food, Drug and Cosmetic Act.

1. **Sponsor:** Electro-Biology, Inc. **Contact Person:** Jonas Wilf
100 Interpace Parkway Telephone: (973) 299-9022
Parsippany, NJ 07054

Date prepared: June 8, 1999

2. **Proprietary Name:** EBI XFIX DFS[®] Rail System
Common Name: External Fixation Device
Classification Names: Single Multiple Component Metallic Bone
Fixation Appliances and Accessories, 21 CFR
888.3030.

3. **Predicate or legally marketed devices that are substantially equivalent:**

- EBI XFIX DynaFix Fixation System – Electro-Biology, Inc.
- The Adult Limb Reconstruction System – Orthofix, Inc.
- Heidelberg External Fixator – Smith and Nephew, Inc.

4. **Description of the device:** The system consists of fixation components and implantable bone screws. The EBI XFIX DFS Rail System is utilized in the following manner: bone screws are inserted through the patient skin and soft tissue and into the bone. The fixator frame of the EBI XFIX DFS Rail System is attached to the shanks of the bone screws.

5. **Intended Use:** The EBI XFIX DFS[®] Rail System is a unilateral external fixation device intended for use in the treatment of bone conditions including limb lengthening, corrective osteotomies, arthrodesis, fracture fixation, acute or gradual multiplanar correction and other bone conditions amenable to treatment by use of the external fixation modality.

6. **Materials:** The components of the system may be manufactured from materials such as Aluminum, Stainless Steel, Pyromet[®] 718, and Ti-6Al-4V ELI.

7. **Comparison of the technological characteristics of the device to predicate devices:**

The EBI XFIX DFS[®] Rail System is substantially equivalent to the following predicate EBI and competitive devices. The components of the EBI XFIX DFS[®]

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Rail System are fabricated from the same materials as the components of the currently marketed **EBI XFIX DynaFix Fixation System**.

- The bone screw clamps of the **EBI XFIX DFS[®] Rail System**, like the bone screw clamps currently marketed competitive **Adult Limb Reconstruction System – Orthofix, Inc.** and **EBI XFIX DynaFix Fixation System**, are designed for attachment to the bone screws. In addition the bone screw clamps of the **EBI XFIX DFS[®] Rail System** and the competitive **Adult Limb Reconstruction System – Orthofix, Inc** are designed to track along the length of the rail.
- The **Compression Distraction Clicker** of the design of the **EBI XFIX DFS[®] Rail System**, like the currently marketed competitive **Adult Limb Reconstruction System – Orthofix, Inc.** and **Heidelberg External Fixator-Smith & Nephew**, is designed to provide the surgeon the ability to compress or distract the bone of the patient postoperatively for optimal treatment.

The **EBI XFIX DFS[®] Rail System** like the currently marketed **EBI XFIX DynaFix Fixation System** and competitive **Adult Limb Reconstruction System – Orthofix, Inc.** and **Heidelberg External Fixator-Smith & Nephew**, is provided non-sterile. There are no significant differences between the **EBI SpineLink[™] System** and other currently marketed spinal systems. It is substantially equivalent* to the predicate devices in regards to intended use, materials and function.

*Any statement made in conjunction with this submission regarding a determination of substantial equivalence to any other product is intended only to relate to whether the product can be lawfully marketed without pre-market approval or reclassification and is not intended to be interpreted as an admission or any other type of evidence in patent infringement litigation. [Establishment Registration and Pre-market Notification Procedures, Final Regulation, Preamble, August 23, 1977, FR 42520 (Docket No. 76N-0355.)]



Food and Drug Administration
9200 Corporate Boulevard
Rockville MD 20850

AUG 19 1999

Mr. Jon Caparotta
Manager, Regulatory Affairs
Electro-Biology, Incorporated
100 Interpace Parkway
Parsippany, New Jersey 07054

Re: K991941
Trade Name: EBI XFIX DFS® Rail System
Regulatory Class: II
Product Code: KTT
Dated: June 8, 1999
Received: June 9, 1999

Dear Mr. Caparotta:

We have reviewed your Section 510(k) notification of intent to market the device referenced above, and we have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act). You may, therefore, market the device, subject to the general control provisions of the Act. The general control provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (Premarket Approval), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 895.

A substantially equivalent determination assumes compliance with the current Good Manufacturing Practice requirement, as set forth in the Quality System Regulation (QS) for Medical Devices: General Regulation (21 CFR Part 820), and that, through periodic (QS) inspections, the Food and Drug Administration (FDA) will verify such assumptions. Failure to comply with the GMP regulation may result in regulatory action. In addition, FDA may publish further announcements concerning your device in the Federal Register. Please note: this response to your premarket notification submission does not affect any obligation you might have under sections 531 through 542 of the Act for devices under the Electronic Product Radiation Control provisions, or other Federal laws or regulations.

This letter will allow you to begin marketing your device as described in your 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801 and additionally 809.10 for in vitro diagnostic devices), please contact the Office of Compliance at (301) 594-4659. Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR 807.97). Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address "<http://www.fda.gov/cdrh/dsmamain.html>".

Sincerely yours,



84- Celia M. Witten, Ph.D., M.D.

Director
Division of General and
Restorative Devices
Office of Device Evaluation
Center for Devices and
Radiological Health

Enclosure

K991941

Statement of Indications for Use:

The EBI XFIX DFS[®] Rail System is a unilateral external fixation device intended for use in the treatment of bone conditions including limb lengthening, corrective osteotomies, arthrodesis, fracture fixation, acute or gradual multiplanar correction and other bone conditions amenable to treatment by use of the external fixation modality.

Russell L. Kaplan Sr. MD

(Division Sign-Off)
Division of General Restorative Devices
510(k) Number K991941

Prescription Use X
(Per 21 CFR 801.109)