

### 3. 510(k) Summary of Safety and Effectiveness

MAR 7 2013

This summary of 510(k) safety and effectiveness information is being submitted in accordance with the requirements of 21 CFR 807.92(c).

**510(k) Owner:** Micro Therapeutics d/b/a ev3 Neurovascular  
9775 Toledo Way  
Irvine, CA 92618  
Establishment Registration No. 2029214

**Contact Person:** Analia Staubly  
Regulatory Affairs Specialist  
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**Date Summary Prepared:** February 26, 2013

**Trade Name of Device:** SilverSpeed™ Hydrophilic Guidewire  
Mirage™ Hydrophilic Guidewire  
X-celerator™ Hydrophilic Guidewire  
X-pedion™ Hydrophilic Guidewire

**Common Name of Device:** Hydrophilic Guidewire

**Classification of Device:** Primary  
21 CFR 870.1330  
Guide, Wire, Catheter, Neurovasculature  
MOF, Class II

Secondary  
21 CFR 870.1330  
Guidewire, Catheter  
DQX, Class II

**Predicate Device:** Micro Therapeutics, Inc. d/b/a ev3 Neurovascular,  
SilverSpeed™ Hydrophilic Guidewire K982543  
K993257

X-celerator™ Hydrophilic Exchange Guidewire K010497  
Originally, cleared under trade name: SilverSpeed™  
Hydrophilic Guidewire

X-pedion™ Hydrophilic Guidewire K001454  
Originally, cleared under trade name: SilverSpeed™  
Hydrophilic Guidewire

Mirage™ Hydrophilic Guidewire K002212

**Device Description:** The Hydrophilic Guidewire is a stainless steel guidewire with a radiopaque, platinum distal coil. The guidewire is hydrophilically coated on the distal portion. For the X-celerator™ Hydrophilic Guidewire labeled as an "Exchange" guidewire, the proximal portion is coated with polytetrafluoroethylene (PTFE). The Exchange guidewire facilitates the exchange of one interventional device for another, while maintaining guidewire position in the anatomy.

The following modifications have been made to the device:

- Change in the degree of polymerization with the base coat material.
- Elimination of Brown Oxide pigment from base coat material.

**Intended Use:** The Hydrophilic Guidewire is indicated for general intravascular use to aid in the selective placement of catheters in the peripheral, visceral and cerebral vasculature during diagnostic and/or therapeutic procedures.

**Non-Clinical Performance Data:** The following tests were performed to support the changes to the Hydrophilic Guidewires:

Biocompatibility Testing

- USP Physicochemical Extraction
- Cytotoxicity: ISO MEM Elution Using L-929 Mouse Fibroblast Cells
- Sensitization: ISO Guinea Pig Maximization Sensitization Test
- ISO Intracutaneous Reactivity Test
- ISO Acute Systemic Injection Test
- Material Mediated Rabbit Pyrogen Test
- ASTM Hemolysis Assay – Direct Contact Method
- Complement Activation C3a and SC5b-9 Assay
- Four Hour Thromboresistance Evaluation in Dogs

Bench Testing

- Visual Inspection
- Tip Buckling (Flexibility)
- Tip Shapeability
- Tip Retention
- Coating Adherence
- Friction Test
- Torque Response

Shelf-life Testing

- 36-month Accelerated Aging

In addition, no clinical or animal testing was performed as there is no change in the indications for use or the fundamental scientific technology of the device.

**Substantial  
Equivalence  
Determination**

The information presented in the 510(k) shows that the Hydrophilic Guidewires are substantially equivalent to the predicate devices previously in regards to the identical indications for use, device design, similar device materials, device dimensions, and materials comprising its accessories and final packaging, and design specifications.



March 7, 2013

Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Center – WO66-G609  
Silver Spring, MD 20993-0002

Micro Therapeutics, Inc. d/b/a ev3 Neurovascular  
Analia Staubly  
Regulatory Affairs Specialist  
9775 Toledo Way  
Irvine, California 92618

Re: K124007

Trade/Device Name: SilverSpeed™, Mirage™, X-celerator™ Exchange, and  
X-pedion™ Hydrophilic Guidewires

Regulation Number: 21 CFR 870.1330

Regulation Name: Catheter Guide Wire

Regulatory Class: Class II

Product Code: MOF, DQX

Dated: December 21, 2012

Received: December 26, 2012

Dear Ms. Staubly:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate 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) that do not require approval of a premarket approval application (PMA).

You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you; however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set

forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

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If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please go to <http://www.fda.gov/AboutFDA/CentersOffices/CDRH/CDRHOffices/ucm115809.htm> for the Center for Devices and Radiological Health's (CDRH's) Office of Compliance. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,

**Victor Krauthamer -S**

Victor Krauthamer, Ph.D.  
Acting Director  
Division of Neurological  
and Physical Medicine Devices  
Office of Device Evaluation  
Center for Devices and Radiological Health

Enclosure

## Indications for Use

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510(k) Number: K124007

Device Name: SilverSpeed™, Mirage™, X-celerator™ Exchange, and X-pedion™ Hydrophilic Guidewires

### Indications For Use:

The SilverSpeed™, Mirage™, X-celerator™ Exchange, and X-pedion™ Hydrophilic Guidewires are indicated for general intravascular use to aid in the selective placement of catheters in the peripheral, visceral and cerebral vasculature during diagnostic and/or therapeutic procedures.

Prescription Use  (Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use \_\_\_\_\_ (21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

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Concurrence of CDRH, Office of Device Evaluation (ODE)

Victor Krauthamer -S 2013.03.05 18:38:20 -05'00' _____ (Division Sign Off) Division of Neurological and Physical Medicine Devices (DNPMD)  510(k) Number <u>    K124007    </u>
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