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**B. 510(k) SUMMARY (as required by 21 CFR 807.92)**

FEB 6 2006

**Columbus (CR) Total Knee System**  
December 1, 2005

**COMPANY:** Aesculap<sup>®</sup>, Inc.  
3773 Corporate Parkway  
Center Valley, PA 18034  
Establishment Registration Number: 2916714

**CONTACT:** Kathy A. Racosky  
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[kathy.racosky@aesculap.com](mailto:kathy.racosky@aesculap.com) (email)

**TRADE NAME:** Columbus (CR)Total Knee System

**COMMON NAME:** Total Knee System

**CLASSIFICATION NAME:** Knee joint patellofemorotibial polymer/metal/polymer semi-constrained cemented prosthesis

**REGULATION NUMBER:** 888.3560

**PRODUCT CODE:** JWH

**SUBSTANTIAL EQUIVALENCE**

Aesculap<sup>®</sup>, Inc. believes that the Columbus (CR)Total Knee System additions are substantially equivalent to Aesculap's Columbus Total Knee System (K022672), Smith & Nephew's revision knee system (K043440) and PLUS Orthopedic's VKS/TC Plus revision knee (K032215), PLUS Orthopedic's RT-Plus Solution and RT-Plus Modular Knee (K023667), and Howmedica Osteonics's Tibial Tray Screw Hole Plugs (K032479).

**DEVICE DESCRIPTION**

The cemented Columbus (CR)Total Knee System additions include a CRA/PSA tibial tray and hemispacers, commonly known as wedges. The CRA/PSA tibial tray and wedges can be used with the existing femoral component, insert, patella and attachment mechanism of the Columbus (CR) Total Knee System cleared via K022672 or with the femoral component and insert of the Columbus (PS) Total Knee System cleared via K030367. The CRA/PSA tibial tray and wedges are manufactured from CoCrMo.

**INDICATIONS FOR USE**

The Columbus (CR) Total Knee System is indicated for use in reconstruction of the diseased knee joint caused by osteoarthritis, rheumatoid arthritis, post-traumatic arthritis, the need to revise failed arthroplasties or osteotomies where pain, deformity or dysfunction persist, and for patients suffering from correctable valgus or varus deformity and moderate flexion contracture.

The Columbus Knee (CR) is designed for use with bone cement.

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**TECHNOLOGICAL CHARACTERISTICS(compared to Predicate(s))**

The CRA/PSA tibial tray and wedges are offered in similar in shapes and sizes as the predicate devices. The material used for the Aseculap device is the same as that used to manufacture the predicate devices.

**PERFORMANCE DATA**

All required testing per "Draft Guidance for the Preparation of Premarket Notifications (510(k)s) Applications for Orthopedic Devices-The Basic Elements" were done where applicable. In addition, testing per the

- "Guidance Document for Testing Orthopedic Implants with Modified Metallic Surfaces Apposing Bone or Bone Cement",
- "Guidance for Industry on the Testing of Metallic Plasma Sprayed Coatings on Orthopedic Implants to Support Reconsideration of Postmarket Surveillance Requirements"
- "Guidance Document for Testing Non-articulating, "Mechanically Locked" Modular Implant Components", and
- "Data Requirements for Ultrahigh Molecular Weight Polyethylene (UHMPE) Used in Orthopedic Devices" was completed where applicable.



Food and Drug Administration  
9200 Corporate Boulevard  
Rockville MD 20850

FEB 6 2006

Ms. Kathy A. Racosky  
Regulatory Affairs Associate  
Aesculap, Inc.  
3773 Corporate Parkway  
Center Valley, Pennsylvania 18034

Re: K053390  
Trade/Device Name: Columbus (CR) Total Knee System  
Regulation Number: 21 CFR 888.3560  
Regulation Name: Knee joint patellofemorotibial polymer/metal/polymer semi-constrained cemented prosthesis  
Regulatory Class: II  
Product Code: JWH  
Dated: January 12, 2006  
Received: January 13, 2006

Dear Ms. Racosky:

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.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), 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 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

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CFR Part 807); labeling (21 CFR Part 801); 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.

This letter will allow you to begin marketing your device as described in your Section 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), please contact the Office of Compliance at (240) 276-0120. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). 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) 443-6597 or at its Internet address <http://www.fda.gov/cdrh/industry/support/index.html>.

Sincerely yours,



Mark N. Melkerson  
Acting Director  
Division of General, Restorative and Neurological Devices  
Office of Device Evaluation  
Center for Devices and Radiological Health

Enclosure

