



Food and Drug Administration  
10903 New Hampshire Avenue  
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Silver Spring, MD 20993-0002

October 29, 2014

Aesculap® Implant Systems, Incorporated  
Ms. Lisa M. Boyle  
Regulatory Affairs Manager  
3773 Corporate Parkway  
Center Valley, Pennsylvania 18034

Re: K142150

Trade/Device Name: AIS Modulift VBR System  
Regulation Number: 21 CFR 888.3060  
Regulation Name: Spinal intervertebral body fixation orthosis  
Regulatory Class: Class II  
Product Code: MQP  
Dated: August 4, 2014  
Received: August 5, 2014

Dear Ms. Boyle:

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.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Division of Industry and Consumer Education 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>. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR 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 Industry and Consumer Education 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,

**Ronald P. Jean -S** for

Mark N. Melkerson  
Director  
Division of Orthopedic Devices  
Office of Device Evaluation  
Center for Devices and  
Radiological Health

Enclosure

## Indications for Use

510(k) Number (if known)

K142150

Device Name

AIS Modulift VBR System

Indications for Use (Describe)

The AIS Modulift VBR System is indicated for use in the thoracolumbar spine (T1 to L5) for partial or total replacement of a collapsed, damaged, or unstable vertebral body due to tumor or trauma (i.e. fracture). The AIS Modulift VBR System is intended for use with supplemental spinal fixation systems such as the Aesculap MACS TL or S4 Systems. The Aesculap Modulift VBR System may be used with bone graft.

Type of Use (Select one or both, as applicable)

Prescription Use (Part 21 CFR 801 Subpart D)

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

### CONTINUE ON A SEPARATE PAGE IF NEEDED.

This section applies only to requirements of the Paperwork Reduction Act of 1995.

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**B. 510(k) SUMMARY (as required by 21 CFR 807.92)*****Aesculap Implant Systems, LLC. (AIS) Modulift (Modulift) VBR System***  
*October 28, 2014*

**COMPANY:** Aesculap® Implant Systems, Inc.  
3773 Corporate Parkway  
Center Valley, PA 18034  
Establishment Registration Number: 3005673311

**CONTACT:** Lisa M. Boyle  
800-258-1946 (phone)  
610-791-6882 (fax)

**TRADE NAME:** AIS Modulift VBR System

**COMMON NAME:** Adjustable Vertebral Body Replacement Device

**CLASSIFICATION NAME:** Spinal Vertebral Body Replacement Device

**REGULATION NUMBER:** 888.3060

**PRODUCT CODE:** MQP

**PURPOSE FOR PREMARKET NOTIFICATION**

The AIS Modulift VBR System described in this submission introduces medium and large (15°) footplates that are used with the VBR's currently cleared in the existing product line under K133802 /K110864.

**DEVICE DESCRIPTION**

The AIS Modulift VBR System is an adjustable vertebral body replacement device that is implanted into the vertebral body space to improve stability of the spine. The system is comprised of spacers and foot plates of various heights and sizes to fit the anatomical needs of a wide variety of patients. The device can be adjusted to the required height after implantation. Once it is adjusted to the desired height the column is mechanically locked in place by means of locking screws (grub screws). Each spacer has an axial hole to allow grafting material to be packed inside the device. Spikes on the end of the foot plates improve the anchoring of the implant to the vertebral body. The foot plates of the device are available in various lordotic and kyphotic angles. Components are manufactured from titanium alloy (Ti6Al4V) per ASTM F-136, and cobalt chrome (CoCr) per ASTM F1537.

**INDICATIONS FOR USE**

The AIS Modulift VBR System is indicated for use in the thoracolumbar spine (T1 to L5) for partial or total replacement of a collapsed, damaged, or unstable vertebral body due to tumor or trauma (i.e. fracture). The AIS Modulift VBR System is intended for use with

supplemental spinal fixation systems such as the Aesculap MACS TL or S4 Systems. The AIS Modulift VBR System may be used with bone graft.

### **TECHNOLOGICAL CHARACTERISTICS(compared to Predicates)**

As is established in this submission, the AIS Modulift VBR System is a mechanically adjustable vertebral body replacement device that is substantially equivalent to other predicate devices cleared by FDA. The subject device is shown to be substantially equivalent and has the same technological characteristics to its predicate devices through comparison in design, intended use, material composition, function and range of sizes.

### **PERFORMANCE DATA**

As recommended by the FDA Guidance for Spinal System 510(k)'s, non-clinical testing was performed to demonstrate that the AIS Modulift VBR System is substantially equivalent to other predicate devices. The following testing was performed:

- Expulsion per ASTM Draft Standard F-04.25.02.02

The results of the testing showed that the subject AIS Modulift VBR System meets or exceeds the performance of the predicate devices, and the device is therefore found to be substantially equivalent.

### **PREDICATE DEVICE**

- Primary Predicate: Aesculap Modulift VBR System (K110864/K133802)
- Ulrich Obelisc VBR Systems (K060416)