



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

January 23, 2015

Mr. William Bolt
Sr. Vice President, Global Product Operations
ABIOMED, Inc.
22 Cherry Hill Drive
Danvers, MA 01923

Re: H140001
HUD #12-0285
Impella RP System
Filed: September 10, 2014
Procode: OJE

Dear Mr. Bolt:

The Center for Devices and Radiological Health (CDRH) of the Food and Drug Administration (FDA) has completed its review of your humanitarian device exemption (HDE) application for the Impella RP System. This device is indicated for providing circulatory assistance for up to 14 days in pediatric or adult patients with a body surface area $\geq 1.5 \text{ m}^2$ who develop acute right heart failure or decompensation following left ventricular assist device implantation, myocardial infarction, heart transplant, or open-heart surgery. We are pleased to inform you that your HDE is approved. You may begin commercial distribution of the device in accordance with the conditions of approval described below.

The sale, distribution, and use of this device are limited to prescription use in accordance with 21 CFR 801.109 within the meaning of section 520(e) of the Federal Food, Drug, and Cosmetic Act (the FD&C Act) under the authority of section 515(d)(1)(B)(ii) of the FD&C Act. In addition, in order to ensure the safe use of the device, FDA has further restricted the device within the meaning of section 520(e) of the FD&C Act under the authority of section 515(d)(1)(B)(ii) of the FD&C Act insofar as (1) the labeling shall specify the training requirements for practitioners who may use the device as approved in this order and (2) the sale, distribution, and use must not violate sections 502(q) and (r) of the FD&C Act.

Expiration dating for the Impella RP Catheter and the Impella Purge Cassette has been established and approved at 2 years.

Continued approval of this HDE is contingent upon the submission of periodic reports, required under 21 CFR 814.126, at intervals of one year (unless otherwise specified) from the date of approval of the original HDE. Two (2) copies of this report, identified as "Annual Report"

(please use this title even if the specified interval is more frequent than one year) and bearing the applicable HDE reference number, should be submitted to the address below. The Annual Report should indicate the beginning and ending date of the period covered by the report and should include the information required by 21 CFR 814.126.

In addition to the above, an HDE holder is required to maintain records of the names and addresses of the facilities to which the HUD has been shipped, correspondence with reviewing institutional review boards (IRBs), as well as any other information requested by a reviewing IRB or FDA.

This is a reminder that as of September 24, 2014, class III devices are subject to certain provisions of the final UDI rule. These provisions include the requirement to provide a UDI on the device label and packages (21 CFR 801.20), format dates on the device label in accordance with 21 CFR 801.18, and submit data to the Global Unique Device Identification Database (GUDID) (21 CFR 830 Subpart E). For more information on these requirements, please see the UDI website, <http://www.fda.gov/udi>.

In addition to the Annual Report requirements, you must provide the following data in post-approval study (PAS) reports for each PAS listed below. Two (2) copies of each report, identified as “OSB Lead HDE Post-Approval Study Report” in accordance with how the study is identified below and bearing the applicable HDE reference number, should be submitted to the address below.

1. *OSB PAS - Impella RP Prospective Study*: This study will be conducted as per protocol dated October 17, 2014, version 1.0 received via interactive email on November 25, 2014. This study will be conducted to monitor the postmarket safety and effectiveness of the Impella RP device. This will be a single-arm multicenter study of patients with right ventricular failure in need of hemodynamic support. Patients will be followed at 30 and 180 days post device explant.

A sample size of 30 consecutive patients will be enrolled from up to 15 US sites. The patient population will be similar to the RECOVER RIGHT IDE study population.

The primary safety endpoint of survival at 30 days post device explant or hospital discharge (whichever is longer), or to induction of anesthesia to a longer term therapy, which includes a heart transplant or an implant of a surgical RVAD, will be descriptively reported.

The secondary safety endpoints are major adverse events at hospital discharge or to induction of anesthesia to a longer term therapy, including death (any cause of death and cardiac death), major bleeding, hemolysis, pulmonary embolism. The secondary effectiveness endpoint of improvement in hemodynamic parameters (cardiac index, central venous pressure and LVAD flows) will be assessed after initiation of Impella RP support. Survival only will be evaluated at 30 days and 180 days post device explant. All secondary endpoints will be descriptively reported.

2. *OSB PAS - Impella RP Pediatric Study*: This study will be conducted as per protocol dated November 10, 2014, version 1.0, received via interactive email on November 25, 2014, to monitor postmarket safety and effectiveness of the Impella RP device in pediatric patients. This will be a single-arm multicenter study of pediatric patients under 18 years of age with $BSA \geq 1.5m^2$ who developed right ventricular failure and were supported with the Impella RP device. The patient data at baseline and from implant through 180 days post device explant will be retrospectively collected.

A total of 15 consecutive pediatric patients or all pediatric patients supported with the Impella RP over a 5-year period (whichever comes first) will be enrolled in the study at a minimum of 5 participating clinical centers.

The primary safety endpoint of survival at 30 days post device explant or hospital discharge (whichever is longer), or to induction of anesthesia to a longer term therapy, which includes a heart transplant or an implant of a surgical RVAD, will be descriptively reported.

The secondary safety endpoints are major adverse events including death (any cause of death and cardiac death), major bleeding, hemolysis, pulmonary bleeding at hospital discharge or to induction of anesthesia to a longer term therapy. The secondary effectiveness endpoint of improvement in hemodynamic parameters (cardiac index, central venous pressure and LVAD flows) assessed after initiation of Impella RP support. Survival only will be evaluated at 30 days and 180 days post device explant. All secondary endpoints will be descriptively reported.

Please be advised that the results from the two post-approval studies should be included in the labeling as these data become available. Any updated labeling must be submitted to FDA in the form of an HDE Supplement.

FDA would like to remind you that you are required to submit separate PAS Progress Reports for the two studies every six months during the first two years and annually thereafter. For more information on post-approval studies, see the FDA guidance document entitled, "Procedures for Handling Post-Approval Studies Imposed by PMA Order"

<http://www.fda.gov/MedicalDevices/DeviceRegulationandGuidance/GuidanceDocuments/ucm070974.htm>

Be advised that the failure to conduct any such study in compliance with the good clinical laboratory practices in 21 CFR part 58 (if a non-clinical study subject to part 58) or the institutional review board regulations in 21 CFR part 56 and the informed consent regulations in 21 CFR part 50 (if a clinical study involving human subjects) may be grounds for FDA withdrawal of approval of the HDE.

Before making any change affecting the safety or effectiveness of the device, you must submit an HDE supplement or an alternate submission (30-day notice) in accordance with 21 CFR 814.39 except a request for a new indication for use of for a humanitarian use device (HUD). A request for a new indication for use for an HUD shall comply with the requirements set forth in 21 CFR

814.110 which includes obtaining a new designation of HUD status for the new indication for use and submission of an original HDE application in accordance with §814.104. The application for the new indication for use may incorporate by reference any information or data previously submitted to the agency.

You are reminded that many FDA requirements govern the manufacture, distribution, and marketing of devices. For example, in accordance with the Medical Device Reporting (MDR) regulation, 21 CFR 803.50 and 21 CFR 803.52, you are required to report adverse events for this device. Manufacturers of medical devices, including in vitro diagnostic devices, are required to report to FDA no later than 30 calendar days after the day they receive or otherwise becomes aware of information, from any source, that reasonably suggests that one of their marketed devices:

1. May have caused or contributed to a death or serious injury; or
2. Has malfunctioned and such device or similar device marketed by the manufacturer would be likely to cause or contribute to a death or serious injury if the malfunction were to recur.

Additional information on MDR, including how, when, and where to report, is available at www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm.

In accordance with the recall requirements specified in 21 CFR 806.10, you are required to submit a written report to FDA of any correction or removal of this device initiated by you to: (1) reduce a risk to health posed by the device; or (2) remedy a violation of the act caused by the device which may present a risk to health, with certain exceptions specified in 21 CFR 806.10(a)(2). Additional information on recalls is available at www.fda.gov/Safety/Recalls/IndustryGuidance/default.htm.

This device may not be sold for an amount that exceeds the costs of research and development, fabrication, and distribution of the device. See section 520(m)(3) of the Federal Food, Drug, and Cosmetic Act.

Failure to comply with any post-approval requirement constitutes a ground for withdrawal of approval of an HDE. The introduction or delivery for introduction into interstate commerce of a device that is not in compliance with its conditions of approval is a violation of law.

CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading. CDRH will notify the public of its decision to approve your HDE by making available a summary of the safety and probable benefit of the device upon which the approval was based. The information can be found on the FDA CDRH Internet Home Page located at <http://www.fda.gov/MedicalDevices/ProductsandMedicalProcedures/DeviceApprovalsandClearance/HDEApprovals/ucm161827.htm>. Written requests for this information can also be made to the Dockets Management Branch (HFA-305), Food and Drug Administration, 5630 Fishers Lane, Rm. 1061, Rockville, MD 20852. The written request should include the HDE number or docket

number. Within 30 days from the date that this information is placed on the Internet, any interested person may seek review of this decision by requesting an opportunity for administrative review, either through a hearing or review by an independent advisory committee, under section 515(g) of the FD&C Act.

You are reminded that, as soon as possible and before commercial distribution of your device, you must submit an amendment to this HDE submission with copies of all approved labeling in final printed form. The labeling will not routinely be reviewed by FDA staff when HDE applicants include with their submission of the final printed labeling a cover letter stating that the final printed labeling is identical to the labeling approved in draft form. If the final printed labeling is not identical, any changes from the final draft labeling should be highlighted and explained in the amendment.

Any information to be submitted to FDA regarding this HDE should be submitted in triplicate, unless otherwise specified, to the address below and should reference the above HDE number to facilitate processing:

U.S. Food and Drug Administration
Center for Devices and Radiological Health
HDE Document Control Center – WO66-G609
10903 New Hampshire Avenue
Silver Spring, MD 20993-0002

If you have any questions concerning this approval order, please contact Changfu Wu, Ph.D., at (301) 796-6086.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Bram D. Zuckerman". The signature is written in a cursive style and is positioned above the typed name.

for
Bram D. Zuckerman, M.D.
Director
Division of Cardiovascular Devices
Office of Device Evaluation
Center for Devices and Radiological Health