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Medacta International

**510(k) Summary**

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Contact Person: Mr. Adam Gross
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Date Prepared: September 10, 2013

DEVICE INFORMATION

Trade/Proprietary Name: Mpact Extension
Common Name: Total Hip Acetabular Components
Class II

Classification Name:
21 CFR 888.3358 - Hip joint, femoral metal/polymer/metal semiconstrained porous-coated uncemented prosthesis
Device Product Code: LPH

21 CFR 888.3353 - Hip joint metal/ceramic/polymer semi-constrained cemented or nonporous uncemented prosthesis
Device Product Code: LZO

Predicate Devices:

| 510(k) | Product | 510(k) Holder | Clearance Date |
|---|---|---|---|
| K103721 | Mpact Acetabular System | Medacta International | 3/21/2011 |
| K122641 | Mpact Extension | Medacta International | 9/28/2012 |
| K033338 | Pinnacle Revision Cup System | Depuy | 1/8/2004 |

Product Description

The Mpact Extension components are designed to be used with the Medacta Total Hip Prosthesis System. The Mpact Extension consists of the following components:

Revised dimensions and labeling of the acetabular shells (Ti-6Al-4V, ASTM F136 and Ti, ASTM F1580 porous coating) cleared under K103721 and K122641 to correlate to the actual external diameter including the porous coating.

Modified design of the hooded acetabular liners (UHMWPE ISO 5834-2 Type1 and HighCross® HXUHMWPE) cleared under K103721 and K122641. The modification of the hooded liner is specific to the external side of the anti-luxation shoulder, creating a chamfer in order to reduce the risk of psoas irritation.

Additional sizes of the cancellous bone screws (flat head, 6.5mm diameter, Ti-6Al-4V ISO 5832-3) cleared under K103721 with lengths of 50, 55, 60, 65, and 70mm.

Indications for Use

The hip prosthesis is designed for cementless use in total hip arthroplasty in primary or revision surgery.

The patient should be skeletally mature.

The patient's condition should be due to one or more of:

- Severely painful and/or disabled joint: as a result of osteoarthritis, posttraumatic arthritis, rheumatoid arthritis or psoriatic arthritis, congenital hip dysplasia, ankylosing spondylitis.
- Avascular necrosis of the femoral head.
- Acute traumatic fracture of the femoral head or neck.
- Failure of previous hip surgery: joint reconstruction, internal fixation, arthrodesis, hemiarthroplasty, surface replacement arthroplasty, or total hip replacement where sufficient bone stock is present.

Comparison to Predicate Devices

The indications for use of the Mpact Extension are identical to the previously cleared predicate devices. The design features and materials of the subject devices are substantially equivalent to those of the predicate devices. The fundamental scientific

technology of the modified devices has not changed relative to the predicate devices. The safety and effectiveness of the Mpact Extension are adequately supported by the substantial equivalence information, materials information, and analysis data provided within this Premarket Notification.

Performance Testing

No performance standards applicable to this device have been adopted under Section 514 of the Food, Drug and Cosmetic Act. Performance testing of the Mpact Extension was conducted in accordance with various international standards and FDA guidance documents. The Mpact Extension was tested as part of design verification to written protocols with pre-defined acceptance criteria. The Mpact Extension testing was conducted on the worst case component size and option/design.

The design verification activities included the assessment of pull-off, lever-out and torsional stability of the modular connection of the fixed liner to the metal shell, coating validation, metal shell deformation resistance during impaction, range of motion, wear, and bone screw testing. Either a dimensional or FEM analysis was completed as part of the design activities and no new worst case constructs were identified except for the bone screw. Therefore, testing per ASTM F543 was completed on the bone screws, with the results meeting the acceptance criteria. No other mechanical testing was performed.

Conclusion:
Based on the above information, the Mpact Extension can be considered as substantially equivalent to its predicate devices.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

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

January 22, 2014

Medacta International SA
% Mr. Adam Gross
Director of Regulatory, Quality and Compliance
Medacta USA
4725 Calle Quetzal, Unit B
Camarillo, California 93012

Re: K132879
Trade/Device Name: Mpact Extension
Regulation Number: 21 CFR 888.3358
Regulation Name: Hip joint metal/polymer/metal semi-constrained porous-coated uncemented prosthesis
Regulatory Class: Class II
Product Code: LPH, LZO
Dated: October 23, 2013
Received: October 24, 2013

Dear Mr. Gross:

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 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. 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 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,

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): K132879

Device Name: Mpact Extension

Indications for Use:

The hip prosthesis is designed for cementless use in total hip arthroplasty in primary or revision surgery.

The patient should be skeletally mature.

The patient's condition should be due to one or more of:

- Severely painful and/or disabled joint: as a result of osteoarthritis, posttraumatic arthritis, rheumatoid arthritis or psoriatic arthritis, congenital hip dysplasia, ankylosing spondylitis.
- Avascular necrosis of the femoral head.
- Acute traumatic fracture of the femoral head or neck.
- Failure of previous hip surgery: joint reconstruction, internal fixation, arthrodesis, hemiarthroplasty, surface replacement arthroplasty, or total hip replacement where sufficient bone stock is present.

Prescription Use ____x____ AND/OR Over-The-Counter Use _____
(21 CFR 801 Subpart D) (21 CFR 801 Subpart C)

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

Concurrence of CDRH, Office of Device Evaluation (ODE)

Elizabeth L. Frank -S

Division of Orthopedic Devices