

## REDEFINING THR: THE AMIS SYNERGY

The **anterior approach**, supported by years of clinical experience<sup>[16]</sup>, is the only technique which follows an **intermuscular** and **internervous** path, potentially reducing the risk of damage to periarticular structures such as muscles, tendons, vessels and nerves. Convinced of the value of the anterior approach for improving **patient wellbeing**, but at the same time acknowledging the potential challenges in its adoption, **an international group of expert surgeons**, in collaboration with **Medacta**, set out to **optimize** and **standardize** the anterior approach, to make it more **straightforward** and enhance its **reproducibility**.

The result of this collaboration was the **AMIS (Anterior Minimally Invasive Surgery)** technique, created in 2004, along with the development of dedicated instrumentation to facilitate the procedure. Today, the AMIS technique has evolved into the **AMIS Experience** and is now more than just a surgical technique. The AMIS Experience is a complete set of services that delivers **healthcare efficiencies**, including economic and commercial advantages, to the hospital and surgeon. Using **AMISem-P** will enter you into Medacta International's world of **AMIS Experience**.

### AMIS Experience

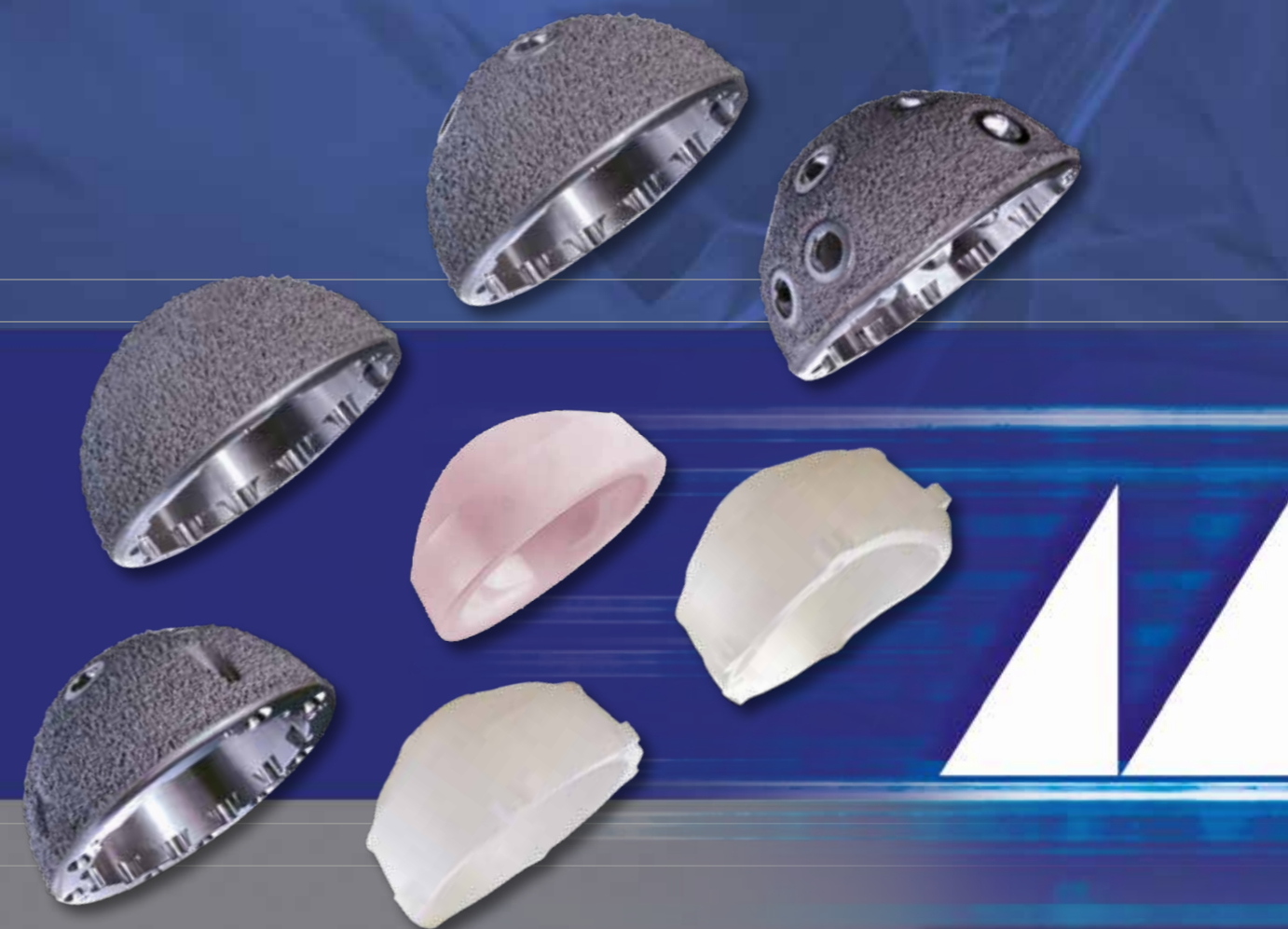
ANTERIOR MINIMALLY INVASIVE SURGERY  
IN HIP REPLACEMENT



## REFERENCES

[1] C. Anderson Engh, Cementless acetabular components, JBJS (Br), vol. 72-b, No. 1, Jan 1990, 53-60. [2] S. J. Incavo, F. A. Di Fazio, J. G. Howe, Cementless Hemispherical Acetabular Components, JoA Vol. 8, no. 8, 1993, 573-80. [3] P. Robotti, A. Sabbioni, L. Glass, B. George, Macroporous Titanium Coatings, by Thermal Plasma Spray, ITSC 2013, International Thermal Spray Conference, May 13-15, 2013, Busan, Korea. [4] Friction testing of the Mpac and Versafitcup coating samples. Data on file Medacta. [5] Mpac liner wear test. Data on file Medacta. [6] Push-out, lever-out and torsion test on the Mpac shell. Data on file Medacta. [7] J. E. Biemond et al, In vivo Assessment of Bone Ingrowth Potential of 3-Dimensional E-Beam Produced Implant Surfaces and the Effect of Additional Treatments by Acid-Etching and Hydroxyapatite Coating, J. Biomat. Appl, published on line January 27, 2011, 0885328210391495. [8] R. Ferro de Godoy et al., In vivo Evaluation of Titanium Macro-Porous Structures Manufactured Through an Innovative Powder Metallurgy Approach. Proceedings eCM XIII: Bone Fixation, Repair & Regeneration, June 24-26, 2012, Davos, Switzerland. [9] A. Goodship et al, In-vivo Assessment of the Ingrowth Potential of Engineered Surface Topographies Produced by Spark Plasma Sintering, Proceedings 9th World Biomaterial Congress, June 1-5, 2012, Chengdu, China. [10] Michael DR, MD, Review of the Evolution of the Cementless Acetabular Cup, ORTHOSuperSite December 1, 2008.

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## MPACT SYSTEM

Mpact offers a system of hemispherical press-fit acetabular shells in titanium alloy that deliver different solutions according to patient needs, addressing primary and revision indications. Cementless hemispherical shell design with porous coating surface treatment has a long and successful clinical history.<sup>[1,2]</sup> The Mpact shells follow this philosophy, enhancing primary stability and biological secondary fixation with the Mectagrip, highly porous plasma spray coating.<sup>[3]</sup>

## EVOLVING SAFETY

### OPTIMAL PRIMARY STABILITY AND SECONDARY FIXATION

Due to the coefficient of friction, pore size and distribution of Mectagrip<sup>[3,4]</sup>

### LOCKING SYSTEM FOR THE LINER

Which minimizes micro-movements, preventing backside wear<sup>[5,6]</sup>

### CERAMIC LINERS FOR REVISION CASES

Due to the optimized thickness of the Rim-Hole shell

### EASY TO USE INSTRUMENTATION

For a straight forward surgery for any preferred approach

### MULTIPLE SHELL VERSIONS

Available to secure adequate fixation to the available bone stock

### OPTIMIZED FEMORAL HEAD/SHELL DIAMETER RATIO

Head 36 mm available from shell size 52 mm



## PRODUCT RANGE



## MECTAGRIP TECHNOLOGY

Mectagrip is the porous coating treatment applied to the Mpact shells, consisting of a layer of commercially pure titanium deposited through a special Vacuum Plasma Spray technique (VPS). The VPS method used to deposit the Titanium porous coating on the implant shows potential advantages:



**Pure titanium composition for optimal biocompatibility;**

**High friction coefficient increasing grip at the bone interface with bone;<sup>[4]</sup>**

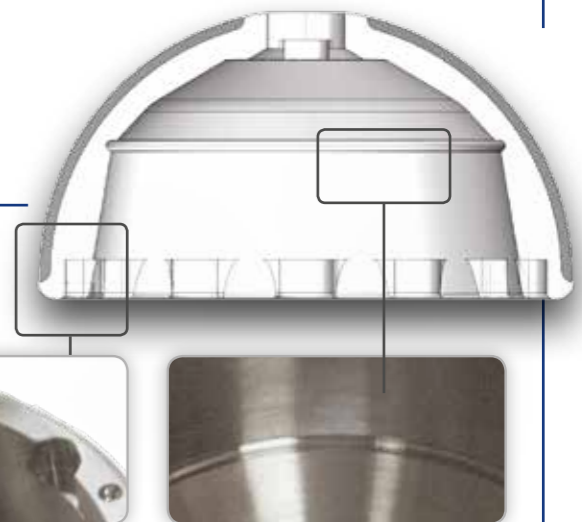
**Favourable environment for bone:<sup>[3,7,8,9]</sup>**

- pore sizes of 100-350 µm
- open pores with high porosity level
- continuous interconnected pores.

## ADVANCED LOCKING MECHANISM

**Locking systems for the polyethylene liners:**

- A **clipping system** placed out of the equatorial weight bearing area in the thickest region of the liner. This design reduces stresses at the liner/shell interface and minimizes the risk of the liner rim fracture should impingement occur.<sup>[10]</sup>
- The match between **anti-rotation tabs** in the liner and indentions on the shell limits rotational micro-movement and potential backside wear.<sup>[5,6]</sup>



## REVISION OPTIONS

