



Medacta Long Term R&D Projects

Medacta History

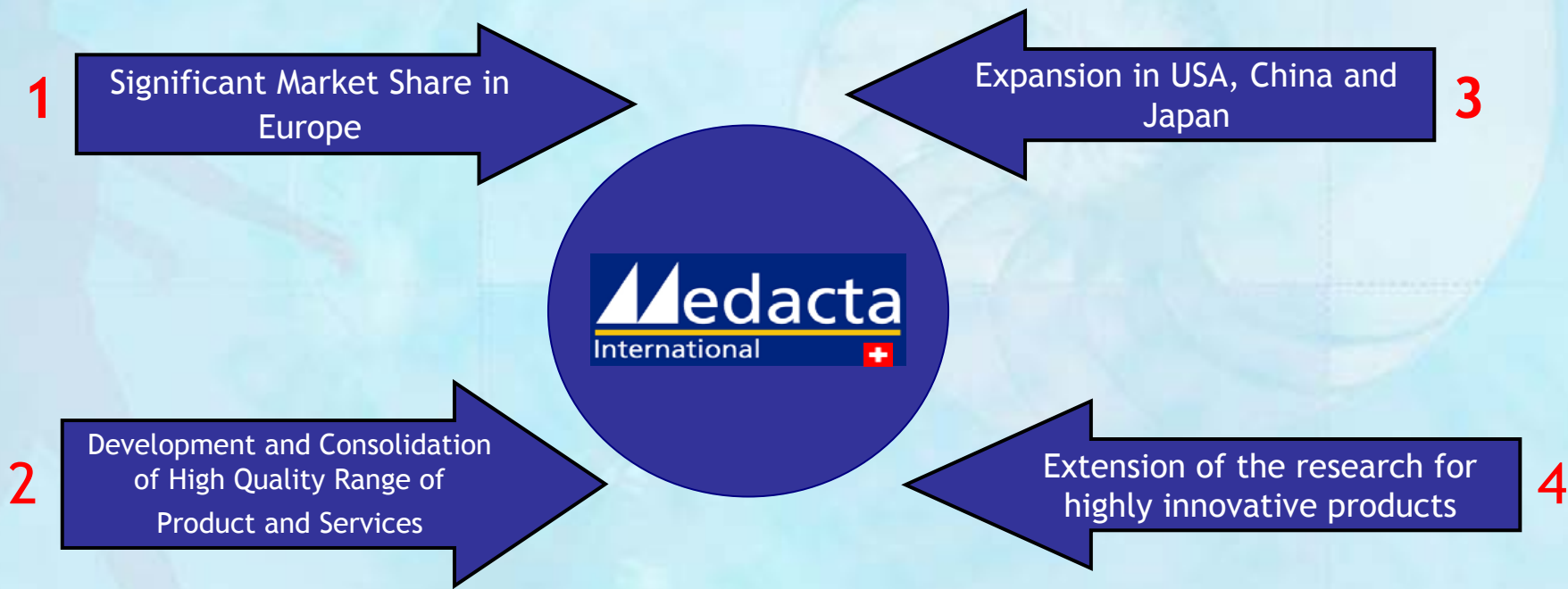
- 1997 - Acquisition by Baxter of Bieffe Medital medical fluids activities.
- 01/1999 - Strategic decision to enter Orthopedic Market, maintaining General Surgery and Pharma.
- 12/1999 - Acquisition of ORDEV in Tilburg as MEDACTA Holland.
- 04/2000 - Establishment of MEDACTA Belgium in Brussels.
- 05/2000 - Acquisition of BIOMICRON in Paris which became MEDACTA France.
- 09/2000 - Move to a new plant in CSP headquarters including manufacturing and R&D units.



Medacta Product Portofolio

- ORTHOPEDICS
 - HIP PROSTHESES
 - KNEE PROSTHESES
 - NAVIGATION SYSTEM FOR KNEE SURGERY
 - STRETCHING TABLE FOR HIP MINIMAL SURGERY
- SURGERY
 - SUTURES
 - ARTHROSCOPIC DISPOSABLE BLADES & BURRS (MARKET TEST)

Medacta Strategy





NATIVE®

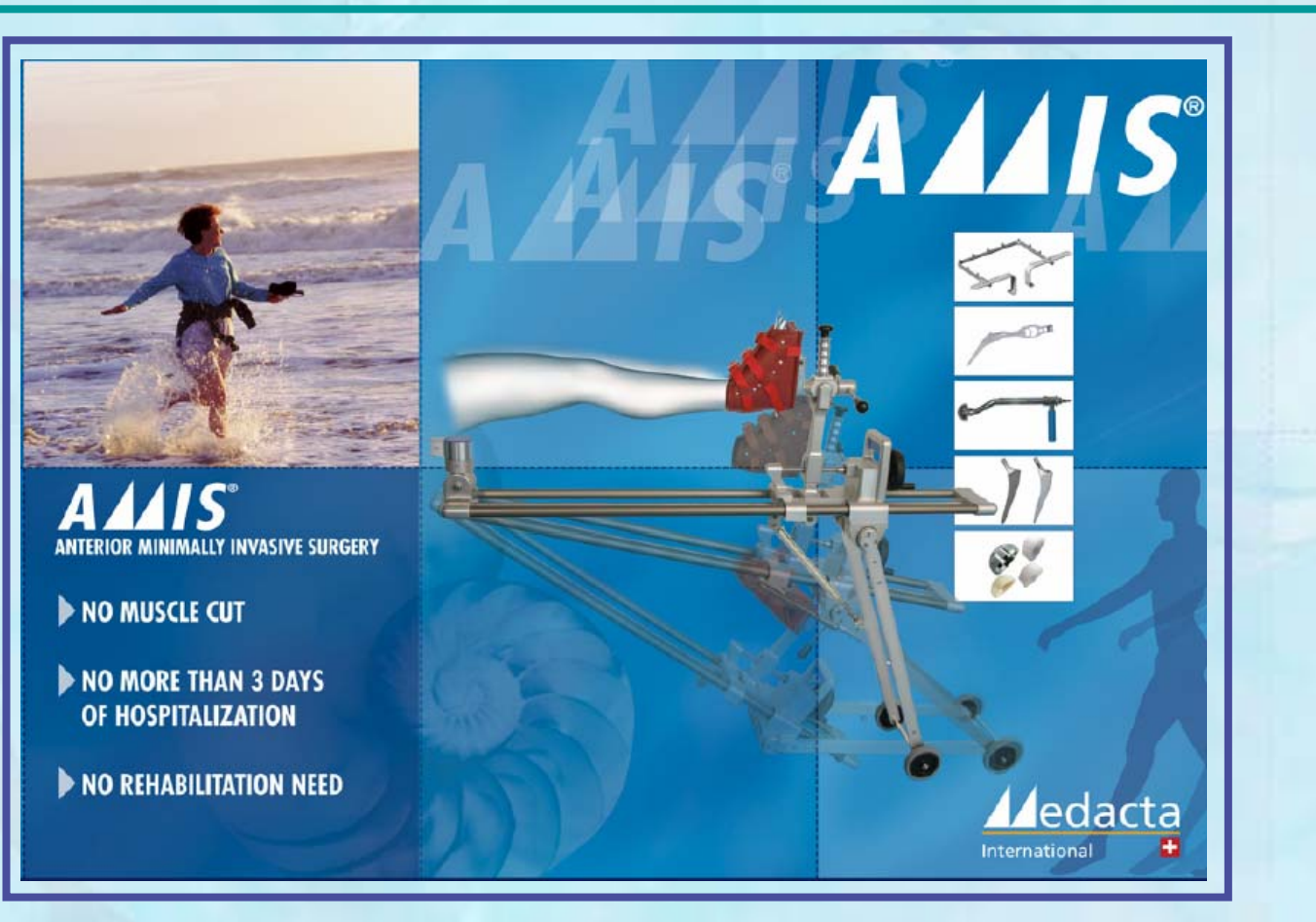
CEMENTED ANATOMIC THR

CINETIQUE®



- CEMENTED AND CEMENTLESS MOBILE BEARING TKR
- RESPECT OF ANATOMY
 - Optimised congruence
 - Anatomical track of patella groove (6° and wider)
 - Excellent tibial coverage (asymmetric)
 - Optimal sizes distribution
- HIGH PERFORMANCE IN:
 - Cut execution
 - Ligament balance


MEDACTA LATEST DEVELOPMENT: AMIS[®]



The advertisement graphic is divided into several sections. On the left, a photograph shows a woman in a blue shirt and white shorts running through shallow ocean waves. Below this photo, the text 'AMIS[®] ANTERIOR MINIMALLY INVASIVE SURGERY' is displayed. To the right of the photo, a large, detailed illustration of the AMIS surgical robot is shown, featuring a red motorized head and multiple articulated arms. Further right, a vertical column of six small images displays various surgical instruments and components. The background of the graphic is a light blue gradient with faint silhouettes of a person and a knee joint. The Medacta International logo is located in the bottom right corner of the graphic.

AMIS[®]
ANTERIOR MINIMALLY INVASIVE SURGERY

- ▶ NO MUSCLE CUT
- ▶ NO MORE THAN 3 DAYS OF HOSPITALIZATION
- ▶ NO REHABILITATION NEED

Medacta
International 

MEDACTA LATEST DEVELOPMENT: MNS[®] - MEDACTA NAVIGATION SYSTEM



- In line with the top competitors
- Lighter, Smaller and transportable
- Rapid set up-easy movable-thin shape



Medacta Long Term R&D Projects

- 1) NEW COATING FOR ORTHOPEDIC JOINT (HIP and KNEE)
- 2) NEW ORTHOPEDIC IMPLANT MADE OUT OF PLASTIC COMPOSITE

Coating for Orthopedic Joint

Current joint materials

- Metal-on-Polyethylene: High Wear
Wear Debris cause inflammation (osteolysis)
Larger Joints, more wear
- Ceramic-on-ceramic: Fragility limiting joint sizes
- Metal-on-metal: Low wear/larger joint-less wear
But Metal ions cause allergic reaction and
potential long term genotoxicity

New joint materials

- Metal-on-Metal: With metal coated with hard nitride ceramic
deposited by physical vapour deposition

Benefits:

Very low wear and lower Debris
Larger joints, even lower wear
Very low metal ion release
Potential longer service time

But Long Term:

Safety and efficacy must be validated for 25-30
years service time.
Use of wear and Hip simulators

Plastic Composite Orthopedic Implant

Current Situation

- 1) Most bone-contact weight bearing implants are metal based
- 2) Prevailing material SS, Ti, CoCr alloys w or w/o coating to promote bone tissues regrowth

Problem

“Stress Shielding”: mechanical mismatch between rigid metal (E.Mod 100-200 MPa) and soft bone (E.Mod. 15-20 MPa) result in uneven stress distribution at bone-metal interface. The part of the bone not stressed is subject to necrosis, which causes implant loosening.

New Implant

Benefits:

- A plastic is compound with (in) organic fibers to fully replicate bone biomechanical properties. The fiber orientation enable to create bone-like anisotropy
- PF6 EC Project in a consortium where Medacta is the technical coordinator



Thank you for your attention