



OPT-HIP

Innovative ceramics for higher performance,
less invasive orthopaedic surgery

BUDGET

€1,660K

GRANTS
OBTAINED

€940K

ANR FUNDING

2008 - 2011

THE PROJECT

Our project aims to develop new aluminium oxide and zirconium-based ceramics to make a new generation of orthopaedic implants. These ceramics may be micro- or nano-structured and must be more reliable and durable than the solutions currently available and allow small dimension or special geometry implants to be produced.

Our goals are two-fold: to develop new ceramics, but also to characterise and understand the degradation mechanisms of existing ceramics.

The interactions between prosthetic wear debris and osteoclasts are being studied to get a better understanding of the mechanisms of bone resorption around implants and aseptic prosthesis loosening.

The project also aims to develop, on an industrial basis, a new design of "double mobility" implants using the ceramic selected after validation.

ViaMéca
French mechanical cluster



PROJECT SPONSOR

MATEIS

Pr Jérôme CHEVALIER

jerome.chevalier@insa-lyon.fr

MATEIS, ULR CNRS 5510

INSA de Lyon

20 Avenue Albert Einstein

69 621 Villeurbanne Cedex

www.insa-lyon.fr

www.mateis.insa-lyon.fr

R&D PARTNERS



SME PARTNERS

