

NEWS

HypOrth

New approaches in the development of hypoallergenic implant materials in Orthopaedics:

Steps to personalized medicine

HYP  ORTH

ISSUE 1/2017

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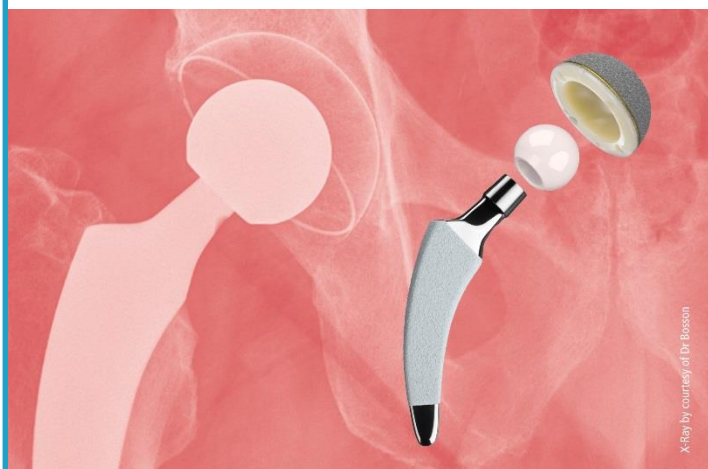


About HypOrth

The European collaborative project HypOrth aims to develop hypoallergenic material for endoprotheses, pursuing two major goals: HypOrth intends to improve the understanding and diagnosis of complications associated with an implant, primarily focussing on adverse immune reaction and infection. Based on these insights the project will develop innovative approaches for renewals in orthopaedic arthroplasty with improved biocompatibility.

The aims of HypOrth

- ❖ Testing of conventional and new material combinations for implant and coating on different cell systems: bone cells and immune cells for biocompatibility, antibacterial properties and evoking immunological parameters including the newly identified biomarkers
- ❖ Evaluation of data, production of prototypic hypoallergenic implant
- ❖ differentiation of AIR from low-grade infection in the context of prosthesis loosening; inclusion of epidemiological and clinical expertise and the finding of diagnostic biomarkers for AIR
- ❖ Understanding of mechanisms of adverse immune reaction and develop predictive computational models
- ❖ Finding of predictive biomarkers for application in personalised medicine



Key Data

- ❖ HypOrth is a Collaboration Project funded by the European Union under the 7th Framework Programm, grant agreement n° 602398.
- ❖ Coordinator: Prof. Christoph H. Lohmann, Otto-von-Guericke-University Magdeburg
- ❖ Project start: August 1, 2013
- ❖ Funding period: 5 years



Visit of the orthopaedic laboratory at the University of Magdeburg by prime minister Dr. Reiner Haseloff (middle), shown around by Prof. Christoph Lohmann (left).

Contact

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Project Office

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The HypOrth consortium



General assembly Meeting in Bilbao, July 2016

The members of HypOrth

1. University of Magdeburg (Germany)
2. University of Tartu (Estonia)
3. Instytut Obróbki Plastycznej/Metal Forming Institute, Poznan (Poland)
4. Hungarian Academy of Sciences, Budapest (Hungary)
5. Danish Technological, Aarhus (Denmark)
6. Progenika, Derio (Spain)
7. Mathys AG, Bettlach (Switzerland)
8. ARTTIC, Munich (Germany)

Major events

Launch of the HypOrth website: www.hyporth.eu

General Assembly Meetings

- 2014, Tartu, Estonia
- 2015, Budapest, Hungary
- 2016, Bilbao, Spain
- 2017, Poznan, Poland

Four Steering Committee Meetings from 2014 to 2017

Publications

- **Allergies in orthopaedic and trauma surgery.**
Lohmann CH, Hameister R, Singh G.
Orthop Traumatol Surg Res. 2016 Dec 30. pii: S1877-0568(16)30192-X.
- **Fretting corrosion of Cobalt and titanium implant alloys in simulated body fluids**
Sulej-Chojnacka J, Wielowiejska-Giertuga A, Mroz A, Delfosse D, Tribologia, (2016) 6, 149-158.
- **Stand for Tribological Testing of Hip Endoprostheses**
Wisniewski T, Mroz A, Magda J, Wielowiejska-Giertuga A-, Tribologia, (2016) 6, 167-177

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