

Dienstag, 27. Juni 2017

12:15 – 13:00 Mittagessen

13:00 – 13:10 TOP 1: Beginn der Veranstaltung
Begrüßung und Einführung: R. Willumeit-Römer

13:10 TOP 2: Work Package Präsentationen

WP1: Materials development, characterisation and implant production

(jeweils 20 min. Präsentation + 5 min. Diskussion)

13:10 – 13:35 HZG – N. Hort: Principles of Mg Alloy Development

13:35 – 14:00 FH Stralsund – P. Maier: Heat treatment on strength and corrosion of Mg-Gd and Mg-Ag alloys

14:00 – 14:25 HZG – J. Harmuth: Tailoring of properties of as extruded binary Mg-Gd alloys

14:25 – 14:50 HZG – J. Schaper: Metal Injection Moulding (MIM) of Magnesium

14:50 – 15:15 Syntellix – J.-M. Seitz: MAGNEZIX®-based Implants – The Current State and Future Potential

15:15 – 15:35 Kaffeepause

WP2: Development of reliable *in vitro* tests to predict *in vivo* behaviour

(jeweils 20 min. Präsentation + 5 min. Diskussion)

15:35 – 16:00 HZG – D. Höche: Mg corrosion and its simulation

16:00 – 16:25 HZG – B. Luthringer: *In vitro* cell-material interactions

16:25 – 16:50 HZG – R. Hou: The adsorption of proteins on Mg surface under cell culture conditions

WP3: Evaluation of inflammatory response to Mg-based implants *in vivo*

(jeweils 20 min. Präsentation + 5 min. Diskussion)

16:50 – 17:15 MHH – M. Meier: From Structure to Function - Imaging and Magnesium based degradable Biomaterials

17:15 – 17:40 CAU/MOIN CC – O. Peñate Medina: Fluorescent environment sensing nanoparticles in detection of inflammatory cell stress of novel implants and inflammatory models

**ab 19:00 gemeinsames Abendessen in:
Museumsschiff RICKMER RICKMERS, Landungsbrücken,
Ponton 1a, 20359 Hamburg**

Mittwoch, 28. Juni 2017

Keynote Session

(jeweils 25 min. Präsentation + 5 min. Diskussion)

- 09:00 – 09:30 FHNW (CH) – M. de Wild: 3D printing of magnesium implants
- 09:30 – 10:00 Uni Erlangen-Nürnberg – S. Virtanen: Biodegradable Magnesium: Challenges and Progress in Understanding and Controlling the Corrosion Behaviour in Biological Environments
- 10:00 – 10:30 MHH/NIFE – J. Reifenrath: Preclinical *in vivo* evaluation of degradable magnesium implants in suitable animal models

10:30 – 10:45 Kaffeepause

(jeweils 25 min. Präsentation + 5 min. Diskussion)

- 10:45 – 11:15 MHH – T. Schilling: Facilitating regenerative cardiovascular implants with degradable magnesium scaffolds
- 11:15 – 11:45 Uni Hannover – H.J. Maier (evtl. C. Klose): Development of Resorbable Magnesium Alloys with Application-Depending Mechanical Properties
- 11:45 – 12:15 HZG – B. Zeller-Plumhoff, J. Moosmann, J. Hammel: Synchrotron-radiation micro-tomography as a characterization tool for implant materials

12:15 – 13:00 Mittagessen

WP4: Evaluation of fracture healing and degradation of Mg implant prototypes *in vivo*

(jeweils 20 min. Präsentation + 5 min. Diskussion)

- 13:00 – 13:25 UKE – E. Hesse / presented by H. Saito: Local and systemic effects of Mg-implants
- 13:25 – 13:50 UKE – H. Schlüter: Analysis of the response of bone cells towards magnesium implants and its corrosion products on the molecular level via proteomics
- 13:50 – 14:15 HZG – H. Helmholtz: Bioimaging of element distributions in tissues and bones after *in vivo* application of Mg-2Ag

WP5: *In vivo* studies on the reaction of juvenile bone on Mg-based implant materials

(jeweils 20 min. Präsentation + 5 min. Diskussion)

- 14:15 – 14:40 MUG – A. Weinberg: Fracture treatment with Mg-Screws in a sheep model
- 14:40 – 15:05 MUG – N Grün: Mg Pins in an osteoporotic rat model: First results

15:05 – 15:30 TOP 3: Wrap up
15:30 Ende