

## TRACE-2

April 4-5, 2019 - Villa Vigoni, Italy

### Wednesday April 3:

19.00 - 19.30 Welcome cocktail

19.30 – 21.30 Dinner

### Thursday April 4:

9.00 – 9.30 Registration

9.30 – 10.00 **Introduction** – Roberto Eggenhöfner, Luca Giacomelli, Anna Tampieri

### **Session 1A – Chemistry of biomaterials**

*Chair: Roberto Eggenhöfner, Aldo R. Boccaccini*

10.10 – 10.40 Andreas Killinger – “Suspension Flame Sprayed Metal Doped Calcium Phosphate Coatings with Antibacterial Properties for Infection Prophylaxis”

10.40 – 11.10 Steffen Eßlinger - “Manufacturing of Bioceramic Scaffolds Using 3D-Printing Technology”

11.10 – 11.40 Coffee break

### **Session 1B – Chemistry of biomaterials**

*Chair: Aldo R. Boccaccini, Simone Sprio*

11.40 – 12.10 Ornella Cavalleri – “Mesoporous oxide growth on transition metals for biomedical applications”

12.10 – 12.40 Enrica Vernè – “Fabrication and characterization of robocast bioactive  $\text{SiO}_2\text{-P}_2\text{O}_5\text{-CaO-MgO-Na}_2\text{O-K}_2\text{O}$  glass scaffolds”

12.40 – 14.30 Lunch

### **Session 2 – Applied chemistry of biomaterials**

*Chair: Julietta Rau, Steffen Eßlinger*

14.00 – 14.30 Matthias Blum – “Biologically Derived Hydroxyapatite Coatings for Biomedical Applications”

14.30 – 15.00 Anna Tampieri – “Nature inspires smart device for regenerative medicine and nanomedicine”

15.00 -15.30 Simone Sprio – “Bioactive macroporous and injectable apatitic scaffolds for bone regeneration”

15.30 -16.00 Anke Bernstein – “Thin degradable coatings for optimization of osteointegration associated with simultaneous infection prophylaxis”

16.00 -16.30 Christophe Drouet – “Bio-inspired apatite particles in nanomedicine: from hematology to dermatology original applications”

16.30 – 17.00 Coffee break

### **Session 3 – Bioceramics and dentistry**

*Chair: Anna Tampieri, Enrica Vernè*

17.00 – 17.30 Julietta V. Rau - “Bioactive doped coatings and cements for medical implants”

17.30 – 18.00 Corrado Piconi – “Zirconia Dental Implants: what about Osseointegration?”

18.00 – 18.30 Michele Iafisco – “Citrate-stabilized amorphous calcium phosphate doped with fluoride ions: a new biomimetic nanomaterial in dentistry”

19.30 – 21.30 Dinner

Friday April 5:

**Session 4 – Frontiers in biomaterials**

*Chair: Christophe Drouet, Nicola Bragazzi*

9.00 – 9.30 Aldo R. Boccaccini– “Bioactive glasses meet herbal medicine: Combining bioactive glass scaffolds with phytotherapeutics for tissue engineering”

9.30 – 10.00 Victor Sivozhelezov – “Ceramics-related data mining uncovers tissue regeneration genes linking hydroxyapatite and tricalcium phosphate to vitamin D”

10.00 – 10.30 Rainer Gadow – “Novel Bioceramic Probe Structures for Intelligent Neuroimplantation”

10.30 – 11.00 Coffee break

**Session 5 – Beyond biomaterials**

*Chair: Rainer Gadow, Victor Sivozhelezov*

11.00 – 11.30 Maurizio Viviani – “Application of AI supercomputing to biological data for patterns generation and tissue engineering models: machine learning and reconstruction algorithms”

11.30 -12.00 Sergio Zanfrini – “Patient status from disequilibrium to: surgery, rehabilitation's follow up, predictive AI medicine”

12.00 -12.30 Nicola Bragazzi – “Big Data-based medicine: towards a precision, predictive stratified medicine”

12.30 – 13.00 **Conclusions and wrap-up** - Aldo R. Boccaccini, Rainer Gadow

13.00 – 14.30 Lunch