

# Materials and Surface Technology for Implants

[MEET THE EXPERT] Implants is organized in cooperation with the event ORTHOMANUFACTURE in 2021 and will combine two well-known congresses for the implant industry in Europe. This year, the concept of these events is an online congress that is designed equally for manufacturers of implants, suppliers and service providers, as well as for universities and institutes. The program includes keynote lectures, short presentations and possibilities for online discussions with the authors and presenters. During the breakout sessions, all exhibitors will be accessible in their individual room for online discussions. We invite you to register now as a participant.

Wed 28<sup>th</sup> April 2021 Thu 29<sup>th</sup> April 2021

Venue
Online presentations and Q&A sessions

### Information and registration

www.rms-foundation.ch/meet

Main organizer



Testing Research Consulting

www.rms-foundation.cl

## Registration (deadline extended!)

Please register until 21<sup>st</sup> April 2021 at: www.rms-foundation.ch/meet

Regular participant: 150 CHF + VAT

No refund will be given for cancellations made less than 14 days before the event, though the registrant may transfer the ticket to another person to attend as a replacement.

## **Program Committee**

- Dr. Lukas Eschbach, RMS Foundation Lukas. Eschbach@rms-foundation.ch
- Dr. Simon Berner, Medicoat AG
- Francisco Faoro, Institut Straumann AG
- PD Dr. habil. Christiane Jung, KKS Ultraschall AG
- Dr. Martin Stöckli, inspire AG
- Prof. Dr. Michael de Wild, FHNW

#### **Administration**

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# Conference Program, Wednesday 28<sup>th</sup> April 2021

	08:00 Welcome
	<b>08:15 – 08:45 Session 1: Overview</b> Chairperson: Dr. Lukas Eschbach
08:15	Keynote 1: Dr. med. Daniel de Menezes, Spitalzentrum Biel/Bienne, Switzerland: Improving efficiency and results of prosthetic joint surgery: Role of technology and materials from the perspective of a surgeon
	08:45 – 09:45 Poster and Exhibition (Breakout Session) / Virtual Coffee Break
	09:45 – 11:30 Session 2: Materials and Surfaces Chairperson: Prof. Dr. Michael de Wild
09:45	Keynote 2: Beat Lechmann, DePuy Synthes, Zuchwil, Switzerland: Trends related to materials, surfaces and technologies
10:15	Prof. Dr. med. dent. Dr. rer. nat. Jens Fischer, University Center for Dental Medicine Basel, Switzerland: What endosseous surface is appropriate for dental zirconia implants?
10:35	Prof. Dr. Marta Monjo, University of Balearic Islands, Palma de Mallorca, Spain: Multifuncional properties of Quercitrin coated porous Ti-6Al-4V implants for orthopaedic applications
10:55	Dr. Dirk Hegemann, Empa, St. Gallen, Switzerland: Rapid active, non-releasing antibacterial coatings based on Ag nano islets deposited on TiOx films
11:15	Session discussion, Q&A roundup
	11:30 – 13:30 Lunch Break / Virtual Meetings
	13:30 – 15:40 Session 3: Medical Device Regulation (MDR) Chairperson: Francisco Faoro
13:30	Keynote 3: Shokoufeh Khodabandeh, Institut Straumann AG, Basel, Switzerland: Medical Device Regulations – MedTech in EU beyond May 2020
14:00	Dr. Marta Swierczynska, SFL Regulatory Affairs & Scientific Communication GmbH, Basel, Switzerland: Challenges for implants under the new MDR
14:20	Stefano Adami, Confinis AG, Sursee, Switzerland:  Additive Manufacturing of custom made and mass production of implants – Overview of regulatory and quality challenges posed by the MDR
14:40	Dr. Ulrich Hofer, Integrated Scientific Services ISS AG, Biel, Switzerland: Lean PMCF studies using real-world data
15:00	Keynote 4: Dr. Richard Curno, Medidee Services SA, Lausanne, Switzerland:  Lessons learned from recalls
15:00 15:30	



## Conference Program, Thursday 29th April 2021

	08:00 Welcome
	<b>08:00 – 09:30 Session 4: Smart Devices &amp; Analytics</b> Chairperson: Dr. Simon Berner
08:00	Keynote 5: Dr. Roman Dittmar, Institut Straumann AG, Basel, Switzerland: Smart devices – Implants 4.0
08:30	Ana Isabel Costa, Center of MicroElectroMechanical Systems, University of Minho, Guimarães, Portugal: Highly porous Ti as bone substitute: triboelectrochemical characterization of highly porous Ti under fretting-corrosion conditions
08:50	Dr. Olivia Kettner, Anton Paar GmbH, Graz, Austria: Zeta potential of implant surfaces - correlation with hydrophilicity and porosity
09:10	Session discussion, Q&A roundup
	09:30 – 10:30 Poster and Exhibition (Breakout Session) / Virtual Coffee Break
	10:30 – 12:30 Session 5: Additive Manufacturing Chairperson: Dr. Martin Stöckli
10:30	Keynote 6: Daniel Seiler, Hochschule für Life Sciences FHNW, Muttenz, Switzerland: Trends in medical AM
11:00	Jean-Jacques Fouchet, Z3DLAB SAS, Montmagny, France: ZTi-Med®: a potential replacement for Titanium in medical
11:20	Rashid Tikhilov, Vreden Russian Research Institute of traumatology and orthopedic, S-Petersburg, Russia: The experience of using custom-made implants for gross acetabular defects
11:40	Donatien Campion, 3D Medlab, Marignane, France: 4D Printing of expandable Spinal Cages: Development and applications
12:00	Session discussion, Q&A roundup
	12:15 – 14:00 Lunch Break/ Virtual Meetings
	<b>14:00 – 16:30 Session 6: Cleaning</b> Chairperson: PD Dr. habil. Christiane Jung
14:00	Keynote 7: Peter Huonker, Früh Verpackungstechnik AG, Fehraltorf, Switzerland: Industrial sterilization methods – an overview
14:30	Lise Vanderkelen, Nelson Labs NV, Heverlee, Belgium:  Don't forget to think about family grouping before doing reprocessing validations of medical devices and instruments!
14:50	Elena Stübi, RMS Foundation, Bettlach, Switzerland: Cleaning validation for instrument reprocessing: normative background and the test methods
15:10	Dr. Sc. Marco Furlan, eCO2, Taverne, Switzerland: A novel post-treatment process of medical and pharmaceutical material using scCO2
15:30	Keynote 8: Ali Madani, AVICENNE, Paris, France: Orthopedic market perspectives - Orthopedic contract manufacturing markets
16:00	Session discussion, Q&A roundup
	16:15 Meeting End

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#### **Poster Session**

1	Biodegradable magnesium implants: how to improve the surface properties?
	Dr. Oksana Banakh, Haute Ecole Arc, La Chaux-de-Fonds, Switzerland

- 2 Multilayer based on parylene and an oxide deposited by ALD for the packaging of medical devices Prof. David Grange / Sophie Farine-Brunner, Haute Ecole Arc, La Chaux-de-Fonds, Switzerland
- 3 MRI compatibility of additive manufactured auxetic NiTi parts Felix Schuler, FHNW, Muttenz, Switzerland
- 4 Protection of electronics for reprocessable surgical devices Grégory Schaffner, Turck duotec SA, Delémont, Switzerland
- 5 Cleaning processes in medical technology Fabio Cordaro, Amsonic AG, Biel, Switzerland
- High-accurate form and roughness measurement of orthopedic implants using a new optical micro-coordinate measurement device
  - Robert Winkler, Alicona Imaging GmbH, Raaba/Graz, Austria
- 7 Surface properties and fatigue resistance of AM-structures
  Dr. sc. ETH Zürich Roman Heuberger, RMS Foundation, Bettlach, Switzerland
- Accelerated tests for lifetime prediction of interfaces and interlayers with respect to crevice and fatigue corrosion in body fluid

  Dr. Roland Hauert, Empa, Dübendorf, Switzerland
- 9 Implants surface modification: a reliable biomimetic approach
  Dr. Agnese Carino, Medicoat AG, Mägenwil, Switzerland
- ICP-MS trace element analysis of calcium phosphate bone substitute materials according to USP 232/233 guidelines
  - Dr. Ronny Wirz, RMS Foundation, Bettlach, Switzerland
- Laser additive manufactured hemi-thoracic cage custom implant in Ti6Al4V Pierfrancesco Robotti, Lincotek, Trento, Italy
- Protective pink coating for dental implant applications

  Noora K. Manninen, Oerlikon Surface Solutions AG, Balzers, Liechtenstein
- Cleanliness of orthopaedic implants according to ISO 19227: differences and gaps compared to ISO 10993-18

  Dr. Ronny Wirz, RMS Foundation, Bettlach, Switzerland
- Dry mechanical-electrochemical polishing of titanium Sven Simeunovic, FHNW, Muttenz, Switzerland
- Adaptive density minimal surface structures for 3D printed medical implants Niklaus Arn, Spherene AG, Zürich, Switzerland
- Process simulation software applied to the medical sector
  Octavia Fleuchaus, TRANSVALOR S.A. Sophia Antipolis, France

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