

# European Network of Multidisciplinary Research to Improve the Urinary Stents (ENIUS)

## *Training School*

**Sponsored by:**



**Organised by:**



## Ureteral stents: from modelling to commercialisation

Tuesday 10<sup>th</sup> – Wednesday 11<sup>th</sup> September 2019

Swiss Institute for Translational and Entrepreneurial  
Medicine (SITEM), University of Bern

### LOCAL ORGANISING COMMITTEE:

**Prof. Sarah Waters**, University of Oxford, UNITED KINGDOM – *ENIUS working group leader*

**Dr. Francesco Clavica**, University of Bern, SWITZERLAND – *ENIUS working group vice-leader*

**Dr. Dario Carugo**, University of Southampton, UNITED KINGDOM – *ENIUS Short term Scientific Mission (STSM) coordinator*

# PROGRAMME

## DAY 1 - Tuesday 10<sup>th</sup> September 2019

- 9:15 - 9:30 **INTRODUCTION & WELCOMING REMARKS**  
**Local organising committee** (Dr Francesco Clavica, Prof. Sarah Waters, Dr Dario Carugo)
- 9:30 - 11:10 **CLINICAL CHALLENGES AND IN VIVO MODELLING**  
**Chair: Dr Dario Carugo**
- Dr Duje Rako** (Polyclinic Croatia, Zagreb, Croatia & Countess of Chester NHS Foundation Trust, UK)  
*Urologist's perspective on urinary stent*
- Prof. Dirk Lange** (Department of Urologic Sciences, University of British Columbia)  
*From Bench to Bedside: Preclinical Validation Using Large-Animal Models*
- Dr Daniela Casoni** (Experimental Chirurgische Station ESI, University of Bern, CH)  
*In vivo models for urology surgery: How can the animals help us? How can we help them?*
- Dr Els van Asselt** (Department of Urology, Erasmus Medical Center, NL)  
*Animal models in urinary tract research*
- 11:10 - 11:30 BREAK
- 11:30 - 12:45 **URETERAL STENTS: COMPUTATIONAL APPROACHES**  
**Chair: Prof. Sarah Waters**
- Prof. Sarah Waters** (Mathematical Institute, University of Oxford, UK)  
*Mathematical modelling of stented urinary tract fluid mechanics*
- Prof. Dominik Obrist** (ARTORG Center, University of Bern, CH)  
*Combining clinical data with computational models of biomedical flow systems*
- Prof. Bastien Chopard** (Computer Science Department, University of Geneva, CH)  
*Biomedical applications with the Lattice Boltzmann method*
- 12:45 - 13:45 LUNCH & POSTER PRESENTATIONS
- 13:45 - 15:00 **IN VITRO MODELLING I**  
**Chair: Dr Francesco Clavica**
- Dr Francesco Clavica** (ARTORG Center, University of Bern, CH)  
*Developing in-vitro platforms of the urinary tract- what do we need to take into account?*
- Dr Dario Carugo** (Department of Mech. Engineering, University of Southampton, UK)  
*Developing a pre-clinical pipeline to innovate endourological devices: from microfluidics to full-scale models*
- Dr Yoan Civet** (Center for Artificial Muscle, EPFL, Neuchâtel, CH)  
*Potential of artificial muscles in cardiovascular and urological research*
- 15:15 - 15:30 BREAK
- 15:30 - 16:20 **IN VITRO MODELLING II**  
**Chair: Dr Dario Carugo**

**Prof. Ali Abou-Hassan** (Laboratoire PHENIX, Sorbonne Université, FR)  
*Physico-chemical multi-scale microfluidic approach to kidney stones formation*

**Prof. Filipe Mergulhão** (Faculty of Engineering, Universidade do Porto, PT)  
*In-vitro surface testing with controlled hydrodynamics for urinary tract applications*

16:20 - 17:35 **MedTech session:** start-ups /companies will share their experiences and efforts to bring their research to market

**Chair: Dr Francesco Clavica**

1. **Dr Janick Stucki** (Chief Executive Officer & Technical Director, ALVEOLIX, CH)  
*A breathing human Lung-on-Chip for drug transport and safety studies*
2. **Dr Alexander Barros** (Chief Executive Officer, Hydrustent, PT)  
*Hydrustent: from bench to business*
3. **Prof. Stefan Weber** (Chief Executive Officer, CAScination, CH)  
*Destination Patient: What it takes to bring research into the clinic*

18:00 - 19:30 Apéro (Swiss buffet) at [Panorama Restaurant, Inselspital](#)

## DAY 2 - Wednesday 11<sup>th</sup> September 2019

9:30 - 11:10 **PATHWAYS TO COMMERCIALISATION IN MEDTECH INDUSTRY: from laboratory models to patients**  
**Chair: Prof. Sarah Waters**

**Dr Francesco Clavica and Prof. Dominik Obrist** (co-founders, UroDEA, CH)  
*Our solution for urinary retention: first steps as entrepreneurs*

**Kosta Shatrov** (Center of Competence for Public Management, University of Bern, CH)  
*The Interplay between Regulation and Performance in the Medical Device Industry: an Introduction based on the Example of the Swiss Medtech Sector*

**Mark Hera** (Research & Development Manager, Boston Scientific, IE)  
*Example from Industry: Launching a Ureteral Stent*

**Niraj Rauniyar** (Principal Development Engineer, Boston Scientific, IE)  
*Health Technical Assessment*

11:10 - 11:30 BREAK

11:30 - 12:15 **COMMERCIALISATION WORKSHOPS: steps to get CE mark/ FDA approval**

Open discussion with: **Kosta Shatrov, Mark Hera, Niraj Rauniyar**

12:15 - 13:45 **LUNCH & POSTER PRESENTATION**

13:45 - 14:00 **CLOSING REMARKS**

## CONTACTS

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