

**SimInhale**  
COST ACTION  
MPI404



**Pulmonary  
Drug  
Delivery**

**Joint 5<sup>th</sup> Workshop on Pulmonary Drug Delivery  
and 1<sup>st</sup> SimInhale Summer School  
Trinity College Dublin**

**September 3 – 6, 2018**

**Sunday, September 2<sup>nd</sup>**

Arrival of the participants

18.00 – 20.00 Informal Welcome Reception (The Ginger Man)

**Monday, September 3<sup>rd</sup>**

09.00 – 09.45 Registration

09.45 – 10.00 Welcome Address and Opening Remarks  
Carsten Ehrhardt (Chair of the Conference)  
Stavros Kassinos (Chair of SimInhale COST Action)

10.00 – 10.30 Carsten Ehrhardt (Trinity College Dublin)  
Anatomy and physiology of the lung and aerosol inhalation basics

10.30 – 11.00 Lea Ann Dailey (University of Halle)  
Macrophages and other clearance mechanisms

11.00 – 11.30 Coffee break and poster exhibition

11.30 – 12.00 Alessandra Rossi (University of Parma)  
Particle dissolution in the lungs

- 12.00 – 13.00 Keynote Lecture  
John Patton (Dance Biopharmaceuticals)  
Inhaled insulin – where it came from and where it is going
- 13.00 – 14.30 Lunch break and poster exhibition
- 14.30 – 15.00 Ben Forbes (King's College London)  
Inhalation biopharmaceutics
- 15.00 – 15.30 Per Bäckman (Emmace)  
Do we need a BCS for inhalation products?
- 16.00 – 22.30 City Tour and Conference Dinner (The Merry Ploughboy)

**Tuesday, September 4<sup>th</sup>**

- 09.30 – 10.00 Maria Ines Amaro (Trinity College Dublin)  
Dry powder inhalers
- 10.00 – 10.30 Sarah Zellnitz (Research Center Pharmaceutical Engineering Graz)  
Aerosol particle engineering
- 10.30 – 11.00 Bernhard Müllinger (Vectura)  
Impact of smart-nebuliser use on patient outcomes
- 11.00 - 11.30 Coffee break and poster exhibition
- 11.30 - 12.00 Nathalie Wauthoz (Université Libre de Bruxelles)  
Formulation strategies of dry powders related to the lung diseases
- 12.00 – 12:30 Fabio Sonvico (University of Parma)  
Impact of drug solid state aspects on pulmonary delivery
- 12.30 – 14.00 Lunch break and poster exhibition
- 14.00 – 14.30 Wilbur de Kruijf (Medspray)  
Liquid inhalers
- 14.30 – 15.00 Ronan MacLoughin (Aerogen)  
Nebulisers

### **Wednesday, September 5<sup>th</sup>**

- 09.30 – 10.00 Wilbur de Kruijf (Medspray, Enschede)  
*In vitro*, *in silico* and *in vivo* tools for dose finding, aiming for bio-equivalence
- 10.00 – 10.30 Regina Scherließ (University of Kiel)  
Mucosal vaccination via the respiratory tract
- 10.30 – 11.00 Sandrine Marchand (University of Poitiers)  
Fate of inhaled antibiotics
- 11.00 – 11.30 Coffee break and poster exhibition
- 11.30 – 13.00 Alessio Alexiadis (University of Birmingham)  
Trans-disciplinary short course on discrete multiphysics computer simulations
- 13.00 – 14.30 Lunch break and poster exhibition
- 14.30 – 16.00 Michael Bennett (University of Southampton)  
Quantification of HRCT clinical data and translation across to CFD
- Kiko Belchí (Polytechnic University of Catalonia)  
Using topology to identify disease-specific lung structure changes
- 19.00 – 22.00 Speakers' Dinner (Bloom Brasserie)

### **Thursday, September 6<sup>th</sup>**

- 10.00 – 10.30 Carsten Ehrhardt (Trinity College Dublin)  
*In vitro* models for pulmonary drug disposition studies
- 10.30 – 11.00 Kwang-Jin Kim (University of Southern California)  
Absorption pathways of nanoparticles in the lung
- 11.00 – 11.30 Coffee break and poster exhibition
- 11.30 – 12.00 Poster prize ceremony
- 12.00 – 13.30 Lunch

13.30 – 17.00

Lab/Software demonstration courses (limited number of participants)

Mimetikos Preludium™ – Bo Olsson (Emmace)

Spray drying – Ines Amaro (TCD)

Particle characterisation – Peter O'Connell (TCD)