



**Joint SimInhale COST Action Summer School
and 5th Workshop on Pulmonary Drug Delivery**

**SIMINHALE COST ACTION MP1404
Summer School**

Dublin, 3-6 September, 2018
Trinity College Dublin

Organised by:

Action Chair Prof. Stavros Kassinos, University of Cyprus
Chair of the Conference Prof. Carsten Ehrhardt, Trinity College Dublin
Co-Chair of the Conference Dr Ayca Yildiz Peköz, Istanbul University, Turkey
Prof. Gerrit Borchard, University of Geneva, Action Vice-Chair
WG1 Leaders Prof. Alessandra Rossi and Prof. Elias Fattal
WG2 Leaders Prof. Sitaram Velaga and Mr. Wilbur de Kruijf
WG3 Leaders Prof. Martin Sommerfeld and Prof. Alessio Alexiadis
WG4 Leaders Prof. Joy Conway and Dr. Frantisek Lizal
WG5 Leaders Prof. Maria Beatriz da Silva Lima and Prof. Carsten Ehrhardt

Hosted by:

School of Pharmacy and Pharmaceutical Sciences, Trinity College Dublin, Ireland





Keynote Speaker

Dr. John Patton

Dance Biopharmaceuticals, USA

Speakers

(in alphabetical order)

- Prof. Alessio Alexiadis, University of Birmingham, United Kingdom
- Dr Maria Ines Amaro, Trinity College Dublin, Ireland
- Dr Per Bäckman, Emmace, Sweden
- Dr. Lea Ann Dailey, University of Halle, Germany
- Dr Kiko Belchí, Polytechnic University of Catalonia, Spain
- Dr Michael Bennett, University of Southampton, United Kingdom
- Prof. Carsten Ehrhardt, Trinity College Dublin, Ireland
- Mr Wilbur de Kruijf, Medspray, The Netherlands
- Prof. Ben Forbes, King's College London, United Kingdom
- Dr Kwang-Jin Kim, University of Southern California, USA
- Dr Ronan MacLoughin, Aerogen, Ireland
- Dr Sandrine Marchand, University of Poitiers, France
- Dr Peter O'Connell, Trinity College Dublin, Ireland
- Dr Bo Olsson, Emmace, Sweden
- Dr Ayca Yildiz Peköz, Istanbul University, Turkey
- Prof. Alessandra Rossi, University of Parma, Italy
- Prof. Regina Scherließ, Kiel University, Germany
- Dr Gerhard Scheuch, Ventaleon, Germany
- Dr Fabio Sonvico, University of Parma, Italy
- Dr Nathalie Wauthoz, Université Libre de Bruxelles, Belgium
- Dr Sarah Zellnitz, Research Center Pharmaceutical Engineering, Austria

Agenda

Sunday September 2, 2018

Time	Description
18:00-20:00	Informal Welcome Reception (Venue TBC)

Monday September 3, 2018

Time	Description
09:00	Registration
09:45	Welcome Address and Opening Remarks Prof. Carsten Ehrhardt (Chair of the Conference) Dr Ayca Yildiz Peköz (Co-Chair of the Conference) Prof. Stavros Kassinos (Chair of SimInhale COST Action)
10:00	Anatomy and physiology of the human lung Prof. Carsten Ehrhardt, Trinity College Dublin, Ireland
10:30	Basics of aerosol delivery Dr Gerhard Scheuch, Ventaleon, Germany
11:00	<i>Coffee break and poster exhibition</i>
11:30	Macrophages and other clearance mechanisms Dr Lea Ann Dailey, University of Halle, Germany
12:00	Keynote Lecture: Dr John Patton, Dance Biopharmaceuticals, USA Inhaled insulin – where it came from and where it is going
13:00	<i>Lunch break and poster exhibition</i>
14:30	Inhalation biopharmaceutics Prof. Ben Forbes, King's College London, United Kingdom
15:00	Do we need a BCS for inhalation products? Dr. Per Bäckman, Emmace, Sweden
16:00	City Tour Conference Dinner at The Merry Ploughboy (http://www.mpbpub.com/)

Tuesday September 4, 2018

Time	Description
9:30	Dry powder inhalers Dr Maria Ines Amaro, Trinity College Dublin, Ireland
10:00	Aerosol particle engineering Dr Sarah Zellnitz, Research Center Pharmaceutical Engineering, Austria
10:30	Particle dissolution in the lungs Prof. Alessandra Rossi, University of Parma, Italy
11:00	<i>Coffee Break and poster exhibition</i>
11:30	Formulation strategies of dry powders related to the lung diseases Dr Nathalie Wauthoz, Université Libre de Bruxelles, Belgium
12:00	Impact of drug solid state aspects on pulmonary delivery Dr Fabio Sonvico, University of Parma, Italy
12:30	<i>Lunch break and poster exhibition</i>
14:00	Liquid inhalers Wilbur de Kruijf, Medspray, Sweden
14:30	Nebulisers Dr Ronan MacLoughin, Aerogen, Ireland
15:00	End of Day

Wednesday September 5, 2018

Time	Description
9:30	<i>In vitro, in silico</i> and <i>in vivo</i> tools for dose finding, aiming for bio-equivalence Wilbur de Kruijf, Medspray, Sweden
10:00	Mucosal vaccination via the respiratory tract Prof. Regina Scherließ, Kiel University, Germany
10:30	Inhaled heparin Dr Ayca Yildiz Peköz, Istanbul University, Turkey
11:00	<i>Coffee Break and poster exhibition</i>
11:30	Trans-disciplinary short course on integrated CFPD mesoscale computer simulations Prof. Alessio Alexiadis, University of Birmingham, United Kingdom
13:00	<i>Lunch break and poster exhibition</i>
14:30	Quantification of HRCT clinical data and translation across to CFD Dr Michael Bennett, University of Southampton, United Kingdom
	Using topology to identify disease-specific lung structure changes Dr Kiko Belchí, Polytechnic University of Catalonia, Spain
16:00	End of Day
19:00- 22:00	Speakers' Dinner (Venue TBC)

Thursday September 6, 2018

Time	Description
9:30	<i>In vitro</i> models for pulmonary drug disposition studies Prof. Carsten Ehrhardt, Trinity College Dublin, Ireland
10:00	Absorption pathways of nanoparticles in the lung Dr Kwang-Jin Kim, University of Southern California, USA
10:30	Fate of inhaled antibiotics Dr. Sandrine Marchand, University of Poitiers, France
11:00	Coffee Break and poster exhibition
11:30	Poster prize ceremony
12:00	Lunch break and poster exhibition
13:30	Lab/Software demonstration courses (limited number of participants) <ol style="list-style-type: none"> Mimetikos Preludium™ Dr Bo Olsson, Emmace, Sweden Spray drying Dr Maria Ines Amaro, Trinity College Dublin, Ireland Particle characterization Dr. Peter O'Connell, Trinity College Dublin, Ireland
17:00	End of Summer School



Who can attend?

- Young researchers starting their research activities in the field of pulmonary drug delivery, especially those interested in the use of *in silico* methods but who want to acquire a multidisciplinary training
- Researchers/technical/policy-making staff with a background in Pharmaceutical, Engineering or other Life Sciences interested in understanding the role of *in silico* methods in the field of drug delivery to the lungs.

Eligibility Criteria

- Applicants eligible to be reimbursed can be from **all COST Countries**
- List of COST countries: http://www.cost.eu/about_cost/cost_countries
- **Number of applicants to be reimbursed: 25**

Applications

- To apply, please provide:
 - A cover letter with an expression of interest and a paragraph describing the relevant scientific activities with this Training School
 - A Curriculum Vitae (CV)
 - All applications should be submitted to **info@siminhale-cost.eu** no later than **15 June 2018**.
- Successful applicants will be contacted directly by e-mail by **25 June 2018**.

Support Grant

- Applicants will be evaluated on the basis of following criteria:
 - Early Career Investigators (ECIs) in the area of pulmonary drug delivery
 - Relevance of applicants' studies and research experience to the topics of the workshop
 - Balanced distribution of educational background among participants

Financial Support Accommodation

- **Fees: FREE**
- Each applicant will receive a financial support grant of 800 EUR
 - Travel Grant: 200 EUR
 - Accommodation and meals: 150 EUR per day (4 days covered)
- The Grant will be provided after the completion of the training school through the e-COST system <https://e-services.cost.eu>.
- **Travel and accommodation must be arranged by each participant after the receipt of the acceptance email and the official e-COST invitation.**

Local Organiser:



Grant Holder:



Πανεπιστήμιο Κύπρου
University of Cyprus

SimInhale
COST ACTION
MP1404



Abstract Submission

- The deadline for abstract submission for the Pulmonary Drug Delivery Workshop is 17 August 2018
- Students posters may be selected for Oral Presentation
- For more info please visit: <http://www.pulmonarydrugdelivery.org/>

For more information visit

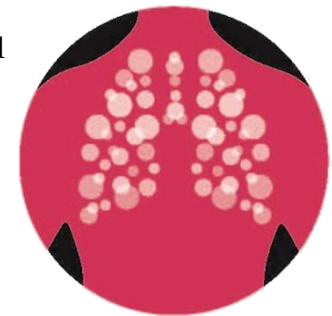
- <http://www.siminhale-cost.eu>
- <http://www.pulmonarydrugdelivery.org/>



SimInhale COST Action MP1404

As a result of the culmination of several scientific and technological developments, we are on the verge of technological breakthroughs in the field of inhaled medicines that will revolutionize the treatment of many acute or chronic respiratory and systemic illnesses. However, knowledge in the field is vertically fragmented and compartmentalized in disciplines. As a result, current developments are not necessarily synergistic and supportive of each other. The prospect of patient-tailored inhaled medicines necessitates a much closer coordination of research and development activities.

The primary objective of Siminhale is to develop create and maintain a pan-European multidisciplinary scientific network that will coordinate and enhance research and development (R&D) in the field of inhaled medicines with the aim to accelerate the development of a new generation of effective and safe inhaled medicines.



Siminhale aims to create a pan-European network of experts in order to: i) advance particle designs for improved deposition and interaction with lung tissue, ii) promote realistic computer simulations of particle aerosolization, delivery and deposition, iii) promote patient-tailored inhaled medicines, iv) promote integration of device and formulation design, and v) promote critical assessment of toxicity issues and related risks. Making a new generation of advanced inhaled pharmaceuticals available to patients in a shorter period of time will have enormous social benefits.

Learn more on the Action on: www.siminhale-cost.eu

LinkedIn: <https://www.linkedin.com/groups/8421105>

Facebook: <https://www.facebook.com/siminhale/>

For more information please contact info@siminhale-cost.eu

“The COST Action MP1404 – SimInhale is supported by COST (European Cooperation in Science and Technology)”.

COST (European Cooperation in Science and Technology) is a pan-European intergovernmental framework. Its mission is to enable break-through scientific and technological developments leading to new concepts and products and thereby contribute to strengthening Europe’s research and innovation capacities. It allows researchers, engineers and scholars to jointly develop their own ideas and take new initiatives across all fields of science and technology, while promoting multi- and interdisciplinary approaches. COST aims at fostering a better integration of less research intensive countries to the knowledge hubs of the European Research Area. The COST Association, an International not-for-profit Association under Belgian Law, integrates all management, governing and administrative functions necessary for the operation of the framework. The COST Association has currently 36 Member Countries. www.cost.eu