System approaches in lung disease

10-13 March, 2016 - Estoril, Portugal
(Scientific programme as of 22.02.2016)

The Conference is granted 15 European CME credits (ECMEC) by the European Accreditation Council for Continuing Medical Education (EAccME).

Thursday 10 March, 2016

Opening Session
18:00-18:15 Welcome and Introduction
Bruno Crestani, ERS Conferences and Seminars Director
18:15-18:45 Opening Lecture
Chairs: Bruno Crestani and Ian Adcock
Personal ‘omics profiling
Rui Chen (Stanford, USA)
18:45-19:00 Discussion
19:00-19:30 Welcome cocktail

Friday 11 March, 2016

Session 1: The unmet needs in lung disease: is systems medicine the answer?
Chairs: Guy Brusselle and Alen Faiz
08:45-09:05 Severe asthma
Peter Sterk (Amsterdam, The Netherlands)
09:05-09:20 Discussion
09:20-09:35 OP1: miR-17 and -21 in intercellular communication via exosomes in allergic airway inflammation
Sabine Bartel (Borstel, Germany)
09:35-09:50 OP2: Eicosanoids in asthma: multi-omics data interpretation
Alexander Mazein (Lyon, France)
09:50-10:10 COPD
Rosa Faner (Barcelona, Spain)
10:10-10:25 Discussion
10:25-10:50 Coffee break

Session 2: Methodological advances as enablers
Chairs: Craig Wheelock and Lieuwe Bos
10:50-11:10 Single cell ‘omics analysis
Yan Xu (Cincinnati, USA)
11:10-11:25 Discussion
11:25-11:40 OP3: Non-canonical WNT signaling is mediated by extracellular vesicles in pulmonary fibrosis
Aina Martin (Munich, Germany)
11:40-11:55 OP4: Vitamin D stimulates macrophage efferocytosis and encourages a proresolution phenotype
Dhruv Parekh (Birmingham, United Kingdom)
11:55-12:15 Building handprints of complex diseases: the U-BIOPRED case
Bertrand De Meulder (Lyon, France)
12:15-12:30 Discussion
12:30-14:30 Lunch for all delegates and mentorship lunch for bursary recipients and their mentors
Session 3: Asthma and allergy
Chairs: Jørgen Vestbo and Yanaika Shari Sabogal Piñeros

14:30-14:50  Epigenetics in asthma ontology
Irina Lehmann (Leipzig, Germany)

14:50-15:05  Discussion

15:05-15:20  OP5: RibomiR-seq reveals microRNAs fine-tune the transcriptome but profoundly alter translation in severe asthma
Rocio Martinez-Nunez (Southampton, United Kingdom)

15:20-15:35  OP6: The association between fine ambient particulate air pollution and lung cancer incidence in adventist health and smog -2 (AHSMOG-2) cohort study
Lida Gharibvand (Loma Linda, United States of America)

15:35-15:55  An integrated approach to the exposome
Valérie Siroux (Grenoble, France)

15:55-16:10  Discussion

16:10-16:40  Coffee

16:40-18:40: Poster Session 1
Group A – Chairs: Gunilla Westergren-Thorsson and Andras Bikov

PP101: Altered small RNA cargo in severe asthma exosomes - Ana Francisco-Garcia (Southampton, United Kingdom)

PP103: Network analysis of induced pluripotent stem cells secretome reveals its anti-fibrotic action in rat lung injury model - Cedric Simillion (Bern, Switzerland)

PP104: Early biomarkers indicating the development of neonatal chronic lung disease defined by clinical and imaging parameters - Kai Förster (Munich, Germany)

PP106: Defect in the translational control of cytokines leading to hyperresponsive bronchial epithelial cells in asthmatics - Abilash Ravi (Amsterdam, Netherland)

PP111: Effects of vitamin D supplementation on perioperative markers of inflammation in patients at risk of acute respiratory distress syndrome (ARDS) - Rachel Dancer (Birmingham, United Kingdom)

Group B – Chairs: Tania Maes and Sabine Bartel

PP113: Enhanced expression of alarmins in pulmonary hypertension and fibrosis - Aleksandar Petrovic (Giessen, Germany)

PP115: Increased oxidative stress leads to telomere shortening in children with alpha-1 antitrypsin deficiency - Sara Pastor (Valencia, Spain)

PP116: Modeling the air-blood barrier in healthy and disease state to evaluate safety and efficacy of inhaled (nano)medicines - Remi Hendrix (Saarbrucken, Germany)

PP118: Host-environmental IL-1b drives mutant KRAS-IKKα addiction in malignant pleural effusion - Antonia Marazziot (Patras, Greece)


PP120: Inflammation paradox – A detailed analysis of inflammatory profile in the airway wall of mild to moderate COPD - Mathew Eapen (Hobart, Australia)
PP121: Human Airway Trypsin-like protease: friend or foe in Idiopathic Pulmonary Fibrosis? - Awen Menou (Paris, France)

PP122: A human lung explant model of fibrogenesis for the assessment of anti-fibrotic strategies in idiopathic pulmonary fibrosis - Katy Roach (Leicester, United Kingdom)

Group C – Chairs: Peter Sterk and Leonor Gouveia

PP123: Exploring the mechanisms of granuloma formation in vivo to prevent dissemination of a respiratory Mycobacterium tuberculosis infection - Joana Da Silva Domingues (Toulouse, France)

PP124: A combination of the Wells score with Multiorgan Ultrasound to stratify patients with suspected pulmonary embolism - Argyro Chatziantonio (Heraklion, Greece)

PP125: Global gene expression analysis of the mucociliary differentiation process of human bronchial epithelial cells at the air-liquid interface - Jeremy Parker (London, United Kingdom)

PP126: Changes of peripheral blood eosinophil activity during allergen-induced late-phase airway inflammation in asthma - Ieva Janulaityte (Kaunas, Lithuania)

PP127: Histone Deacetylase 7 mediated metabolic remodeling: a new crosslink between Pulmonary Hypertension and Cancer - Elisabetta Gamen (Bad Nauheim, Germany)

PP128: Lung-derived prostacyclin (PGI) in endothelial dysfunction in db/db mice - Andrzej Fedorowicz (Krakow, Poland)

PP129: Sequence analysis of ROS1 fusion genes could predict transforming ability – Rica Zinsky (Germany, Wiesbaden)

PP130: Prediction of COPD- and smoking status by network-based multi-omics data fusion analysis - Chuan-Xing Li (Stockholm, Sweden)

PP131: Association of single nucleotide polymorphisms located in miRNA binding sites with lung function - Elise De Smet (Ghent, Belgium)

PP132: Modulation of Met signal transduction by altering a degree of receptor phosphorylation - Magdalena Szczygiel (Heidelberg, Germany)

Group D – Chairs: Ian Adcock and Audrey Joannes

PP133: Evaluation the effect of bronchoconstriction on airway cellular responses in asthma - Maria Ester Quesada del Bosque (Southampton, United Kingdom)

PP134: Irisin stimulates hyaluronic acid secretion in COPD: a new role for irisin associated with disease progression and severity - Eleni Papakonstantinou (Basel, Switzerland)

PP136: Inducible expression quantitative trait loci: A novel method to identifying genetic variants associated with corticosteroid responsiveness in COPD - Alen Faiz (Groningen, Netherlands)

PP137: Upregulation of P2X7R and downstream effects in early stages of fibrogenesis - Kathrin Barth (Dresden, Germany)

PP138: Clinical significance of Streptococcus pneumoniae co-infection during respiratory syncytial virus infections in young children - Jaelle Brealey (Brisbane, Australia)

PP139: Multi-level differential network analysis of COPD exacerbations - Guillaume Noell (Madrid, Spain)

PP140: A requirement for IKKa in lung adenocarcinoma - Malamati Vreka (Munich, Germany)

PP141: Identification of pathogenic micro RNA (miR) in BOS: a system biology approach - Michele Zorzetto (Pavia, Italy)

PP142: The estrogen-induced miR-19 downregulates Secretory Leukoprotease Inhibitor expression in monocytes - Paul Joseph McKiernan (Dublin, Ireland)

PP143: Selective TSC1 Deletion in Smooth Muscle Activates mTOR Signaling and Induces Pulmonary Hypertension - Amal Houssaini (Munich, Germany)
18:40-19:20: Early evening talk  
Chairs: Jonathan Grigg and Lies Lahousse  
New tools for epidemiological medical research in the digital age  
Marcel Salathé (Genèvre, Switzerland)

From 19:40 Dinner for all delegates

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<th>Session 4</th>
<th>Experimental models of disease</th>
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<td>Chairs: David Warburton and Katy Roach</td>
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| 08:15-08:35 | Natural experiments and large databases in Respiratory, CVD and tobacco control  
Jørgen Vestbo (Manchester, United Kingdom) |
| 08:35-08:50 | Discussion |
| 08:50-09:05 | OP7: Systemic and local metabolomics profiling reveals novel insights into the progression of emphysema  
Thomas Conlon (Munich, Germany) |
| 09:05-09:20 | OP8: Alpha8 integrin deficiency alters branching morphogenesis and alveolarization during mouse lung development  
Tiziana Patrizia Cremona (Bern, Switzerland) |
| 09:20-09:40 | Modelling the whole lung  
Jason Bates (Burlington, USA) |
| 09:40-09:55 | Discussion |
| 09:55-10:25 | Group Picture and Coffee Break |

10:25-11:40: Young Investigator Session – The William MacNee Award  
Chairs: Rachel Chambers and Bertrand De Meulder

| YI1: Epigenome-wide mapping of histone modification landscape in human pulmonary arterial hypertension  
Prakash Chelladurai (Bad Nauheim, Germany) |
| YI2: Transcriptomic profiling of Macrophages isolated from human Non-Small Cell Lung Carcinoma (NSCLC) reveals novel Macrophage subsets with distinct tumour response features  
Eva Maria Garrido-Martin (Southampton, United Kingdom) |
| YI3: Peripheral blood myeloid-derived suppressor cells reflect disease status in IPF  
Isis Enlil Fernandez (Munich, Germany) |
| YI4: Identifying biomarkers of loss of control/exacerbations in asthma from exhaled breath  
Sinha Anirban (Amsterdam, Netherlands) |
| YI5 - The use of microarray analysis of gene signalling to determine heterogeneity of COPD exacerbation phenotypes  
Kenneth Bolger (Dublin, Ireland) |

11:40-14:30: Lunch and Poster Session 2  
Group A – Chairs: Lindsay Edwards and Rica Zinsky

PP201: A systems biology approach to aid identification of the mechanisms employed by BPIFA1/SPLUNC1 to restrict influenza A virus infection in the lung – Nathifa Moyo (Liverpool, United Kingdom)  
PP202: Investigating SOCS-mediated regulation of STAT signalling in idiopathic pulmonary fibrosis (IPF) - Cecilia Prele (Perth, Australia)  
PP203: MicroRNA profiling reveals a role for microRNA-218-5p in the pathogenesis of chronic obstructive pulmonary disease - Griet Conickx (Ghent, Belgium)
PP204: The Asthma Map: towards a community-driven reconstruction of asthma-relevant pathways and networks - Alexander Mazein (Lyon, France)

PP205: Epigenetic modifications in cord blood associated with asthma development later in children’s life - Matthias Klöös (Leipzig, Germany)

PP206: GM-CSF drives human lung tissue macrophages towards a more pro-inflammatory phenotype - Jessica Tilman (London, United Kingdom)

PP207: Platelet-derived Growth Factor Receptor α (PDGFRα) signaling involvement in alveolar secondary septation - Leonor Gouveia (Uppsala, Sweden)

PP208: Visualization of neonatal lung injury associated with mechanical ventilation using x-ray dark-field radiography - Prajakta Oak (Munich, Germany)

PP209: Identification of novel traffic factors involved in CFTR exit from the ER - João D. Santos (Lisbon, Portugal)

Group B – Chairs: Reinoud Gosens and Rachel Dancer

PP210: Identification of distinct biological phenotypes of ARDS by cluster analysis and association with mortality - Liewue Bos (Amsterdam, Netherlands)

PP211: The specific upregulation of placenta growth factor (PlGF) by matrix metalloproteinase (MMP)-12 in the pathogenesis of COPD - Hsin-Han Hou (Taipei, Taiwan)

PP212: Pleural inflammation is essential in bleomycin-induced lung toxicity - Olivier Burgy (Dijon, France)

PP213: Unsupervised gene co-expression analysis identifies a novel endotype in severe asthma - Akul Singhania (Southampton, United Kingdom)

PP214: Enhanced postnatal pulmonary injury as a consequence of exposure to moderate prenatal cigarette smoke - Prajakta Oak (Munich, Germany)

PP215: Systems approach to predict asthmatic response to allergen inhalation challenge - Scott Tebbutt (Vancouver, Canada)

PP216: An airway epithelial origin for tobacco carcinogen-induced lung adenocarcinoma - Magda Spella (Patras, Greece)

PP217: Human bronchial epithelial cell migration is dependent on the RhoA effector protein Rho-associated kinase - Fraser Milla (London, United Kingdom)

PP218: Is it possible to predict the outcome of the Whole lung lavage (WLL) in Pulmonary Alveolar Proteinosis (PAP)? - Michele Zorzetto (Pavia, Italy)

Group C – Chairs: Melanie Königshoff and Abilash Ravi

PP219: Macrophage phenotype changes within the small airway wall in smokers and Chronic Obstructive Pulmonary Disease – Mathew Eapen (Hobart, Australia)

PP220: Batf3-dependent dendritic cells control exacerbated allergic airways inflammation to house dust mite (HDM) - Laura Conejero Hall (Madrid, Spain)

PP221: Exploring mechanisms and early detection of pulmonary arterial hypertension via breath and lung vascular cells' volatolomics - Morad Nakhleh (Le Plessis Robinson, France)

PP222: Eosinophils enhance WNT-5a and TGF-β1 genes expression in airway smooth muscle cells and promote their proliferation in asthma - Andrius Januskevicius (Kaunas, Lithuania)

PP223: Differentiation between inflammation and hyperinflammation in the murine lung - Kathleen Reiss (Aachen, Germany)

PP224: Non-biased investigation into cardio-pulmonary bypass lung injury - Andrew Durham (London, United Kingdom)

PP225: Oxidative stress in nasal epithelial cells from patients with primary ciliary dyskinesia - Ana Reula (Valencia, Spain)

PP227: Correlation of IL-17A concentration with T regulatory cells in lung cancer microenvironment - Iwona Osinska (Warsaw, Poland)

PP228: The role of platelet-expressed C-type lectin-like receptor-2 in regulating the severity of murine lung injury - Sian Lax (Birmingham, United Kingdom)
Group D – Chairs: Adam Giangreco and Tiziana Patricia Cremona

PP229: System biology of adrenomedullin is controlled via its cell type specific expressed receptors in the human lung – Jyotshna Mandal (Basel, Switzerland)

PP232: Osteopontin as an airway epithelial tumor promoter - Ioannis Psallidas (Oxford, United Kingdom)

PP234: Identification of novel compounds for Wnt/beta-catenin induced lung repair in COPD - Rita Costa (Munich, Germany)

PP235: Activation of FGF9 and 18 in idiopathic pulmonary fibrosis promote survival and migration and inhibit myofibroblast differentiation of human lung fibroblasts - Audrey Joannes (Paris, France)

PP236: Punching above their weight: plasmacytoid dendritic cells play a critical role in regulating rhinovirus induced gene expression pathways - John Upham (Brisbane, Australia)

PP237: A dual role for eosinophils upon viral exposure; its relevance in virus-induced loss of asthma control – Yanaika Shari Pineros Sabogal (Amsterdam, Netherlands)

PP238: Hookworm infection with Nippostrongylus brasiliensis is a MyD88-TRIF independent mouse model of emphysema - Emma Ringqvist (Stockholm, Sweden)

PP239: Potential use of &beta;-blockers to reduce COPD exacerbations - Lies Lahousse (Ghent, Belgium)

PP240: Vitamin D deficiency is associated with and influences the severity of human and murine sepsis - Dhruv Parekh (Birmingham, United Kingdom)

14:45-16:45 Junior session: Getting the job you want
Chairs: Bruno Crestani and Agnes Boots

14:45-14:50 Introduction

14:50-15:05 What does the employer look for in a CV and application letter – an industry example
Paul Nicklin, Boehringer-Ingelheim, Germany

15:05-15:20 What does the employer look for in a CV and application letter – an academic example
Oliver Eickelberg, Comprehensive Pneumology Center, Germany

15:20-15:35 Performing your best in the interview situation
Inge Vestbo, KONTUR Healthcare, Denmark

15:35-15:50 Discussion

15:50-16:20 Part 2: CV feedback exercise
Liz Elvidge, Imperial College London, United Kingdom

16:20-16:45 Panel Discussion

16:45-17:30 Cocktail

19:30-20:00 Evening Pre-Dinner Talk
Chair: Stephan Holgate
IBM Watson; an advisor to medical professionals
Pascal Sempé, Paris, France

From 20:00 Gala Dinner and Award Ceremony
Sunday 13 March, 2016

Session 5: Personalised medicine: the treatment of the future – Part 1
Chairs: Carlos Robalo Cordeiro and Rocio Martinez-Nunez

09:00-09:20  Epigenetics in pulmonary hypertension
Soni Savai Pullamsetti (Bad Nauheim, Germany)
09:20-09:35  Discussion
09:35-09:55  Metabolomics for molecular phenotyping in respiratory disease
Craig Wheelock (Stockholm, Sweden)
09:55-10:10  Discussion
10:10-10:30  Coffee

Session 5: Personalised medicine: the treatment of the future – Part 2
Chairs: Ian Adcock and Nakhleh Morad

10:30-10:50  ILD and system medicine
Oliver Eickelberg (Munich, Germany)
10:50-11:05  Discussion
11:05-11:25  Systems pharmacology
Lindsay Edwards (Stevenage, United Kingdom)
11:25-11:40  Discussion
11:40-12:00  Conclusion by Bruno Crestani, ERS Conferences and Seminars Director