Mechanistic overlap between chronic lung injury and cancer

23-26 March, 2017 - Estoril, Portugal
(Scientific programme as of March 14, 2017)

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

**Thursday 23 March 2017**

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<th>Time</th>
<th>Event</th>
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| 18:00-18:15 | Welcome and Introduction  
Rachel Chambers, ERS Conferences and Seminars Director |
| 18:15-18:45 | Opening Lecture: Targeting the lung cancer-inflammation nexus  
Chair: Guy Brusselle  
Gary Anderson, Melbourne, Australia |
| 18:45-19:00 | Discussion |
| 19:00-19:30 | Welcome cocktail |

**Friday 24 March 2017**

**Session 1: Pathological and mechanistic disease similarities**  
Chairs: Reinoud Gosens and Agnes Boots

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<tr>
<th>Time</th>
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| 08:45-09:05 | Molecular imprint of lung cancer development  
Sam Janes, London, United Kingdom |
| 09:05-09:20 | Discussion |
| 09:20-09:35 | OP01 - CREB signaling in KRAS-driven lung adenocarcinoma  
Georgia Giotopoulou, Patras, Greece |
| 09:35-09:50 | OP02 - Downregulation of the pro-apoptotic gene, BNIP1, in bronchial biopsies from COPD patients  
Karl J. Staples, Southampton, United Kingdom |
| 09:50-10:10 | Epithelial progenitor cell dysfunction in chronic lung disease: potential roles for altered p53 signaling  
Barry R. Stripp, Beverly Hills, USA |
| 10:10-10:25 | Discussion |
| 10:25-10:50 | Coffee break |

**Session 2: Shared pathways of repair**  
Chairs: Adam Giangreco and Mareike Lehmann

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| 10:50-11:10 | Lung stem cells and lung cancer  
Carla Kim, Boston, USA |
| 11:10-11:25 | Discussion |
| 11:25-11:40 | OP03 - A critical role for mTOR regulated metabolic reprogramming during TGF-β induced fibroblast collagen synthesis  
Brintha Selvarajah, London, United Kingdom |
| 11:40-11:55 | OP04 - Deregulated SOX2 drives a migratory signature in a novel organotypic model of bronchial dysplasia  
Lucia Correia, Cambridge, United Kingdom |
11:55-12:15  
**Lung repair and disease**  
Georgios Stathopoulos, Munich, Germany

12:15-12:30  
Discussion

12:30-14:30  
**Lunch for all delegates and mentorship lunch for bursary recipients and their mentors**

Session 3: **Intersecting immunity and inflammation**  
Chairs: Jorgen Vestbo and Sebastian Marwitz

14:30-14:50  
**Tertiary lymphoid structures and cancer**  
Marie-Caroline Dieu-Nosjean, Paris, France

14:50-15:05  
Discussion

15:05-15:20  
**OP05 - Nontypeable Haemophilus influenzae-promoted proliferation of K-ras-induced early lung cancer lesions is completely dependent on Toll-like receptor signaling**  
Christoph Beisswenger, Homburg, Germany

15:20-15:35  
**OP06 - Myeloid NF-κB signaling fosters KRAS-mutant tumors**  
Magda Spella, Patras, Greece

15:35-15:55  
**Dendritic cells, immunomodulation, COPD, and cancer**  
Karim Vermaelen, Ghent, Belgium

15:55-16:10  
Discussion

16:10-16:40  
**Coffee**

16:40-18:40 - **Poster Session 1**  
Group A - Chairs: Rory Morty and Anthi Krontira

**PP101:** Hippo-YAP/TAZ signaling is deranged in IPF  
- Darcy Wagner, Munich, Germany

**PP102:** A new mechanism of latent TGF-β1 presentation in lung fibrosis  
- Henna Karvonen, Toronto, Canada

**PP103:** Targeting CD98hc: a key mediator of tumour and microenvironmental crosstalk in malignant mesothelioma  
- Claire Rooney, London, United Kingdom

**PP104:** SHP-2 is a novel anti-fibrotic regulator of fibroblast homeostasis  
- Argyris Tzouvelekis, Athens, Greece

**PP105:** Exosomal miRNA cargo in non small-cell lung cancer  
- Toby Mellows, Southmapton, United Kingdom

**PP107:** Study of lung development, regeneration and repair using precision-cut lung slice model  
- Khondoker Akram, London, United Kingdom

**PP108:** IL-17C promotes growth and proliferation of K-ras induced cancerous lesions  
- Felix Ritzmann, Homburg, Germany

**PP109:** Roles of air pollution on lung cancer development  
- Didier Cataldo, Liege, Belgium

**PP110:** Tissue-specific imprinting of innate immunity in the development of tumour metastasis  
- Amy Adlard, Manchester, United Kingdom

Group B - Chairs: Ian Adcock and Casper Wahlund

**PP111:** Involvement of Igf1r in Bronchiolar Epithelial Regeneration: Role During Repair Kinetics after Selective Club Cell Ablation  
- Iciar P. Lopez, Logroño, Spain

**PP112:** IL-17C promotes tumor-associated inflammation and lung tumor growth  
- Christoph Beisswenger, Homburg, Germany

**PP113:** Using a novel organotypic model of bronchial dysplasia to screen potential therapeutic agents for the chemoprevention of lung cancer  
- Phil Barry, Cambridge, United Kingdom
PP114: Wnt activity marks lung progenitors capable of forming spheres in vitro - John-Poul Ng-Blichfeldt, Groningen, Netherlands

PP115: The impact of myeloid and plasmacytoid dendritic cells in the development of lung cancer - Plamen Minkov, Stara Zagora, Bulgaria

PP116: Senolytic drugs target alveolar epithelial cell function and attenuate experimental lung fibrosis ex vivo - Mareike Lehmann, Munich, Germany

PP117: The role of LRRIG1-dependent EGFR signalling in airway homeostasis and squamous cell lung cancer development - Laura Sucony, London, United Kingdom

PP118: IL-17-mediated inflammation promotes cigarette smoke-induced genomic instability - Songmin Ying, Hangzhou, China

PP119: Pneumococcal pneumolysin triggers cell-derived microvesicle release - Eleftheri Letsiou, Berlin, Germany

Group C - Chairs: Pieter Hiemstra and Ioannis Psallidas

PP120: The micrometer 3D characteristics of the acinus - Tiziana Patrizia Cremona, Bern, Switzerland

PP121: Human rhinovirus infection impairs macrophage phagocytic capabilities - Jamil Jubrail, Paris, France

PP122: Tumour associated macrophages from human lung cancer that show activation of M1 functions, recruitment of CD8+ T cell by production of chemokines and strong anti-tumour activities are able to predict better survival - Eva Maria Garrido-Martin, Southampton, United Kingdom

PP123: Inhibiting the inhibitor: How epigenetic silencing of BAMBI drives the TGFβ pathway to enhanced malignancy in human non-small cell lung cancer - Sebastian Marwitz, Borstel, Germany

PP124: Role of AQP1 in tunneling nanotube (TnT) formation and mesothelial-mesenchymal transition (MMT) in malignant pleural mesothelioma (MPM) - Rajesh Jagirdar, Larissa, Greece

PP125: Tenascin C knockout mice have an altered lung function at newborn and adult age - Tiziana Patrizia Cremona, Bern, Switzerland

PP126: Investigating the role of cathepsin S in the pathogenesis of cystic fibrosis-like lung disease - Rebecca Delaney, Belfast, United Kingdom

PP127: Effects of e-cigarette vapour condensate upon human alveolar macrophage function - Isaac Almendros, Barcelona, Spain

PP128: A novel cell culture device to study the cross-talk between cells simultaneously exposed to different oxygenation mimicking hypoxic gradients in tumors - Aaron Scott, Birmingham, United Kingdom

PP129: Antioxidant treatment can promote lung tumor formation during chronic oxidative stress - Marielle Breau, Cretiel, France

Group D - Chairs: Robert Vries and Aron Ghimessy

PP131: Targeting glucose metabolism in experimental lung injury and fibrosis - Ellen Forty, London, United Kingdom

PP132: Scatter factors receptors MET and RON mutations in brain metastases from non-small-cell lung cancer - Giulia Stella, Pavia, Italy

PP133: Treg depletion decelerates bleomycin-induced pulmonary fibrosis - Kaustav Chakraborty, Kolkata, India

PP134: mTOR-mediated cap-dependent translation is essential for human lung myofibroblast differentiation and collagen I synthesis - Jessica D Eley, London, United Kingdom

PP135: Changes in the extracellular matrix – signs of remodeling leading to chronic rejection after lung transplantation - Catharina Mueller, Lund, Sweden
PP136: Inhibition of CFTR-specific miRNAs in CF bronchial epithelial cells - Chiara De Santi, Dublin, Ireland

PP137: Proteasomal activator 200 (PA200) regulates cellular proliferation: A putative role for IPF and lung cancer pathogenesis - Vanessa Welk, Munich, Germany

PP138: Lysosomal-associated membrane protein 1 (LAMP-1) upregulation in small airway epithelium of COPD may have physiological consequence and role in autophagy - Mathew Eapen, Hobart, Australia

PP139: Distinct M1, M2 macrophage populations in airway tissues and lumen of COPD patients - Mathew Eapen, Hobart, Australia

**Saturday 25 March 2017**

**Session 4: Stromal Similarities and synergies**
Chairs: Erik Sahai and Laura Succony

**08:45-09:05**  
FGFs in lung disease  
Saverio Belluscio, Giessen, Germany

**09:05-09:20**  
Discussion

**09:20-09:35**  
OP07 - Mesenchymal stem cell therapy reduces inflammation and damage in a model of chronic lung disease  
Doherty Declan, Belfast, United Kingdom

**09:35-09:50**  
OP08 - Circulating fibrocytes depletion results in reduced lung tumor growth and metastasis by modulating macrophage phenotype, angiogenesis and endothelin system  
Rajkumar, Savai, Bad Nauheim, Germany

**09:50-10:10**  
EMT in development and disease  
Angela Nieto, Alicante, Spain

**10:10-10:25**  
Discussion

**10:25-10:50**  
Group Picture and Coffee Break

**10:50-12:05**  
Young Investigator Session – The William MacNee Award  
Chairs: Rachel Chambers and Pieter Hiemstra

**10:50-11:05**  
YI01 - KRAS & TP53 mutations cause malignant mesothelioma  
Anthi Krontira, Patras, Greece

**11:05-11:20**  
YI02 - Re-education of tumor-associated macrophages by modulating histone deacetylases in lung cancer  
Xiang Zheng, Bad Nauheim, Germany

**11:20-11:35**  
YI03 - Mouse lung adenocarcinoma cell lines as tools to identify novel lung cancer genes  
Nikolaos Kanellakis, Patras, Greece

**11:35-11:50**  
YI04 - Targeting the mTOR signaling pathway to inhibit lung cell senescence in chronic obstructive pulmonary disease (COPD)  
Amal Houssaini, Munich, Germany

**11:50-12:05**  
YI05 - The role of the epigenetic regulator HMGN5 in COPD resulting from chronic lung injury  
Gizem Gunes, Munich, Germany
12:05-14:45 - Lunch and Poster Session 2
Authors will present their poster from 12:30 to 14:30. Lunch is served until 14:00.

**Group A - Chairs: Karim Vermaelen and Claire Rooney**

PP201: RNA-Seq analysis reveals major differences between the effects of rapamycin and dual mTORC1/2 inhibition during TGFβ1-induced myofibroblast differentiation - Manuela Platé, London, United Kingdom

PP202: Thyroid hormone inhibits pulmonary fibrosis through enhancement of mitochondrial function in alveolar epithelial cells - Argyris Tzouvelekis, Athens, Greece

PP203: Antifibrotic effects of Nintedanib and Pirfenidone on alveolar epithelial cells in 2D and 3D culture - Lara Buhl, Munich, Germany

PP204: Impact of in vitro expansion on the mesenchymal stem cell secretome and their use in Acute Respiratory Distress Syndrome - Rahul Mahida, Birmingham, United Kingdom


PP207: Functional gene polymorphisms of pro-inflammatory cytokines TNF-α and IL-17F and COPD - Tanya Tacheva, Stara Zagora, Bulgaria

PP208: Tissue-resident Natural Killer (NK) cell Phenotype in the Human Lung - Grace Cooper, Southampton, United Kingdom

PP209: The effect of KRAS mutation on anti-VEGF treatment in advanced lung adenocarcinoma - Aron Ghimessy, Budapest, Hungary

PP210: A non-small cell lung cancer (NSCLC) associated gene set is enriched in human IPF indicating common pathomechanisms - Darcy Wägener, Munich, Germany

**Group B - Chairs: Stefan Marciniak and Isaac Almendros**

PP211: GSK-3 β inhibition suppresses lung cancer cell survival, metastasis and proliferation through down-regulation the phosphorylation sites of CAP1 - Changhui Wang, Shanghai, China

PP212: Secretion of inflammasome complexes highlights unconventional neutrophil activity: insight into cystic fibrosis - Julie Laval, Tuebingen, Germany

PP213: Genetically engineered MSCs to treat lung cancer, the TACTICAL Clinical Trial - Elizabeth Sage, London, United Kingdom

PP215: Postnatal development of pulmonary acini in rats - Tiziana Patrizia, Cremona, Bern, Switzerland

PP216: Organoid model of luminal remodelling in COPD - Tankut G. Guney, London, United Kingdom

PP217: The role of DICER in CD11c+ cells in smoke-induced inflammation - Elise De Smet, Ghent, Belgium

PP218: Matrix metalloprotease-1 plays a detrimental role in the pathogenesis of pulmonary fibrosis - Jan Willem Duitman, Paris, France

PP219: Interaction proteomics of the pulmonary extracellular matrix in fibrosis and repair - Christoph Mayr, Munich, Germany

PP220: Allergen-induced late-phase airway inflammation trigger eosinophils adhesion and increase their effect on airway smooth muscle cells proliferation - Ieva Janulaityte, Kaunas, Luthania

**Group C - Chairs: Jean-Michel Sallenave and Sabine Bartel**

PP221: Evaluation the effect of bronchoconstriction on airway epithelial cells responses in asthma - Maria Ester Quesada del Bosque, Southampton, United Kingdom

PP222: The serum levels of alpha-1 antitrypsin are strongly associated with its local production by NSCLC tumor cells - Adam Szpechcinski, Warsaw, Poland
PP223: Improving lung cancer treatment by reducing normal lung toxicity - Lorena Giuranno, Maastricht, Netherlands

PP224: A method for clonal expansion of human airway basal cells for genomic analysis - Kate Gowers, London, United Kingdom

PP225: Igf1r deficiency attenuates acute inflammatory response in a bleomycin-induced lung injury mouse model - Sergio Piñeiro-Hermida, Logroño, Spain

PP226: Reprogramming of tumor associated macrophages by modulating Wnt/β-catenin signalling in lung cancer - Poornam Sarode, Bad Nauheim, Germany

PP227: Activin-A protects against lung cancer progression by potentiating anti-tumor immunity - Ioannis Morianos, Athens, Greece

PP228: The MERS coronavirus receptor DPP4 is increased in lungs of smokers and patients with COPD - Ken Bracke, Ghent, Belgium

PP229: Biological markers of survival and successful pleurodesis for malignant pleural effusion - Ioannis Psallidas, Oxford, United Kingdom

Group D - Chairs: Richard Marshall and Jamil Jubrail

PP230: N-acetylcysteine attenuates pulmonary fibrosis by inhibiting lung myofibroblast activation and altering TGF-β signaling - Soumya Chatterjee, Kolkata, India

PP232: Investigating the role and biomarker potential of exosomes in pulmonary sarcoidosis - Casper Wahlund, Stockholm, Sweden

PP233: High-throughput single cell mRNA sequencing reveals cell identity programs in the murine lung - Maximilian Strunz, Munich, Germany

PP234: Profibrotic signaling by TGF-β involves NADPH oxidase 4 dependent activation of tyrosine kinase Src and mitochondrial ROS - Carmen Veith, Maastricht, Netherlands

PP235: Mechanisms of human lung repair: retinoic acid induces alveolar epithelial cell migration through VEGF Receptor-2-dependent microvascular angiogenesis - Joana Alçada, London, United Kingdom

PP236: IL-1R1 but not IL-18Rbeta or IL-18BP contribute to the beneficial effects of IL-37 on experimental asthma - Alexandra Schröder, Borstel, Germany

PP237: Tumor-associated macrophages promote inflammasome-dependent lung tumor progression in mice - Michela Terlizzi, Salerno, Italy

PP238: Expression of PD1 and PD1 signalling in innate and adaptive T cell responses to NTHi - Joshua Wallington, Southampton, United Kingdom

PP239: Epigenetic unbalance may increase lung cancer incidence in patients affected by idiopathic pulmonary fibrosis - Mariangela Natale, Coimbra, Portugal

14:50-16:50 Junior session: Successful funding applications and opportunities
Chairs: Clare Lloyd and Nicolas Kahn

14:50-15:00 Introduction
15:00-15:20 ERS and EU Funding opportunities – Rory Morty, Giessen, Germany
15:20-15:40 ERC Grants – Stathopoulos Georgios, Munich Germany
15:40-16:00 Funding opportunities focused on flexible research careers – Janette K. Burgess, Groningen, Netherlands
16:00-16:20 How to write a successful funding application? – Melanie Königshoff, Denver, USA
16:20-16:45 General discussion followed by a networking cocktail
**19:30-20:00**  
**Evening Pre-Dinner Talk**  
Chair: Mina Gaga  
*Modeling disease with organoids*  
Robert Vries, Utrecht, Netherlands  

From 20:00 Gala Dinner and Award Ceremony

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### Sunday 26 March 2017

**Session 5: Dovetailing drugs and targets**  
Chairs: Guy Joos and Nikolaos Kanellakis

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<th>Speaker and Affiliation</th>
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<td>08:45</td>
<td>Immune checkpoint and COPD</td>
<td>Tom Wilkinson, Southampton, United Kingdom</td>
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<td>09:05</td>
<td>Discussion</td>
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<td>09:20</td>
<td><strong>ER stress in chronic lung disease</strong></td>
<td>Stefan Marciniak, Cambridge, United Kingdom</td>
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<td>09:40</td>
<td>Discussion</td>
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<td>09:55-10:20</td>
<td>Coffee</td>
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<tr>
<td>10:20</td>
<td>Dissecting chronic lung disease</td>
<td>Richard Marshall, GSK, Stevenage, United Kingdom</td>
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<td>10:40</td>
<td>Discussion</td>
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<td>10:55</td>
<td><strong>Cell therapy for lung disease</strong></td>
<td>Felix Hermann, Apceth, Munich, Germany</td>
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<td>11:15</td>
<td>Discussion</td>
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<td>11:30</td>
<td><strong>Conclusion by Rachel Chambers, ERS Conferences and Seminars Director</strong></td>
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