### Thursday 08 March 2018

**Opening Session**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker/Representative</th>
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<tbody>
<tr>
<td>18:00-18:15</td>
<td>Welcome and Introduction</td>
<td>Rachel Chambers, ERS Conferences and Seminars Director</td>
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<tr>
<td>18:15-18:45</td>
<td>Opening Lecture “Stem cell renewal and the matrix”</td>
<td>Chair: Rachel Chambers, Paul Noble, Los Angeles, USA</td>
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<td>18:45-19:00</td>
<td>Discussion</td>
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<td>19:00-19:30</td>
<td>Welcome “cheese and wine” cocktail</td>
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### Session 1: Matrix remodeling in lung disease – Part 1

**Chairs:** Pieter Hiemstra and Argyris Tzouvelekis

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>08:45-09:05</td>
<td>Matrix dysfunction in COPD</td>
<td>Tracy Hussell, Manchester, United Kingdom</td>
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<td>09:05-09:20</td>
<td>Discussion</td>
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<tr>
<td>09:20-09:35</td>
<td>OP01 - A phenotypic high-throughput screening assay for the pharmacological inhibition of the pathological deposition of extracellular matrix</td>
<td>Gerald Burgstaller, Munich, Germany</td>
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<td>09:35-09:55</td>
<td>Matrix abnormalities in pulmonary fibrosis</td>
<td>Martin Kolb, Hamilton, Canada</td>
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<td>09:55-10:10</td>
<td>Discussion</td>
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<td>10:10-10:25</td>
<td>OP02 - Towards human lung regeneration in end-stage respiratory failure: genetically-modifiable 3D organoid culture of human embryonic lung stem cells enables for the first time the study of human lung development in vitro</td>
<td>Marko Nikolic, Cambridge, United Kingdom</td>
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<td>10:25-10:50</td>
<td>Coffee break</td>
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### Session 1: Matrix remodeling in lung disease – Part 2

**Chairs:** Paul Noble and Irma Mahmutovic Persson

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>11:05-11:25</td>
<td>Extracellular matrix anisotropy in cancer invasion and metastasis</td>
<td>Danielle Park, London, United Kingdom</td>
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<td>11:25-11:40</td>
<td>Discussion</td>
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<td>11:40-11:55</td>
<td>OP04 - FKBP10 regulates fibroblast migration via synthesis of collagen VI</td>
<td>Larissa Knüppel, Munich, Germany</td>
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11:55-14:00  Lunch for all delegates and mentorship lunch for bursary recipients and their mentors

Session 2: Matrix-cell interaction
Chairs: Silke Meiners and Corry-Anke Brandsma

14:00-14:20  Matrix/pathogen interactions
Kristian Riesbeck, Malmö, Sweden
14:20-14:35  Discussion

14:35-14:50  OP05 - Guidance cues in the pulmonary environment propel in vivo dynamic movement of group 2 innate lymphoid cells after inflammation
Franz Puttur, London, United Kingdom

14:50-15:10  Matrikines in lung inflammation
Robert Snelgrove, London, United Kingdom
15:10-15:25  Discussion

15:25-15:40  OP06 - The activation of MET-driven invasive growth in IPF and metastasis is modulated by different mechanisms of cell/matrix interaction
Giulia Maria Stella, Pavia, Italy

15:40-16:00  Specialized fibroblasts in wound healing
Yuval Rinkevich, Munich, Germany
16:00-16:15  Discussion

16:15-16:45  Coffee break

16:45-18:45  Poster Session 1
Group A - Chairs: Danielle Park and Hani N. Alsafadi

PP101 - Serological assessment of different proteolytic fragments of elastin predicts mortality differently in the ECLIPSE COPD cohort - Sarah Rønnow, Herlev, Denmark

PP102 - Allergen-activated eosinophils impact on expression of extracellular matrix proteins in airway smooth muscle cells during asthma - Ieva Janulaityte, Kaunas, Lithuania

PP103 - Cyclic stretch induces transforming growth factor-β signalling via Gaq/11 in lung fibroblasts, but does not increase myofibroblast differentiation - Amanda Goodwin, Nottingham, United Kingdom

PP104 - Synthetic lethality of KRAS-mutant tumor cells in vivo depends on inflammatory signaling to myeloid cells - Kristina Arendt, Munich, Germany

PP105 - Airway epithelial-to-mesenchymal transition: compartmentalized cyclic AMP - Haoxiao Zuo, Groningen, Netherlands

PP106 - AKT1/AKT2 mRNA balance is significantly different in IPF BAL cells compared to other fibrotic ILDs - Eliza Tsitoura, Heraklion, Greece

PP107 - Age associated changes in extracellular matrix proteins in the lung are also present in severe COPD - Corry-Anke Brandsma, Groningen, Netherlands

PP108 - MicroRNAs regulate genome-wide post-transcriptional gene expression in severe asthma bronchial epithelium as determined by Frac-seq - Rocio Teresa Martinez-Nunez, London, United Kingdom

PP109 - Trp53 signaling in lung adenocarcinoma - Maria Oplopoioiu, Rion, Greece
PP110 - Anti-diabetic drug metformin imposes anti-fibrotic effects by controlling fibroblast plasticity - Vahid Kheirollahi, Giessen, Germany

Group B - Chairs: Yuval Rinkevich and Jennifer Cairns

PP111 - Material properties of lung scaffolds derived from healthy and IPF donor tissues are associated with disease pathology - Linda Elowsson, Lund, Sweden

PP112 - Fluid shear stress modulates changes in eosinophil morphology prior to transmigration - Kiho Son, Hamilton, Canada

PP113 - Differential effect of ARDS on alveolar macrophage efferocytosis compared to bacterial phagocytosis - Rahul Mahida, Birmingham, United Kingdom

PP114 - miR449 protects airway cilia and healthy lung ageing - Muriel Lizé, Göttingen, Germany

PP115 - IL-33 signaling contributes to pollutant-induced allergic airway inflammation - Tania Maes, Ghent, Belgium

PP116 - Physical and biochemical interactions drive fibrocytes accumulation in the scleroderma lung matrix - Huanxing Sun, New Haven, USA

PP117 - p16Ink4a deletion reverses adult consequences of experimental bronchopulmonary dysplasia, and promotes fibrosis - Maeva Zysman, Vincennes, France

PP119 - Spontaneous extracellular matrix turnover in PCLS from COPD patients - Carmel Nanthakumar, Hertfordshire, United Kingdom

PP120 - Hepatocyte growth factor regulates lung mesenchymal stem cell transition from quiescence to active state in the bleomycin injured lung - Kleanthis Fytianos, Bern, Switzerland

PP121 - Glycosaminoglycans differ in amount and modification dependent on disease severity in COPD - Oskar Hallgren, Lund, Sweden

Group C - Chairs: Silke Meiners and Jennifer J.P. Collins

PP122 - Phosphoproteomics reveals the signaling landscape of lung fibroblast rigidity sensing - Laura Wanat, Munich, Germany

PP123 - Global proteomics analysis reveals altered lung extracellular matrix composition following resolution of influenza virus infection - Oliver Brand, Manchester, United Kingdom

PP124 - CCAAT/enhancer binding protein delta (C/EBPδ) deficiency does not affect bleomycin-induced pulmonary fibrosis - Jan Willem Duitman, Paris, France

PP125 - Ghrelin expression in mast cells of infant lung with respiratory distress syndrome - Koni Ivanova, Stara Zagora, Bulgaria

PP126 - Investigating the phosphorylation of mTOR (S2448) as a novel biomarker for TGF-β1 signalling - Matthew Redding, Bedfordshire, United Kingdom

PP127 - Mechanical preconditioning of lung-derived mesenchymal stem cells improves ventilation-induced lung injury in rats - Isaac Almendros, Barcelona, Spain

PP128 - Extracellular matrix composition of decellularized emphysematous and control lung tissue - Danique J. Hof, Nijmegen, Netherlands

PP129 - The dynamics of tumor-stroma interactions in lung cancer - Magdalena Szczygiel, Heidelberg, Germany

PP130 - TGF-β increases IL-33 expression by primary human lung fibroblasts - Katherine Stephenson, Nottingham, United Kingdom

PP131 - Bronchial extracellular matrix from COPD patients induces altered gene expression in repopulated primary human bronchial epithelial cells - Xiaohong Zhou, Molndal, Sweden

Group D - Chairs: Bruno Crestani and Anna Konishcheva

PP132 - Azithromycin reduces aSMA and leads to vacuolar formation in lung fibroblasts - Ronja Schliep, Hannover, Germany

PP133 - Nuclear factor κB-signalling drives Malignant Pleural Mesothelioma - Ioanna Giopanou, Rio, Greece
PP134 - Generation of alveolar epithelial cells from human induced pluripotent stem cells for a model of alveolar wound repair - Sander van Riet, Leiden, Netherlands

PP135 - Characterization of Lung Resident Mesenchymal Stem Cells in patients with COPD - Sandra Casas, Barcelona, Spain

PP136 - Implication of ADAM10 protease in malignant mesothelioma - Christelle Sepult, Liège, Belgium

PP137 - In vivo models of Drug Induced ILD; tools to study and improve drug safety - Irma Mahmutovic Persson, Lund, Sweden

PP139 - The composition and the interaction between lung fibroblasts and alveolar-epithelial cells with the surrounding matrix is crucial in pulmonary fibrosis - Carlos Esteban Machahua, Barcelona, Spain

PP140 - Microfibrillar-associated protein 4 promotes experimental asthma by modulation of airway smooth muscle cell phenotype - Bartosz Pilecki, Odense, Denmark

PP141 - Macrophage inflammatory tolerance and elevated hyaluronan a microRNA signature after resolution of an infection - Sylvia Lui, Manchester, United Kingdom

Dinner for all delegates

Saturday 10 March 2018

Session 3: The instructive matrix
Chairs: Silke Meiners and Sabine Bartel

08:45-09:05 Mechanosensing – converting tension into chemical signals
Bernhard Wehrle-Haller, Geneva, Switzerland

09:05-09:20 Discussion

09:20-09:35 OP07 - Mechanical programming of mesenchymal stromal cells to treat lung fibrosis
Jae-Won Shin, Chicago, USA

09:35-09:55 When is an alveolar epithelial cell an alveolar epithelial cell?
Michael F. Beers, Philadelphia, USA

09:55-10:10 Discussion

10:10-10:25 OP08 - MTOR regulates TGFβ-induced collagen synthesis via increased glycine biosynthesis
Ilan Azuelos, Montreal, Canada

10:25-10:50 Group picture and coffee break
**Young Investigator Session – The William MacNee Award**

**Chairs: Clare Lloyd and Rory Morty**

**10:50-11:05**  
YI01 - Impaired angiogenic supportive capacity and altered gene expression profile of CD146+ mesenchymal stromal cells isolated from hyperoxia-injured neonatal rat lungs  
Jennifer J.P. Collins, Rotterdam, Netherlands

**11:05-11:20**  
YI02 - PRRX1 a pro-fibrotic mesenchymal transcription factor modulated by remodeled microenvironment in IPF  
Emmeline Marchal-Duval, Paris, France

**11:20-11:35**  
YI03 - Laser-capture microdissection, mass spectrometry and immunohistochemistry reveal pathologic alterations in the extracellular matrix of transplanted lungs  
Catharina Mueller, Lund, Sweden

**11:35-11:50**  
YI04 - Bronchial fibrocyte-like cells accumulate in chronic obstructive pulmonary disease (COPD) lungs  
Isabelle Dupin, Bordeaux, France

**11:50-12:05**  
YI05 - Alternative Polyadenylation (APA) modulates extracellular matrix deposition in pulmonary hypertension  
Scott Collum, Houston, USA

**12:05-14:00**  
Lunch and Poster Session 2

**Authors will present their poster from 12:45 to 14:40. Lunch is served until 14:00.**

**Group E - Chairs: Gisli Jenkins and Bartosz Pilecki**

**PP201** - Human rhinovirus infection of airway epithelial cells induces tenascin-C release which may contribute to increased airway inflammation - Jake Mills, Sheffield, United Kingdom

**PP202** - Serological biomarkers of extracellular matrix remodeling in the ALLIANCE asthma cohort - Sarah Rønnow, Herlev, Denmark

**PP203** - Thyroid hormone inhibits fibrosis and improves epithelial mitochondrial function in experimental pulmonary fibrosis - Argyris Tzouvelekis, Athens, Greece

**PP204** - Extracellular vesicle (EV) – associated microRNAs secreted by primary bronchial epithelial cells upon the development of goblet cell metaplasia - Sabine Bartel, Borstel, Germany

**PP205** - Characterization of the murine acute inflammatory responses and efficient resolution after targeting Igf1r in a HDM model of asthma - Jose G. Pichel, Logroño, Spain

**PP206** - Distinct metabolic alterations in airway macrophages during pulmonary fibrosis - Patricia Ogger, London, United Kingdom

**PP207** - Glycosaminoglycans (GAGs) composition is altered due to epithelial to mesenchymal transition (EMT) - Hani N. Alsafadi, Lund Sweden

**PP208** - Tumor-derived granulocyte chemotactic protein 2 cooperates with neutrophil proteinase 3 to drive lung adenocarcinoma - Anne-Sophie Lamort, Munich, Germany

**PP209** - The function of microRNA-155 in a model of smoke-induced inflammation - Ken Bracke, Ghent, Belgium

**PP210** - Abnormalities in the function of lung-derived mesenchymal stromal cells (LMSCs) in COPD: intrinsic defects or impaired interaction with the matrix? - Dennis Kruk, Groningen, Netherlands
Group F - Chairs: Darcy Wagner and Huanxing Sun

PP211 - Towards an in situ interactome of the pulmonary basement membrane - Christoph Mayr, Munich, Germany

PP212 - Anti-fibrotic effects of Azithromycin are enhanced in human lung fibroblasts from IPF compared to controls - Kristina Krempaska, Bern, Switzerland

PP213 - Galectin-3 promotes transforming growth factor β activity in idiopathic pulmonary fibrosis - Nimesh Parmar, London, United Kingdom

PP214 - A requirement for mast cells in lung adenocarcinoma - Giannoula Ntaliarda, Rio, Greece

PP215 - Diseased lung matrix as a driver of pulmonary fibrosis in both IPF and COPD - Holger Schlüter, Mölndal, Sweden

PP216 - Importance of matrix selection for in vitro cytotoxicology assays and lung disease modeling - Jovile Raudoniute, Vilnius, Lithuania

PP217 - Regulation of pulmonary fibroblast behavior by matrix rigidity and TGF-β: implications in cancer and fibrosis - Jordi Alcaraz Casademunt, Barcelona, Spain

PP218 - A co-culture model of human monocyte-derived M1 and M2 macrophages and airway epithelial cells: differential effects on epithelial repair and pro-inflammatory responses - Sander van Riet, Leiden, Netherlands

PP219 - The integral role of lung extracellular matrix in myofibroblast differentiation - Chandak Upagupta, Hamilton, Canada

Group G - Chairs: Robert Snelgrove and Jan Willem Duitman

PP220 - Extracellular matrix glycosaminoglycans can predict progression and severity in COPD - Eleni Papakonstantinou, Thessaloniki, Greece

PP221 - mTOR regulates TGF-β induced myofibroblast differentiation - Hannah Woodcock, London, United Kingdom

PP222 - Effects of eucalyptol in mouse lung repair after cigarette smoke-induced emphysema - Isabella Cattani-Cavalieri, Groningen, Netherlands

PP223 - Magnetic targeting increases retention of mesenchymal stromal cells in silicotic lungs - Luisa Helena Andrade da Silva, Rio de Janeiro, Brazil

PP224 - Fibrotic extracellular matrix upregulate pro-fibrotic miRNA expression of fibrocytes - Seidai Sato, Hamilton, Canada

PP225 - Characteristics of B regulatory cells and auto-Abs in patients with bronchial asthma and viral infection - Anna Konishcheva, Moscow, Russian Federation

PP226 - Exercise training promotes differential extracellular matrix adaptations in skeletal muscle from cachectic compared to non-cachectic COPD patients - Davina Cm Simoes, Athens, Greece

PP227 - CREB mediates immune-escape of KRAS-mutant lung adenocarcinomas - Georgia Giotopoulou, Patra, Greece

PP228 - Proteomic comparison of lung-derived mesenchymal cells using quantitative DIA-mass spectrometry - Måns Kadefors, Malmö, Sweden

PP229 - Role of Mitogen activated-kinase (MAPK)-phosphatase (MKP)-5 in pulmonary fibrosis - Theodoros Karampitsakos, Thebes, Greece

Group H - Chairs: Kristian Riesbeck and Rocio Teresa Martinez-Nunez

PP230 - Lung epithelial microvesicles induced by pneumococcus contain mitochondrial cargo - Eleftheria Letsiou, Berlin, Germany

PP231 - Dysregulated collagen homeostasis by matrix stiffening and TGF-β1 in fibroblasts from idiopathic pulmonary fibrosis patients: role of FAK/Akt - Paula Duch Gili, Barcelona, Spain

PP232 - Elk1 gene deletion promotes early fibrotic changes and up-regulation of fibrotic genes in the ageing lung - Jennifer Cairns, Nottingham, United Kingdom
PP236 - Characterization of decellularized COPD lung matrices using mass spectrometry proteomics - Franziska Uhl, Burlington, USA

PP237 - Eosinophils enhance proliferation, differentiation and extracellular matrix proteins expression of pulmonary fibroblasts in asthma - Andrius Januskevicius, Kaunas, Lithuania

PP238 - Development of a hybrid alginate-ECM hydrogel as a potential bioink for 3D bioprinting - Martina De Santis, Lund, Sweden

PP239 - A Novel assay targeting a cathepsin G generated elastin neo-epitope and its utility in chronic obstructive pulmonary disease - Natasja Gudmann, Herlev, Denmark

PP240 - Pulmonary vascular remodeling mediated by ADORA2B in pulmonary artery smooth muscle cells - Tinne C. J. Mertens, Houston, USA

PP241-LBA - Assessing the Matrix in Neonatal Chronic Lung Disease using new imaging and biomarker strategies - Prajakta Oak, Munich, Germany

PP242-LBA - An ex vivo lung model for screening of nanoparticle targeting - Deniz Ali Bölükbas, Lund, Sweden

14:50-16:50 Early-Career delegates session: Maximizing your publication output
Chairs: Nicolas Kahn and Tracy Hussel

14:50-15:00 Introduction
15:00-15:20 How to make me like your paper: the Editor’s perspective (Martin Kolb, Hamilton, Canada)
15:20-15:40 Open Access: Influence on publication strategies (Gisli Jenkins, Nottingham, United Kingdom)
15:40-16:00 Publication metrics: assessing the impact of your paper (Neil Bullen, ERJ Publication Office, Sheffield, United Kingdom)
16:00-16:20 Optimizing the visibility of your publications
16:20-16:45 General discussion followed by a networking event

19:00-19:40 Evening Pre-dinner talk
Chair: Clare Lloyd
Visualization of cell-matrix interactions during immune cell interactions and tumour invasion
Peter Friedl, Nijmegen, The Netherlands

Gala Dinner and Awards Ceremony
**Sunday 11 March 2018**

**LSC 2018 Late-breaking abstracts Session**
Chairs: Rachel Chambers and Ramon Farré

08:45-08:55  **LBA01** - Collagen-producing macrophages can mediate lung fibrosis through Fra-2/AP-1 expression  
Alvaro Conrado Ucero, Madrid, Spain

08:55-09:05  **LBA02** - Cell-type resolved analysis of molecular changes in mouse lung aging  
Ilias Angelidis, Munich, Germany

09:05-09:15  **LBA03** - RNAseq analysis in combination with CRISPR-Cas 9 gene editing reveals a critical role for rapamycin-insensitive mTORC1 signalling in TGFbeta1-induced myofibroblasts  
Delphine Guillotin, London, United Kingdom

**Session 4: Reconstructing the matrix: bioengineering approaches**
Chairs: Martin Kolb and Marko Nikolic

09:15-09:35  **Lung Bioprinting - opportunities and challenges**  
Ramon Farre, Barcelona, Spain
09:35-09:50  Discussion

09:50-10:10  **Human lung scaffolds**  
Darcy Wagner, Lund, Sweden
10:10-10:25  Discussion

10:25-10:45  Coffee break

**Session 5: Drugging the matrix**
Chairs: Bruno Crestani and Amanda Goodwin

10:45-11:05  **Targeting and profiling matrix turnover in IPF**  
Gisli Jenkins, Nottingham, United Kingdom
11:05-11:20  Discussion

11:20-11:40  **Neoepitopes of matrix molecules as biomarkers**  
Morten Karsdal, Herlev, Denmark
11:40-11:55  Discussion

11:55-12:10  Conclusion by Rachel Chambers, ERS Conferences and Seminars Director

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