

Welcome to the 8th Annual Retreat
of the
International Graduate Programs
Molecular Biology and Medicine of the Lung
and the
Max Planck Research School for Heart and Lung Research



Rauschholzhausen
August 09-11, 2010



Max-Planck-Institut
für Herz- und Lungenforschung
W.G. Kerckhoff-Institut



MONDAY, 09.08.2010

Up to 10:00

Arrival at the Castle of Rauschholzhausen, Registration

10:00 – 10:15

Welcome and Introduction: Rory E. Morty and Werner Seeger

10:15 – 11:00

RUBIN TUDER (University of Colorado, Denver)

“Energetic switch in pulmonary hypertensive vessels and right ventricle: next frontier for treatment”

11:00 - 12:00

Student Presentations:

PULMONARY VASCULAR DISEASE I

12:00 -13:30

Lunch

13:30 - 14:15

ALAN VERKMAN (University of California, San Francisco)

“Roles of mammalian aquaporin water channels”

14:15 - 15:30

Student Presentations

ION AND PROTEIN TRANSPORT

15:30 - 17:30

Poster Presentations Session I

17:30 - 18:15

WIM TIMENS (University Medical Center, Groningen)

“Remodelling in chronic obstructive pulmonary disease”

18:15 – 19:15

Student Presentations

COPD AND FIBROSIS

19:30 - end

Dinner

TUESDAY, 10.08.2010

07:30 - 09:00

Breakfast

09:00 – 09:45

DAVID WARBURTON (Children's Hospital, Los Angeles)

“Lung development, developmental antecedents of adult lung diseases and potential novel regenerative therapies”

09:45 - 10:45

Student Presentations

HEART AND VASCULAR DEVELOPMENT

10:45 - 12:45

Poster Presentations Session II

12:45 - 14:15

Lunch

14:15 – 15:15

The Nobel Lecture

AARON CIECHANOVER (Technion-Israel Institute of Technology, Haifa, Israel)

“The ubiquitin proteolytic system: From basic mechanisms through human diseases and on to drug targeting”

15:15 - 16:15

Student Presentations

PULMONARY VASCULAR DISEASE II

16:15 - 18:00

Group photograph

Meet-the-Professor sessions

18:00 - 18:45

SCOTT BUDINGER (Northwestern University, Chicago)

“PPAR γ in the development of fibroproliferative ARDS”

18:45 - 19:45

Student Presentations

INFLAMMATION AND INFLAMMATORY CELLS

19:45 - end

Dinner and Social Programme

WEDNESDAY, 11.08.2010

07:30 - 09:00

Breakfast

09:00 – 09:45

KAREN RIDGE (Northwestern University, Chicago)

“Insights into the cellular mechanisms responsible for hypoxia induced disruption of the keratin intermediate filament network”

09:45 – 10:45

Student Presentations

IMAGING AND PROGENITOR CELLS

10:45 – 11:15

Coffee Break

11:15 – 12:00

NEIL DAVIE (Pfizer, Sandwich)

“Translational research in pulmonary vascular disease: an industry perspective”

12:00 – 12:45

Student Presentations

CANCER, AIRWAYS AND SIGNALLING

12:45 – 14:15

Lunch

14:15 – 15:00

OLIVIER BLANC-BRUDE (Paris Center for Cardiovascular Research, Paris)

“Endothelial progenitor cells and thrombosis”

15:00 – 16:00

Student Presentations

EPIGENETICS

16:00 - 16:30

Presentation of MBML coursework certificates

Formal closing of the Retreat: Rory E. Morty and Werner Seeger

17:00

Bus Departure from Rauischholzhausen to Giessen

Meeting Point: Parking Lot of the Castle 16:45

A) PULMONARY VASCULAR DISEASE I

Monday, August 9th, at 11:00

Chairs: Gero Niess and Alexandra Tretyn

11:00 - 11:15: [Friederike Weisel](#) (PI: Grażyna Kwapiszewska and Norbert Weissmann)
“AMD1: a potential target in hypoxia-induced vascular remodelling”

11:15 - 11:30: [Oleg Pak](#) (PI: Norbert Weissmann)
“The role of mitochondrial membrane potential and reactive oxygen species in pulmonary arterial hypertension a UCP2 knock-out as a new model for PAH”

11:30 - 11:45: [Swati Dabral](#) (PI: Ralph T. Schermuly)
“Role of Notch signaling in Pulmonary arterial hypertension”

11:45 - 12:00: [Florian Veit](#) (PI: Norbert Weissmann)
“Reactive oxygen species in monocrotaline-induced pulmonary hypertension”

B) ION AND PROTEIN TRANSPORT

Monday, August 9th, at 14:15

Chairs: Katrin Milger and Heike Schlenz

14:15 - 14:30: [Monika Hollenhorst](#) (PI: Martin Fronius and Wolfgang Clauss)
“Cholinergic signalling in ion transport processes of mouse tracheal epithelium”

14:30 - 14:45: [Łukasz Wujak](#) (PI: Rory E. Morty)
“Chronic effects of TGF- β on alveolar ion transport”

14:45 - 15:00: [Yasmin Buchäckert](#) (PI: István Vadász)
“Clathrin-dependent endocytosis mediates active transport of albumin across the alveolo-capillary barrier”

15:00 - 15:15: [Benno Grzesik](#) (PI: István Vadász)
“Regulation of alveolar epithelial Sodium transport during hypercapnia”

15:15 - 15:30: [Dominick Bossé](#) (PI: Herve Walti)
“Neonatal total liquid ventilation: Is low-frequency forced oscillation technique suitable for respiratory mechanics assessment?”

C) COPD AND FIBROSIS

Monday, August 9th, at 18:15

Chairs: Daniel von der Beck and Manish Kumar

18:15 - 18:30: [Nikolaus Kneidinger](#) (PI: Rory E. Morty)

“Dysregulated ECM stability: a pathomechanism in chronic obstructive pulmonary disease?”

18:30 - 18:45: [Alexandra Pichl](#) (PI: Norbert Weissmann)

“Smoke-induced emphysema”

18:45 - 19:00: [Katarzyna Piskulak](#) (PI: Andreas Günther)

“Regulation and role of Notch signalling in epithelial progenitor cell differentiation and proliferation in the normal and the fibrotic lung”

19:00 - 19:15: [Martin Hühn](#) (PI: Andreas Günther)

“ER-stress signaling in the alveolar epithelium”

D) HEART AND VASCULAR DEVELOPMENT

Tuesday, August 10th, at 09:45

Chairs: Judith Schweisgut and Hagen Witzel

09:45 - 10:00: [Luca Caputo](#) (PI: Gergana Dobрева)

“The role of the Ldb1-Isl1 transcriptional complex in heart development”

10:00 - 10:15: [Carine Detzer](#) (PI: Benno Jungblut)

“Function of S1P signaling during heart development and in the formation of endocardial cushions”

10:15 - 10:30: [Alexandra Tretyn](#) (PI: Ralph T. Schermuly)

“The Wnt signalling pathway in experimental right heart hypertrophy”

10:30 - 10:45: [Arisa Yabe](#) (PI: Giampietro Schiavo)

“Kidins220/ARMS mediates growth factor functions essential for nervous system and cardiovascular development”

E) PULMONARY VASCULAR DISEASE II

Tuesday, August 10th, at 15:15

Chairs: Michael Hofmann and Oleg Pak

15:15 - 15:30: [Himal Luitel](#) (PI: Ardeschir Ghofrani)

“Contribution of progenitor cells in pressure-overload induced right ventricular hypertrophy”

15:30 - 15:45: [Kirsten Szelepusa](#) (PI: Robert Voswinckel)

“Circulating fibrocytes in the pathogenesis and therapy of pulmonary hypertension - role of kinase receptors”

15:45 - 16:00: [Christine Veith](#) (PI: Grażyna Kwapiszewska)

“Potential mechanisms of paxillin regulation in PAH”

16:00 - 16:15: [Ka Hou Lao](#) (PI: John Wharton)

“Endothelial colony-forming cells in patients with idiopathic pulmonary arterial hypertension.”

F) INFLAMMATION AND INFLAMMATORY CELLS

Tuesday, August 10th, at 18:45

Chairs: Andreas Hecker and Florian Uhle

18:45 - 19:00: [Mona Saffarzadeh](#) (PI: Klaus Preissner)

“Role of neutrophil extracellular traps in acute lung injury”

19:00 - 19:15: [Shariq M. Usmani](#) (PI: Paul Dietl)

“Streptolysin-O from *Streptococcus pyogenes* activates store operated Calcium entry in lung epithelial cells: a key step in host response to streptococcal lung infection?”

19:15 - 19:30: [Katrin Högner](#) (PI: Susanne Herold and Jürgen Lohmeyer)

“Macrophage TRAIL expression is IFN- β -dependent and mediates alveolar epithelial cell apoptosis and barrier dysfunction in influenza virus pneumonia”

19:30 - 19:45: [Đjuro Kosanović](#) (PI: Robert Voswinckel)

“Roles of c-kit and mast cells in experimental pulmonary hypertension”

G) IMAGING AND PROGENITOR CELLS

Wednesday, August 11th, at 09:45

Chairs: Piera de Gaspari and Kirsten Szelepusa

09:45 - 10:00: [Yves Schymura](#) (PI: Ralph T. Schermuly)

“Evaluation of an animal model of right ventricular hypertrophy using magnetic resonance imaging”

10:00 - 10:15: [Anne Konzer](#) (PI: Marcus Krüger)

“*In vivo* monitoring of cardiac-specific changes during embryonic development by the SILAC zebrafish”

10:15 - 10:30: [Maria Raissi](#) (PI: Robert Voswinckel)

“Embryonic stem cells as a source of endothelial cells for cell-based therapies”

10:30 - 10:45: [Hagen Witzel](#) (PI: Gergana Dobрева)

“Tight regulation of Isl-1 transcriptional activity controls the cardiac progenitor pool”

H) CANCER, AIRWAYS AND SIGNALLING

Wednesday, August 11th, at 12:00

Chairs: Monika Hollenhorst and BreAnne Mackenzie

12:00 - 12:15: [Heike Schlenz](#) (PI: Wolfgang Kummer)

“Region-specific characteristics of airway constriction: responses to muscarine, 5-HT and dependency on caveolin-1”

12:15 - 12:30: [Pavan Kumar Pamarthi](#) (PI: Ralph T. Schermuly)

“The role of prostanoid signalling in lung cancer”

12:30 - 12:45: [Andreas Hecker](#) (PI: Veronika Grau)

“Alzheimer proteins as potential pharmacological targets after organ transplantation?”

I) EPIGENETICS

Wednesday, August 11th, at 15:00

Chairs: Sylwia Skwarna and Verawan Boonsanay

15:00 - 15:15: [Julia Duerr](#) (PI: Marcus Mall)

“Use of a new generation reverse tetracycline transactivator system for quantitative control of conditional gene expression in the murine lung”

15:15 - 15:30: [Katharina Jenniches](#) (PI: Shizuka Uchida)

“From Gills to Lung: Evolutionary Conservation of Uncharacterized Genes”

15:30 - 15:45: [Judith Schweisgut](#) (PI: Thomas Böttger)

“Physiological functions of miRNAs in the cardiovascular system”

15:45 – 16:00: [Johannes Besser](#) (PI: Thomas Böttger)

“Analysis of site specific miRNA-transcriptome interaction”

Speaker Introductions

Alan Verkman by Łukasz Wujak

Aaron Ciechanover by Benno Grzesik

David Warburton by Elie el-Agha

Karin Ridge by Friederike Weisel

Olivier Blanc-Brude by Anne Konzer

Rubin Tudor by Florian Veit

Scott Budinger by Maria Raissi

Wim Timens by Nikolaus Kneidinger