



26 May

08:00 Opening Registration

09:45 **Welcome CPI 2.0**

Stefanie Dimmeler, Susanne Herold & Thomas Braun

Session I: Flex Funds Applications

Chair: Stefanie Dimmeler

10:00 Amparo Acker-Palmer | Thomas Braun

FLRT2 controls epicardial EMT balance in cardiac development and repair

10:12 Rajkumar Savai | Ingrid Fleming | Siavash Mansouri

Spatial metabolomics to define proliferative and quiescent states in cardiopulmonary cells: Method development and biological discovery

10:24 Laura Zelarayán | Karin Ziegler | Leo Kurian

Spatially resolved analysis of multicellular interactions induced by CRISPRa-driven homeostatic programming in heart failure

10:36 Mauro Siragusa | Stefan Offermanns

Antigen-mediated immunomodulatory responses in atherosclerosis

10:48 Henner Hollert | Ralf Brandes | Sven Reischauer

Particle-induced inflammation sensitizes cells to chronic environmental toxicity

11:00 *Coffee Break*

Session II: Flex Funds Applications

Chair: Susanne Herold

11:30 Soni Savai Pullamsetti | Mario Looso | Leo Kurian

Human endogenous retroviral resurrection as a driver of cardiopulmonary aging and disease

11:42 Stefanie Dimmeler | Miloslav Sanda

The glycode of the aging heart

11:54 Natascha Sommer | Norbert Weissmann | Ralf Brandes

Development of NoxO1-targeting PROTACs for the treatment of COPD

12:06 Miguel Alcazár | Thimoteus Speer

Primed before birth: how intergenerational metabolic stress programs organ wiring and sex-specific resilience

12:18 Guillermo Luxán | Nina Wettschureck

GPCR control of pericyte plasticity and microvascular remodelling in cardiovascular disease

Keynote Lecture

Chair: Thomas Braun

12:30 **Matthias Hentze | EMBL Heidelberg**

Riboregulation: the story unfolds...

13:00 *Poster Teasers*

Marius Külp | Elisabeth Fließer | Marco Tarasco | Shan Lin | Leonie Stein | Qing Yin | Hamza Gulshan
Learta Pervizaj-Oruqaj | Stephanie Stephan | Priyasha De | Moritz Hobein | Anna Klement

13:15 **Poster Session I with Lunch***Areas 1-3 & Hubs, Hall of Honor & Event Tent***Session III: Flex Funds Applications***Chair: Andreas Zeiher*

- 15:00 Christian Münch | Soni Savai Pullamsetti | Michael Rieger
Single cell translational fidelity by the interplay of tRNA abundance and ribosome composition in pulmonary hypertension
- 15:12 Thomas Braun | Michael Kracht
Regulation of RNA polymerase II in mRNA buffering: A key RNA surveillance mechanism in cardiac stress?
- 15:24 Sebastian Cremer | Julian Leberzammer | Irina Kuznetsova
Heart–lung crosstalk in respiratory viral infection: Mechanisms of heart failure–associated virus susceptibility and virus-induced cardiopulmonary dysfunction
- 15:36 Gabrijela Dumbovic | Ana Pardo-Saganta
Therapeutic modulation of TERT splicing to rescue telomerase activity in pulmonary fibrosis
- 15:48 Samuel Sossalla | Laura Zelarayán | Marcel Schulz
Combinatorial CRISPR/dCas9-based gene network modulation: design and validation for reverting aortic stenosis-associated heart failure genes
- 16:00 Didier Stainier | Manuel Kaulich
RNA surveillance and circular RNA biogenesis as engines of transcriptional adaptation - Deciphering nuclear versus cytoplasmic RNA-based transcriptome modulation

16:12 *Coffee Break***Session IV: Discovery Areas***Chair: Elie El Agha*

- 16:45 **Introduction Discovery Area 1: Cellular Heterogeneity**
Wesley Abplanalp | Stefanie Dimmeler | Didier Stainier | Nina Wettschureck
- 16:51 Short Talk: **Nizam Ahmed**
Cardiac stromal cells activate a blastema-like transcriptional signature post cryoinjury
- 17:03 Short Talk: **Elvin Leonard**
TCF15 maintains cardiac endothelial identity and microvascular function after infarction
- 17:15 **Introduction Discovery Area 2: Cellular Surveillance**
Gabrijela Dumbovic | Michael Kracht | Michaela Müller-McNicoll | Christian Münch
- 17:21 Short Talk: **Yinuo Zhou**
Long non-coding RNA-SWI/SNF subcomplex assembly and targeting in iPSC differentiation
- 17:33 Short Talk: **Sebastian Süsser**
Combinatorial CRISPR screens reveal RNA exosome-mediated buffering of gene essentiality

Keynote Lecture*Chair: Stefanie Dimmeler*

- 17:45 **Luisa Arispe | Northwestern University, Chicago**
When flow meets growth: the challenge of proliferation under mechanical stress

18:15 Group Picture, afterwards Get-Together

19:30 End

09:00 Registration & Coffee

Keynote Lecture

09:30 **Scott Budinger | Northwestern University, Chicago**
The integrated stress response controls alveolar epithelial cell state

Chair: Susanne Herold

Session V: Translational Hubs

Chair: Irina Kuznetsova

- 10:00 **Introduction Translational Hub 1: Disease Modeling**
Susanne Herold | Stefan Offermanns | Rajkumar Savai
- 10:20 **Introduction Translational Hub 2: Cardio-Pulmonary Systems Biology and Medicine**
Mario Looso | Marcel Schulz
- 10:40 **Introduction Translational Hub 3: From Precision Biology to Precision Medicine**
Ardeschir Ghofrani | Eike Nagel

11:00 *Coffee Break***Session VI: Discovery Areas**

Chair: Mauro Siragusa

- 11:30 **Introduction Discovery Area 3: Development & Regeneration**
Thomas Braun | Elie El Agha | Susanne Herold | Ana Pardo-Saganta
- 11:36 Short Talk: **André Schneider**
Cell type-specific targeting of different smooth muscle cell populations by intersectional genetics
- 11:48 Short Talk: **Alejandro Egea Zorrilla**
Epithelial cell-derived Notch signaling as a key profibrotic driver for the development of pulmonary fibrosis
- 12:00 **Introduction Discovery Area 4: Cellular Microenvironment**
Ingrid Fleming | Grazyna Kwapiszewska | Stefan Offermanns | Rajkumar Savai
- 12:06 Short Talk: **Leah Vanicek**
Endothelial-derived Neuregulin 1 modulates pericytes function and induces diastolic dysfunction in heart failure with preserved ejection fraction
- 12:18 Short Talk: **Shen Zixiong**
CEACAM6 reshapes AT2 cell-microenvironment interactions to promote COPD progression

Session VII: Discovery Areas

Chair: Karin Ziegler

- 12:30 **Introduction Discovery Area 5: Macroenvironment**
Denisa Bojkova | Ralf Brandes | Natascha Sommer | Norbert Weissmann
- 12:36 Short Talk: **Remy Bonnavion**
Increased CXCL12 levels after loss or blockade of GPR182/ACKR5 improves cardiac repair after myocardial infarction
- 12:48 Short Talk: **Derrick Opoku**
E-cigarettes in COPD: solution or second hit after smoking cessation?
- 13:00 **Introduction Discovery Area 6: Heart-Lung-Neuro Interdependencies**
Stefanie Dimmeler | Soni Savai Pullamsetti | Samuel Sossalla | Khodr Tello
- 13:06 Short Talk: **Nivethitha Manickam**
Attrition of cardiac lymphatic vessels contributes to cardiac denervation in the aging heart
- 13:18 Short Talk: **Golnaz Hesami**
Bone marrow immunometabolic dysfunction links clonal hematopoiesis and irg1/itaconate axis in pulmonary hypertension

13:30 **Poster Teasers**

Noelia Bellon | Riham Rafea | Irina Kuznetsova | Mohammad Amin Mahjoub | Hacer Kurtoglu Babayev | Chien-Cheng Lai | Julian Leberzammer | Swathi Veeroju | Laia Cañes Esteve | Betül Yücel | Tamim Sarakpi | Siavash Mansouri

13:45 **Poster Session II with Lunch**

Areas 4-6, Hall of Honor & Event Tent

Keynote Lecture

15:30 **Kenneth Walsh | University of Virginia, Charlottesville**
Clonal hematopoiesis: the emergent risk factor

Chair: Andreas Zeiher

16:00 **CPI Academy Info Talk**

Julian Wagner | Cheng-Yu Wu

16:10 Wrap-up and Poster Awards

16:45 End

Map of Site

