

IMMUNO- CARDIOLOGY 2025

SEPTEMBER 18-19, 2025

**THE JACKSON LABORATORY
MDI BIOLOGICAL LABORATORY**

BAR HARBOR, MAINE

SEPTEMBER 18

THURSDAY



7:30 am - 8:30 am | Registration & Breakfast

8:30 am - 8:40 am | Welcome to The Jackson Laboratory

Nadia Rosenthal, PhD, FMedSci, FAAHMS | Scientific Director | The Jackson Laboratory
Robert Gropler, MD & Florian Leuschner, MD | Lead Coordinators | Leducq IMMUNO-FIB HF

8:40 am - 10:15 am | SESSION 1: IMMUNE ASPECTS OF CARDIAC BIOLOGY & REPAIR I

Moderator | Florian Leuschner

8:40 | Pilar Martin, PhD | Spanish Nat'l Centre for Cardiovascular Research (CNIC) | ES
Immune regulation of T cell as a therapeutic approach in cardiovascular disease

9:05 | Sarah Dick, PhD | Queens University | CA

Macrophage diversity in cardiac homeostasis and repair

9:30 | Ed Thorp, PhD | Northwestern University | US

Myeloid cells in the amplification and resolution of cardiac inflammation

9:55 | ESI talk | Junedh Amrute, BS | WashU Medicine | US

Targeting RUNX1 in macrophages facilitates cardiac recovery

10:15 am - 10:30 am | Break

10:30 am - 12:05 pm | SESSION 2: IMMUNE ASPECTS OF CARDIAC BIOLOGY & REPAIR II

Moderator | Susanne Sattler

10:30 | Claudia Monaco, MD, PhD, FESC | University of Oxford | UK
Decoding macrophages in atherosclerosis

10:55 | Ebba Brakenhielm, PhD | Normandy University / INSERM | FR
Lymphatic control of cardiac inflammation?

11:20 | Luigi Adamo, MD, PhD | Johns Hopkins University | US

B cell-dependent MHC-II mediated antigen presentation along the cardio-splenic axis of ischemic heart failure

11:45 | ESI talk | Susanna Cooper, PhD | University of Oxford | UK

VEGFC-stimulated lymphangiogenesis clears pro-fibrotic macrophage population to improve cardiac outcome following myocardial infarction

12:05 pm - 1:10 pm | Lunch

1:10 pm - 2:45 pm | SESSION 3: IMMUNE ASPECTS OF CARDIAC BIOLOGY & REPAIR III

Moderator | Scott Friedman

1:10 | Kevin King, MD, PhD | University of California San Diego | US
Living on the edge: Life at the infarct border zone

1:35 | Kory Lavine, MD, PhD | WashU Medicine | US

Targeting macrophage-fibroblast crosstalk to recover the failing heart

2:00 | Rafael Kramann, MD, PhD | RWTH Aachen University | DE

Using single cell and spatial omics to dissect mechanisms of heart and kidney fibrosis

2:25 | ESI talk | Rami Vanguri, PhD | NYU Grossman School of Medicine | US

Spatial transcriptomic signatures of cardiac sarcoidosis in myocardial tissue

SEPTEMBER 18

THURSDAY

2:45 pm - 2:55 pm | Group photo

2:55 pm - 3:10 pm | Break & poster set-up in the cafeteria seating area

3:10 pm - 3:50 pm | Session 4: EARLY-STAGE INVESTIGATOR (ESI) TALKS I
Moderator | Nadia Rosenthal

3:10 | **Noor Momin, PhD | University of Pennsylvania | US**
Engineering immunocytokines to prevent heart failure

3:30 | **José Gabriel Barcia Durán, PhD | NYU Grossman School of Medicine | US**
Mechanisms of atherosclerosis regression

3:50 pm - 4:50 pm | KEYNOTE LECTURE I | Host: Teddy Williamson

Katherine Yutzey, PhD

Professor, Cincinnati Children's Medical Center

"Immune Cells in Heart Valve Development and Disease"



4:50 pm - 6:30 pm | POSTER SESSION I (#1-19) & Reception

6:35 pm | Shuttles (dinner on your own)

SEPTEMBER 19

FRIDAY

7:45 am - 8:30 am | Registration & Breakfast

8:30 am - 8:40 am | Welcome to MDIBL

Hermann Haller, MD | President | MDI Biological Laboratory

MDI Biological Laboratory
CELEBRATING 125 YEARS

8:40 am - 9:40 am | KEYNOTE LECTURE II | Host: Michael "Tyler" Harmon

Ben Hindson, PhD

Chief Scientific Officer, 10X Genomics

"The Next Generation of Single Cell and Spatial Genomics Technology"



9:40 am - 10:40 am | SESSION 5: EARLY-STAGE INVESTIGATOR TALKS II

Moderator | Laura Wienecke

9:40 | **Charles Cohen, PhD | Johns Hopkins University | US**

Tissue transcriptomics of endomyocardial biopsies reveals widespread molecular perturbations independent of leukocyte-rich foci in human myocarditis

10:00 | **Florian Sicklinger, MD | University Hospital Heidelberg | DE**

Tricuspid regurgitation accelerates left ventricular failure via monocyte-derived IL-6

10:20 | **Matt DeBerge, PhD | University of Texas Health Science Center at Houston | US**

Microglial metabolic reprogramming drives cognitive decline in heart failure with preserved ejection fraction

MDI BIOLOGICAL LABORATORY | 159 OLD BAR HARBOR RD

SEPTEMBER 19

FRIDAY

10:40 am - 10:55 am | Break

10:55 am - 12:30 pm | SESSION 6: TRANSLATION ACROSS ORGAN SYSTEMS I

Moderator | Robert Gropler

10:55 | Tomasz Guzik, MD, PhD | University of Edinburgh | UK

Immune and inflammatory mechanisms linking hypertension and atherosclerosis - from mechanisms to therapeutic targets

11:20 | Katalin Susztak, MD, PhD | University of Pennsylvania | US

Human kidney tissue fibrosis at cellular resolution

11:45 | Hermann Haller, MD | MDI Biological Laboratory | US

Senescent endothelial cells and aging of the microvasculature

12:10 | ESI talk | Bernhard Dumoulin, MD | University of Pennsylvania | US

Spatial human kidney map highlights B cell driven kidney disease subgroup

12:30 pm - 1:45 pm | Lunch, sponsor displays & poster set-up

1:45 pm - 3:20 pm | SESSION 7: TRANSLATION ACROSS ORGAN SYSTEMS II

Moderator | Kory Lavine

1:45 | Naftali Kaminski, MD | Yale University | US

A novel cellular framework for Human Pulmonary Fibrosis

2:10 | Neil Henderson, MD, PhD | University of Edinburgh | UK

Multimodal decoding of liver regeneration and repair

2:35 | Scott Friedman, MD | Icahn School of Medicine at Mount Sinai | US

Exploiting stellate cell plasticity in liver fibrosis

3:00 | ESI talk | Blake Jardin, MA | University of Pennsylvania | US

Proof-of-concept treatment of kidney injury with FAP-CAR-T Cells

3:20 pm - 3:30 pm | Break

3:30 pm - 4:30 pm | KEYNOTE LECTURE III | Host: Haewon Shin

Filip Swirski, PhD

Professor, Icahn School of Medicine at Mount Sinai

*"Role of Innate Immunity and Inflammation in
Cardiovascular Disease"*



4:30 pm - 6:00 pm | POSTER SESSION II (#20-40) & Reception

6:00 pm - 8:00 pm | Lobster bake

8:05 pm | Shuttles

01	JOHN BACHMAN	ELUCIDATING NOVEL BIOMARKERS AND MECHANISMS OF IMMUNE CHECKPOINT INHIBITOR-ASSOCIATED MYOCARDITIS AND MYOSITIS
02	MARKUS CICKA	ELUCIDATING THE MYD88 SIGNALING PATHWAY IN MONOCYTES AND MACROPHAGES AFTER CARDIAC INJURY
03	EDA IREM CIM	MOLECULAR IMAGING OF FIBROBLAST ACTIVATION PROTEIN TO GUIDE IMMUNOTHERAPY IN PRESSURE OVERLOAD HEART FAILURE
04	ALESSANDRA CIULLO	SYNTHETIC SMALL RNA DRUG TY2 REPROGRAMS MACROPHAGES TO SECRETE CARDIOPROTECTIVE EVS
05	OBY EBENEZER	SPLENIC FOLLICULAR B CELLS PROMOTE ADVERSE CARDIAC REMODELING AFTER MYOCARDIAL INFARCTION VIA MHC II-DEPENDENT ANTIGEN PRESENTATION
06	WILLIAM GAO	INTEGRATED SINGLE-CELL AND SPATIAL MULTIOMIC ANALYSIS REVEALS WIDESPREAD REACTIVATION OF DEVELOPMENTAL PROGRAMS IN DISEASED HUMAN HEARTS
07	MICHAEL HARMON	GM-CSF AND STAT5 SIGNALING AXIS AS REGULATOR OF TREM2 ⁺ MACROPHAGE FATE SPECIFICATION IN THE HEART
08	NIKLAS HARTMANN	TARGETING LTBP2 MITIGATES CROSS-ORGAN FIBROSIS VIA ANTIBODY-BASED IMMUNOTHERAPIES
09	SIKANDER HAYAT	FROM AN INTEGRATIVE MULTI-MODAL HEART ATLAS TO TARGET IDEAS FOR CARDIOMYOCYTE RESTORATION
10	RUIJUN HE	DNA-DAMAGING CHEMOTHERAPY RESHAPES CARDIAC RESIDENT MACROPHAGE COMPOSITION AND FUNCTION
11	GYU SEONG HEO	DEVELOPMENT OF NOX2-TARGETED PET TRACER FOR IMAGING INFLAMMATION-FIBROSIS AXIS IN ADVERSE LV REMODELING
12	MEGAN HOLT	INVESTIGATING THE ROLE OF FOCAL ADHESION KINASE IN CARDIAC RESIDENT MACROPHAGE RESPONSE TO INJURY
13	RAJESH KUMAR KASAM	GAIN OF FUNCTION APPROACH TO SELECTIVELY AUGMENT MACROPHAGE SUBTYPES IN THE HEART SOLIDIFIES UNIQUE FUNCTIONAL DIFFERENCES
14	DANIEL KASPROVIC	HUR INHIBITION AS A THERAPEUTIC MODALITY FOR CARDIAC PATHOLOGY VIA MODULATION OF MACROPHAGE POLARIZATION
15	LAUREN ELIZABETH LEE	CHRONIC KIDNEY DISEASE-INDUCED HEART DYSFUNCTION IN MICE SHOW IMMUNE AND METABOLIC DYSFUNCTION
16	SHEN LI	HUMAN GENETICS IDENTIFY TBX2 AS A KEY REGULATOR OF VASCULAR CALCIFICATION IN KIDNEY DISEASE BY ORCHESTRATING MINERAL METABOLISM AND INFLAMMATION
17	XIAO LI	MECHANICAL UNLOADING REVERSES IMMUNOSENESCENCE IN SINGLE VENTRICLE HEART FAILURE
18	DANIEL MINASSIAN	CXCR3 PROMOTES DEVELOPMENT OF HEART FAILURE FOLLOWING SEVERE PNEUMOCOCCAL DISEASE
19	BRIANNA MOON	MOLECULAR IMAGING OF INFLAMMATION AND FIBROGENESIS AFTER MYOCARDIAL INFARCTION

POSTER PRESENTATIONS SESSION I (JAX)

20	JAUME OTAEGUI	PET IMAGING OF ANTPD1 ACCELERATED ATHEROSCLEROSIS IN CARDIO-ONCOLOGY MOUSE MODELS
21	MACEE OWEN	TYPE 1 CLASSICAL DENDRITIC CELLS GOVERN LONG-TERM CARDIAC ALLOGRAFT ACCEPTANCE
22	IYANUOLUWANI OWOLABI	DISRUPTION OF FGFR23-FGFR-KLOTHO INTERACTIONS DEFINE SICKLE CELL DISEASE CARDIO-RENAL SYNDROME
23	KEVIN PAAVOLA	PHAGOCYTOSIS OF APOPTOTIC HUMAN VASCULAR CELLS IS REGULATED BY CD47
24	YUN-LING PAI	RUNX1 TRANSCRIPTIONALLY DRIVES FIBROBLAST ACTIVATION FOLLOWING MYOCARDIAL ISCHEMIC-REPERFUSION INJURY
25	ALEKHYA PARVATHANENI	IL-1 SIGNALING TO CCR2+ MONOCYTES REGULATES MONOCYTE FATE SPECIFICATION AND CONTRIBUTES TO ADVERSE CARDIAC REMODELING
26	ANDIA REDPATH	INVESTIGATING THE ROLE OF THE MESOTHELIUM IN AUTOIMMUNE MYOCARDITIS
27	ARUNACHALAM SEKAR	ZBP1 AS A DRIVER OF DOXORUBICIN-INDUCED CARDIOTOXICITY AND A THERAPEUTIC TARGET FOR CARDIAC PROTECTION
28	HANJOO SHIM	GHOST MYOCYTES AS MODULATORS OF POST-INJURY CARDIAC REPAIR AND FUNCTION
29	HAEWON SHIN	NANOWELL-BASED APPROACHES IN CAPTURING TRANSCRIPTIONAL CHANGES IN CHRONIC HEART FAILURE
30	TATSUYA SHIRAKI	LONGITUDINAL TRANSCRIPTOMIC ANALYSIS REVEALS PERSISTENT ALLOGRAFT REJECTION PATHWAYS DRIVE RESTRICTIVE LEFT VENTRICULAR FILLING PATTERN AFTER HEART TRANSPLANTATION
31	URVI NIHIL SHROFF	INVESTIGATING CAUSAL LINKS AND GENE DRIVERS THAT GOVERN ORGAN DYSFUNCTION IN CARDIOVASCULAR AND CHRONIC KIDNEY DISEASE
32	AMALIA SINTOU	SPATIAL DISTRIBUTION AND DYSREGULATED CROSSTALK BETWEEN SENESCENT CELL TYPES IN THE AGED MAMMALIAN HEART
33	LAURINE SPREHE ISRA TAMIM	CENTRAL STRESS CIRCUITS MEDIATE EARLY CARDIAC DAMAGE AFTER ISCHEMIC STROKE
34	MEGAN VIERHOUT	BUILDING A HUMAN-CENTRIC MACROPHAGE MODEL TO ADVANCE DRUG DISCOVERY IN CROSS-ORGAN FIBROSIS
35	LAURA WIENECKE	BISPECIFIC ANTI-LTBP2 ANTIBODIES TO TREAT FIBROSIS AFTER CARDIAC INJURY
36	TEDDY WILLIAMSON	USING CHIMERIC ANTIGEN RECEPTOR (CAR) REGULATORY T CELLS TO TREAT ACUTE CARDIAC INJURY
37	LANCE YEH	LINEAGE TRACING AND SINGLE-CELL PROFILING OF IFN-ACTIVATED MONOCYTES IN AN MX1-REPAIRED MOUSE MODEL OF CARDIAC INJURY
38	MATT COX	AFRICAN TURQUOISE KILLIFISH (<i>NOTHOBRANCHIUS FURZERI</i>): A NOVEL MODEL TO INVESTIGATE VASCULAR AGING
39	HERMANN HALLER	CHARACTERIZING HEPARANASE 2 USING STRUCTURE-FUNCTION STUDIES AND REVERSE GENETICS IN ZEBRAFISH
40	CORY JOHNSON	GLUCOCORTICOID AND MINERALOCORTICOID RECEPTORS JOINTLY PROMOTE VASCULAR DEVELOPMENT IN KIDNEY ORGANOIDS

POSTER PRESENTATIONS SESSION II (MDIBL)

THANK YOU TO OUR SUPPORTERS

GOLD LEVEL



SILVER LEVEL



NETWORK



Hannover Medical School



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HOSPITAL

IMMUNO-FIB HF

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