



METAHEART



METAHEART

European Network to tackle METAbolic alterations in HEART failure
(EU-METAHEART; COST Action 22169)

2nd Training School & International Conference

Molecular Biotechnology Center "Guido Tarone", Torino, Italy
September 14th - 18th, 2026





TRAINING SCHOOL

Monday, September 14th

From 14:00 on Registration

Seminar Room

14:30 – 15:00	Welcome & overview	Alessandra Ghigo (IT)
15:00 – 15:45	IonOptix technology	Michiel Helmes (NL)
15:45 – 16:30	Mantarray technology	Hamed Ghazizadeh (NL) & Mohammad Khoonkari (NL)
16:30 – 17:00	Refreshment	
17:00 – 17:45	Oroboros technology	Luiza Cardoso (AT)
17:45 – 18:30	Seahorse technology	Sofia Vikstrom (DK) & Lorena Maria Ferreira (IT)

20:00 **Dinner** at Ischia Ponte, Piazza Nizza 77E, Torino
<https://pizzeriaischiaponte.it/>

Tuesday, September 15th

9:00 – 12:30 **Practical courses in the labs*** (Part I)

Seminar Room

12:30 – 13:15 **Special science lecture “out of the (metabolic) box”**
Alessandro Bertero (IT):
Genome Architecting: Decoding & Designing Stem Cell Differentiation

13:15 – 14:00 Refreshment

14:00 – 17:30 **Practical courses in the labs*** (Part II)

Wednesday, September 16th

9:00 – 12:30 **Practical courses in the labs*** (Part III)

Seminar Room

12:30 – 13:15 **Special Lecture on Career Opportunities**
Evangelos Daskalopoulos (BE):
All you need to know about Marie Skłodowska-Curie Actions Staff Exchanges

13:15 – 14:00 Refreshment

14:00 – 17:30 **Practical courses in the labs*** (Part IV)

20:00 **Dinner** at Porto di Savona, Piazza Vittorio Veneto 2, Torino
<https://www.foodandcompany.com/ristorante-portodisavona/>

CONFERENCE – Keplero Lecture Hall

Thursday, September 17th

08:30 – 09:00

Christoph Maack (DE): Welcome and Overview

Three years of COST Action EU-METAHEART – what have we achieved, and where do we go from here?

09:00 – 10:30

Immunometabolism

Chairs:

Naya Nikolaou (GR) & Gemma Vilahur (ES)

09:00 – 09:22

Mark Crabtree (UK)

Immunometabolic Control of Vascular Inflammation: The iNOS–IRG1–Itaconate Axis Linking Macrophages, Endothelium and Heart Failure

09:22 – 09:45

Danilo Norata (IT)

Cholesterol metabolism and immunometabolic response in the context of cardiovascular disorders

09:45 – 10:07

Sian Henson (UK)

Fuelling Ageing: How Immunometabolism Shapes Senescence

10:07 – 10:30

Alexandre Paccalet (FR)

Physical activity restrains hematopoiesis by modulating bone marrow metabolism

10:30 – 11:00

Refreshment

11:00 – 12:00

Short-term scientific missions (STSMs)

Chairs:

Petra Kleinbongard (DE), Katrin Streckfuß-Bömeke (DE)

11:00 – 11:15

Marcos Castro Guarda (UK)

From metabolite to messenger: fumarate as a paracrine signalling mediator of cardiac adaptation to ischaemia

11:15 – 11:30

Angeliki Choustoulaki (GR)

Wild-type and variant transthyretin induces cardiotoxicity in primary murine cardiomyocytes via downregulation of OXPHOS complexes: Mitigation by Tafamidis and Acoramidis

11:30 – 11:45

Michelle Alff (DE)

Red blood cells mediate the humoral transfer of remote ischemic conditioning-induced cardioprotection independently of nitric-oxide

11:45 – 12:00

Tengiz Maisuradze (GE)

Acute endothelial and metabolic signatures associated with subsequent masked ischemia in non-culprit coronary lesions following myocardial infarction

12:00 – 14:00

Refreshment

Posters on display



14:00 – 15:30

Chairs:

Metabolic Drugs and Weight Loss Mechanisms

Gabriele Schiattarella (DE) & **Luca Liberale** (IT)

14:00 – 14:22

Theodosios Filippatos (GR)

GLP-1 receptor agonists for the treatment of obesity and heart failure

14:22 – 14:45

Fabio Recchia (IT)

Therapeutic Modulation of Myocardial Metabolism in Heart Failure

14:45 – 15:07

Leanne Hodson (UK)

Dietary Fats, Livers, and Hearts: Exploring the Hepatic–Cardiac Axis in Human models

15:07 – 15:30

Cinzia Perrino (IT)

From Blood to Myocardium: Immunometabolic Insights into Peripartum Cardiomyopathy

15:30 – 16:00

Refreshment

16:00 – 17:30

Poster judges:

Poster session

Katrin Streckfuß-Bömeke (DE); **Sini Skarp** (FI); **Alice Marino** (BE); **Luis Grilo** (PT); **Slavica Mutavdzin Krneta** (RS); **Luca Liberale** (IT); **Mathias Mericskay** (FR); **Naya Nikolaou** (GR)

17:30 – 18:30

Chairs:

Keynote lecture

Alessandra Ghigo (IT) & **Christoph Maack** (DE)

Marco Sandri (IT)

Similarities, differences and cross-talk between skeletal and cardiac muscle

20:00

Dinner at La Badessa, Piazza Carlo Emanuele II, 17, Torino
<https://www.labadessa.net/en/>

Friday, September 18th

08.00 – 08.55	Core group Meeting (closed meeting)
9:00 – 10:45 Chairs and Jury:	Young Research Innovator (YRI) Award George Kararigas (IS), Gabriele Schiattarella (DE), Petra Kleinbongard (DE), Gemma Vilahur (ES); Melanie Paillard (FR)
9:00 – 9:15	David Weissman (DE) Metabolic Remodelling Drives Cardiac Fibroblast Activation in Fabry Cardiomyopathy
9:15 – 9:30	Michele Russo (BE) Anticancer agents BRAF and MEK inhibitors induce reversible cardiotoxicity driven by metabolic remodeling
9:30 – 9:45	Julia Unsöld (DE) RBM20-dependent Cardiomyopathy in Patient-Specific Atrial Stem Cell Models: Mechanisms of Arrhythmogenesis
9:45 – 10:00	Azucena Rendon-Angel (CH) Mitochondrial Dysfunction Promotes Electrical Instability in a Genetic Model of Senescent hiPSC-derived Cardiomyocytes
10:00 – 10:15	Fabrizio Gianferro (IT) Exploring the Role of RORγ in Cardiac Homeostasis and Cardiovascular Disease
10:15 – 10:30	Shambhabi Chatterjee (DE) Telomere length-driven mitochondrial rewiring as a catalyst of cardiac ageing
10:30 – 11:00	Refreshment
11:00 – 12:30 Chairs:	Big data and artificial intelligence in cardiovascular disease Edoardo Bertero (IT) & Lisa Heather (UK)
11:00 – 11:22	Titus Kühne (DE) From Population Data to Personalized Virtual Human Twins
11:22 – 11:45	Simon Kraler (CH) Acute Coronary Syndromes: From Novel Biomarkers to AI-Guided Management
11:45 – 12:07	Michiel Adriaens (NL) An engine out of fuel? From omics to metabotypes via metabolic task analysis
12:07 – 12:18	Chantal Eickelmann (DE) Rapid regulation of mitochondrial fission and fusion mediators during ischemia/reperfusion injury and cardioprotection by ischemic preconditioning
12:18 – 12:30	Rosanna Caputo (IT) 24h Rhythms in the left ventricle in a mouse model of heart failure with preserved ejection fraction
12:30 – 12:45	Summary and Farewell
13:45 – 14:00	Refreshment and departure



ZOOM Links:

Tuesday, Sept. 15th 12:30 – 13:15

Special science lecture “out of the (metabolic) box”

Alessandro Bertero (IT)

Genome Architecting: Decoding & Designing Stem Cell Differentiation

<https://ukw-de.zoom.us/j/95194420941?pwd=Cro1hwraJXu61Z92sJuhjUlmzyqWDm.1>

Meeting ID: 951 9442 0941

Passcode: 679283

Wednesday, Sept. 16th 12:30 – 13:15

Special Lecture on Career Opportunities

Evangelos Daskalopoulos (BE)

All you need to know about Marie Skłodowska-Curie Actions Staff Exchanges

<https://ukw-de.zoom.us/j/94836549316?pwd=YRARzapdpA3CNbJKaRtxzx2FrpxQ1a.1>

Meeting ID: 948 3654 9316

Passcode: 425660

Thursday, September 17th – 8.15am – 7.15pm

<https://ukw-de.zoom.us/j/91688349807?pwd=iEa3QuAczrHalg4sNofiNgMKgpeJGj.1>

Meeting ID: 916 8834 9807

Passcode: 754036

Friday, September 18th Core group Meeting (closed meeting)

08.00 am– 08:55 am

<https://ukw-de.zoom.us/j/99295608527?pwd=X70ucHJh9i1LVn3wISrzyawd986Hez.1>

Meeting ID: 992 9560 8527

Passcode: 232113

Friday, September 18th , 9am – 1pm

<https://ukw-de.zoom.us/j/94333940108?pwd=dbDGQ1mFQglTfb8eNEhAjU08KOPFJa.1>

Meeting ID: 943 3394 0108

Passcode: 330420

About the COST Action EU-METAHEART (CA22169):

The COST Action “European network to tackle METAbolic alterations in HEART failure” (EU-METAHEART) will bring together excellent researchers from Europe to contribute a broad spectrum of scientific expertise, cutting-edge technologies, scientific exchange and education to foster breakthrough science that moves the field forward towards improving the treatment of patients with heart failure. By sharing diverse expertise that cover not only conventional analyses of metabolism and mitochondrial function, but also omics-based approaches towards genetics, epigenetics and metabolism and in particular, integrated assessment of excitation-contraction coupling with mitochondrial redox control and energetics, as well as advanced in vivo imaging technologies, the novelty of this COST Action is that it will allow to develop a comprehensive and cutting-edge approach towards deeper understanding of metabolic dysfunction in HF. We have identified four scientific key areas to which metabolic or mitochondrial dysfunction are central, which will be addressed by four working groups (WGs):

- 1) Impact of metabolic disorders on substrate and intermediary metabolism in cardiac myocytes
- 2) Metabolic aspects of vascular dysfunction
- 3) Immunometabolism: how metabolic alterations control inflammation and vice versa
- 4) Mechano-energetic uncoupling and mitochondrial redox alterations

These research areas are tightly intertwined and can hardly be investigated in isolation (from each other). Therefore, EU-METAHEART will employ an integrative approach to bring all these research fields under one umbrella. The working groups focus on their respective four topics, but benefit from the expertise in the respective other WGs to overcome scientific and methodological boundaries and rapidly move the field forward towards drug development.

For more information, please go to: <https://www.cost.eu/actions/CA22169/>

And/or follow us at X: @EU_METAHEART