

6th EU-CARDIOPROTECTION COST Action WG Meeting

March 25th – 27th 2020 Riga, Latvia



Cost Action CA16225

Chair:

Derek Hausenloy
(UK)

Vice Chair:

Peter Ferdinandy
(Hungary)

WG1: New Targets

Ioanna Andreadou
(Leader, Greece)
Derek Hausenloy
(Co-leader, UK)
Hector Cabrera-Fuentes
(Co-leader, Germany)

WG2: Combination Therapy

Sean Davidson
(Leader, UK)
Marisol Ruiz-Meana
(Co-leader, Spain)
Attila Kiss
(Co-leader, Austria)

WG3: Confounders

Rainer Schulz
(Leader, Germany)
Peter Ferdinandy
(Co-leader, Hungary)
Alina Scridon
(Co-leader, Romania)

WG4: Consortium

Hans Erik Botker
(Leader, Denmark)
Gerd Heusch
(Co-leader, Germany)
Jacob Lonborg
(Co-leader, Denmark)

STSM Chair:

Coert Zuurbier
(Netherlands)

Science Communications

Manager:

Jelena Jovanic
(Bosnia)

Webmasters:

Søren Erik Pischke
(Norway)
Hector Cabrera-Fuentes
(Germany)

Grant Manager:

Krisztina Bagyinszki (Hungary)

Meeting Venue

Avalon hotel & Conferences

13. Janvāra Sreet 19, Riga, LV-1050, Latvia

Phone: +371 67 169 999

<https://hotelavalon.eu>

Program committee

COST Action Core Group committee

Maija Dambrova, Edgars Liepins, Janis Kuka, Reinis Vilskersts
(local organisers)

General Information

Prof. Maija Dambrova

Head of Laboratory of Pharmaceutical Pharmacology

Latvian Institute of Organic Synthesis

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PRACTICAL INFORMATION

- City bus **Nr 22** from Riga Airport to central Riga; bus stop is just in front of the Riga Airport and Avalon hotel (when coming from airport -opposite side of the street, stop Autoosta; ~300m). Bus ticket costs 2 EUR (from driver in bus; 1.15 EUR- ticket automat). 10-15 min intervals, time table: <https://saraksti.rigassatiksme.lv/index.html#bus/22/b-a/en>
- Taxi ~15 EUR.



Please book rooms on AVALON HOTEL & Conferences homepage www.hotelavalon.eu , indicating the Special offer code **CARDIO** or directly by e-mail reservations@hotelavalon.eu until **24.02.2020**.

Price offer for period 24-27.03.2020 is as follows:

Standard room for 1 person - 55.00 EUR/per night
Standard room for 2 persons - 60.00 EUR/per night
Superior room for 1 person - 65.00 EUR/per night
Superior room for 2 persons - 75.00 EUR/per night

Mentioned rate includes hot-buffet breakfast, 2 course dinner for adults on arrival day 24.03.20 (beverages are not included), Wi-Fi and VAT 12%.

Complimentary coffee and tea set, lap-top size safe, iron and ironing board and additional pillow in the room.

Guaranteed reservation can be cancelled without any charge 24 hours before arrival.

In case of late cancellation or no-show Hotel reserves rights to charge a cancellation fee equal to the first night's room rate.

*Check-in time: 15:00 / early CI is subject to availability and for extra cost

*Check-out time: 12:00 / late CO is subject to availability and for extra cost

*Pets are not allowed in this hotel

* Airport transfer service for extra cost:

- Baltic Taxi with 4 seats EUR 16.50/one way. Please provide your arrival time and flight number.

Wednesday March 25th 2020

- 0930-1130 **Oroboros O2k-Workshop**
Measurement of mitochondrial functionality in cardiac tissues
Erich Gnaiger & Maija Dambrova
- Venue:
Laboratory of Pharmaceutical Pharmacology
Latvian Institute of Organic Synthesis
Aizkraukles Str. 21, LV1006
- Optional visit to the Laboratory of Pharmaceutical Pharmacology (Prof. M. Dambrova)
- 1200-1300 Registration and put posters up
- 1200-1300 Lunch
- 1230-1300 COST Action Core group meeting – (closed meeting)
- 1300-1310 **Welcome and introductions to meeting**
Derek Hausenloy, Ioanna Andreadou, Peter Ferdinandy, Maija Dambrova
- 1310-1330 COST ACTION update- Derek Hausenloy
- Opening Keynote Lecture**
Chair: Maija Dambrova
- 1330-1420 **Invited specialist:**
40 min talk, 10 min QA
- Stimulating glucose oxidation and inhibiting fatty acid oxidation as an approach to treating myocardial ischemia/reperfusion injury
Gary Lopaschuk (Edmonton, Canada)
- 1420-1600 **WG1 NEW TARGETS**
COST Workshop – Mitochondria/metabolism as targets for cardioprotection
Chair: Janis Kuka
15 min talk and 10 min QA
1. Mitochondrial pathways and respiratory states
Erich Gnaiger (Oroboros, Austria)
 2. Measuring metabolic flux in hearts
Dunja Aksentijevic (London, UK)
 3. Measuring mitochondrial fatty acid oxidation: concept and reality
Marina Makrecka-Kuka (Riga, Latvia)
 4. Mitochondrial imaging
Marko Vendelin (Estonia)
- 1600-1630 Coffee break – Poster viewing
- 1630-1830 **COST Workshop – Mitochondria/metabolism as targets for cardioprotection**
Chair: Edgars Liepinsh
15 min talk and 5 min QA
5. Getting to the heart of hypoxia in diabetes

- Lisa Heather (Oxford, UK)*
6. Characterising malonate as a drug in heart attack and stroke
Thomas Krieg (Cambridge, UK)
 7. The many facets of mitochondrial ROS in cardiac injury and protection
Fabio Di Lisa (Padova, Italy)
 8. Mitochondrial complex 2 as target for cardioprotection
Antonio Rodríguez Sinovas (Barcelona, Spain)
 9. The role of edible compounds targeting mitochondria in order to lead to cardioprotection
Vincenzo Lionetti (Italy)
 10. Redox-sensitive chaperone and protease DJ1 in heart protection
Lina Badimon (Madrid, Spain)
 11. Higher M1CU1/MCU ratio Decrease Mitochondrial Calcium Overload and Contribute to Tolerance of Cardiac Reperfusion Injury in Hypothyroidism.
Gerardo García-Rivas (Mexico)

**1930-2130 Meeting dinner at Hotel
Guided walking tour of Old Riga**

Thursday March 26th 2020

0900-1130 **WG1 NEW TARGETS – Inflammation/vascular/endothelial/other**

Invited specialists:

Chairs: Ioanna Andreadou, Hector Cabrera-Fuentes, Derek Hausenloy
20 min talk and 5 min QA

1. Systemic Blockade of ACVR2B Ligands Protects Myocardium from Acute Ischemia-Reperfusion Injury
Risto Kerkelä (Finland)
2. Role of MIF proteins in cardioprotection: from production to control of the cardioprotective AMPK pathway
Jürgen Bernhagen (Munich, Germany)
3. Acute Myocardial Infarction: empty vessels make the most noise
Stéphane Germain (Paris, France)
4. Intravital imaging of the beating heart microcirculation post-reperfusion injury
Neena Kalra (Birmingham, UK)
5. New therapeutic approaches to treat ischemic injury
Gemma Vilahur (Madrid, Spain)
6. Red blood cell both as a mediator of cardiac injury and a target for cardioprotection
John Pernow (Sweden)

1130-1200 Coffee break – Poster viewing

1200-1245 **Short-Term Scientific Missions - REPORTS**

Chair: Coert Zuurbier
10 min talk, 5 min QA

1. Activation of PPAR β/δ protects mitochondrial function during myocardial ischemia/reperfusion
Ioanna Papatheodora (Lazou/Dambrova)
2. Immunomodulation by Kv1.3 channel blockade improves insulin resistance and risk of cardiac arrhythmias in T2D rat model
Julian Zayas (Casis+Ruiz-Meana/Turan)
3. Discovery and in vitro evaluation of potent inhibitors for reverse activity of mitochondrial F1F0 ATP synthase

Panagiota-Efstatia Nikolaou (Andreadou/Davidson)

1245-1315

Oral abstract ECI presentations

Chairs: Ioanna Andreadou, Gemma Vilahur, Maija Dambrova
10 min talk, 5 min QA

1. Effect of DJ-1 derived peptide, ND-13 to reduce acute myocardial ischemia reperfusion injury
Sauri Hernandez (Giessen, Germany)
2. Cardioprotective effect of Elamipretide: targeting mitochondria.
Janis Kuka (Riga, Latvia)

1315-1400

Lunch – Moderated poster session

Chairs: Gemma Vilahur

1400-1530

Oral abstract ECI presentations

Chairs: Ioanna Andreadou, Gemma Vilahur, Maija Dambrova
10 min talk, 5 min QA

3. Effect of epoxyeicosatrienoic acid-based therapy to acute ischemia/reperfusion injury and post-ischemic heart failure in rats with angiotensin II- dependent hypertension.
Jaroslav Hrdlička (Czech Republic)
4. Glutaredoxin-2 and Sirtuin-3 deficiencies impair cardiac mitochondrial energetics but their effects are not additive
Neoma T Boardman (Norway)
5. Pannexin1 as a potential target for prevention of cardiac ischemia/reperfusion injury
Olga M Rusiecka (Switzerland)
6. Chronic Empaglifozin treatment reduces myocardial infarct size in healthy mice through STAT-3 mediated protection on microvascular endothelial cells and reduction of oxidative stress.
Panagiotis Efentakis (Greece)
7. Cardiac dysfunction after myocardial infarction: role of pro-inflammatory extracellular vesicles
Vanessa Biemmi (Switzerland)
8. An intrinsic mechanism of metabolic regulation protects the heart from functional impairment under stress conditions.
Matteo Sorge (Italy)

WG2 COMBINATION THERAPY

Chairs: Sean Davidson, Attila Kiss, Marisol Ruiz-Meana

1530-1600

Choosing inflammatory/vascular/endothelial therapies for combination therapy

ISCHEMIA trial in cardioprotection context
Gerd Heusch (Germany)

WG1/WG2 Summary and Action Plan

1600-1630

Coffee break – Poster viewing

1630-1800

WG1/WG2 Workshop – criteria for selective novel target/therapy

Chairs: Hans Erik Botker, Derek Hausenloy, Gerd Heusch

Defining criteria for selecting a novel target/therapy for cardioprotection- group discussion – plan for COST paper-like STAIR criteria

WG1 Summary and Action Plan

1900-2300 **Bus transportation to meeting dinner**
Lido leisure and restaurant centre with Folk show
<https://www.lido.lv/en/your-events/for-tourists/>

Friday March 27th 2020

WG4: CONSORTIUM

Chairs: Gerd Heusch, Hans Erik Botker

0900-1030

Invited specialists:

Chairs: Hans Erik Botker

20 min talk, 10 min QA

1. Drug discovery in academia: how to meet industry expectations
Maija Dambrova (Riga, Latvia)
2. Update on therapeutic hypothermia for cardioprotection
David Erlinge (Lund, Sweden)
3. Clinical cardioprotection - Where to go from here?
Michel Ovize (Lyon, Paris)

1030-1200

WG4 Workshop – Small and large animal networks

Chairs: Gerd Heusch, Derek Hausenloy, Hans Erik Botker

Setting up a large animal network - an update - Gerd Heusch

Setting up a small animal network - group discussion

WG4 Summary and Action Plan

1200-1230

Summary and action plan

Meeting close

1230-1300

Lunch