Ischemic conditioning and targeting reperfusion injury: a 30 year voyage of discovery

Thur May 12th and Fri 13th 2016
Sala de Actos del Pabellón Docente del Hospital Universitari Vall d’Hebron
Barcelona, Spain

Meeting Directors: Derek J Hausenloy & David Garcia-Dorado

Scientific Committee:

Hans Erik Botker, James Downey, Peter Ferdinandy, Gerd Heusch, Michael Marber, Michel Ovize, Rainer Schulz, Jakob Vinten-Johansen, Derek Yellon
FINAL PROGRAM

DAY 1 – Thursday 12th May 2016

1300-1330 Registration/Put posters up on display

1330-1345 Welcome and Introduction
Opening: Vicenç Martínez Ibáñez (Director Gerent Hospital Universitari Vall d'Hebron. Barcelona, Spain)
Antoni Andreu Peritz (Director General de Recerca I Innovació del Departament de Salut de la Generalitat Catalunya, Spain)
Joan Comella (Director de L’Institut de Recerca de l’Hosp Vall d’Hebron. Barcelona, Spain)
Derek Hausenloy (Duke-NUS, Singapore)
David Garcia-Dorado (Hospital Universitari Vall d’Hebron. Barcelona, Spain)

Session 1 Ischemic preconditioning (1986)
Chairpersons: Gerd Heusch (University of Essen, Germany)
Derek Yellon (University College London, UK)

1345-1405 The discovery of ischemic preconditioning
Robert Jennings (Duke University, USA)

1405-1425 The mechanisms underlying ischemic preconditioning
James Downey (University of Alabama, USA)

1425-1445 The application of ischemic preconditioning
Derek Yellon (University College London, UK)

Session 2 Delayed preconditioning or the Second Window of Protection (1993)
Chairpersons: Rainer Schulz (Giessen University, Germany)
Jose A Barrabés (Hospital Universitari Vall d’Hebron. Barcelona, Spain)

1445-1505 The discovery of delayed preconditioning or SWOP
Michael Marber (King’s College London, UK)

1505-1525 Pre-infarction angina: is it protective and does is depend on timing prior to infarction?
Michael Rahbek Schmidt (Aarhus University, Denmark)
1525-1545  Panel discussion

1545-1600  **COFFEE BREAK AND POSTER VIEWING**

**Session 3  Remote ischemic preconditioning (1993)**

Chairpersons: Derek Hausenloy (Duke-NUS, Singapore)  
Rajesh Kharbanda (University of Oxford, UK)

1600-1620  The discovery of remote ischemic preconditioning  
Karin Pryzklenk (Wayne State University, USA)

1620-1640  The mechanisms underlying remote ischemic preconditioning  
Andrew Redington (University of Cincinnati, USA)

1640-1700  The clinical application of remote ischemic preconditioning  
Hans Botker (Aaarhus University, Denmark)

**Session 4  Ischemic postconditioning (2003)**

Chairpersons: Thomas Engstrom (University of Copenhagen, Denmark)  
Sandrine Lecour (University of Capetown, South Africa)

1700-1720  The discovery and underlying mechanisms of ischemic postconditioning  
Jakob Vinten-Johansen (Emory University, USA)

1720-1740  The clinical application of ischemic postconditioning  
Michel Ovize (University of Lyon, France)

1740-1800  Panel discussion

1800-2000  **WINE RECEPTION AND POSTER SESSION**

20:30  Celebratory Dinner
DAY 2 – Friday 13th May 2016

Session 5  Beyond ischemic conditioning (2011 and beyond)

Chairpersons: Esthathis Iliodromitis (University of Athens, Greece)
Joan Montaner (Hospital Vall d’Hebron. Barcelona, Spain)

0920-0940 Ischemic conditioning and co-morbidities
Peter Ferdinandy (Pharmahungary. Budapest, Hungary)

0940-1000 Ischemic conditioning and the brain
Miguel A. Perez-Pinzon (University of Miami Miller School of Medicine. USA)

1000-1030 COFFEE BREAK AND POSTER VIEWING

Session 6  Oral abstract presentation

Chairpersons: Marisol Ruiz-Meana (Institut Recerca Vall d’Hebron. Barcelona, Spain)
Sean Davidson (University College of London, UK)

1030-1045 Imaging microcirculatory disturbances post-reperfusion injury in the beating mouse heart in vivo. Neena Kalia. UK.

1045-1100 Pharmacological postconditioning with adenosine induces cardioprotection independently of Tnf activation. Sandrine Lecour. South Africa.

1100-1115 Stimulating the ear to protect the heart: conditioning the heart via transcutaneous vagus nerve stimulation. Jack MJ Pickard. UK

1115-1130 Platelets protect against myocardial injury, but platelets from patients with type 2 diabetes mellitus (t2dm) lose their protective properties. Pasquale Pagliaro. IT

1130-1145 The release of cardioprotective humoral factors after remote ischemic preconditioning in humans is gender- and age. Friederike Behmenburg. GE

1145-1200 Post-i/r bimodal edema phenomenon: first-in-man evidence, and modulation of the waves by conditioning strategies. Rodrigo Fernández-Jiménez. SP
Session 7  Myocardial reperfusion injury: underlying molecular mechanisms (I)

Chairpersons:  Robert Jennings (Duke University, USA)
               Gemma Vilahur (Hospital de san Pau, Barcelona, SP)

1200-1220  The discovery of myocardial reperfusion injury
           Hans Michael Piper (University of Dusseldorf, Germany)

1220-1240  Oxidative stress and altered calcium handling
           Javier Inserte (Hospital Universitari Vall d’Hebron. Barcelona, Spain)

1240-1300  Cyclosporine and other modulators of the MPTP
           Michel Ovize (Hospital Louis Pradel. Lyon, France)

1300-1400  LUNCH AND POSTER VIEWING

Session 8  Myocardial reperfusion injury: underlying molecular mechanisms (II)

Chairpersons:  Robert Jennings (Duke University, USA)
               Gemma Vilahur (Hospital de Sant Pau i Santa Creu, Barcelona, SP)

1400-1420  The MPTP and mitochondrial calcium uniporter
           Fabio Di Lisa (University of Padova, Italy)

1420-1440  Diabetes and cardioprotection
           Tetsuji Muira (Sapporo Medical University School of Medicine. Japan)

1440-1500  Extracellular nucleic acids as a therapeutic target for ischemia/reperfusion injury
           Hector Alejandro Carbrera-Fuentes (Duke-NUS Graduate Medical School. Singapore)

1500-1520  Microvascular injury – a neglected therapeutic target
           Gerd Heusch (University of Essen, Germany)

1520-1550  COFFEE BREAK AND POSTER VIEWING
Session 9  Pharmacological prevention of reperfusion injury

Chairpersons: Jakob Vinten-Johansen (Emory University, USA)
Bruno García del Blanco (Hospital Universitari Vall d’Hebron. Barcelona, Spain)

1550-1610 GLP-1 mimetics
Thomas Engstrom (University of Copenhagen, Denmark)

1610-1630 Beta blockers
Borja Ibanez (CNIC. Madrid, Spain)

1630-1650 PKG activators and combined therapies
David Garcia-Dorado (Hospital Universitari Vall d’Hebron. Barcelona, Spain)

Session 10  Beyond reperfusion injury: preventing early post-infarction remodeling

Chairpersons: Antoni Bayés (Hospital Universitari Germans Tries i Pujol. Barcelona, Spain)
Neus Bellera (Hospital Universitari Vall d’Hebron. Barcelona, Spain)

1650-1710 Post-infarction remodeling in the era of primary coronary intervention
Jose A Barrabés (Hospital Universitari Vall d’Hebron. Barcelona, Spain)

1710-1730 Drug therapy for post-infarction remodeling?
Gemma Vilahur (Hospital de Sant Pau i Santa Creu. Barcelona, Spain)

1730-1740  BEST FREE COMMUNICATION ABSTRACT AWARD

Conclusions and farewell

1740 The road ahead
Gerd Heusch (University of Essen, GE)
James Downey (University of Alabama, USA)
Derek Yellon (University College London, UK)
Derek Hausenloy (University College London, UK)
David Garcia-Dorado (Hospital Universitari Vall d’Hebron, ES)
C0010 Effect of lower limb remote ischemic conditioning on infarct size in patients with anterior st-elevation myocardial infarction. Dinos Verouhis
C0013 Subdiaphragmatic vagal innervation and remote ischaemic preconditioning cardioprotection. Svetlana Mastitskaya
C0015 Cardioprotective effect of ranolazine in the process of ischemia-reperfusion in adult rat cardiomyocytes. Eva Mª Calderon Sanchez
C0016 Changes in cardiac survival signaling during postnatal development: implications for cardioprotection. Kim Summers
C0017 Rho kinase inhibition protects from ischemia-reperfusion injury via a mechanism related to nitric oxide synthase and downregulation of arginase in diabetes. Kiss Attila
C0018 Attenuation of myocardial and vascular arginase activity by vagal nerve stimulation during cardiac ischemia and reperfusion involves alpha-7 nicotinic receptor. Kiss Attila
C0019 Kinetic oscillation stimulation of the nose: a novel treatment for myocardial ischemia-reperfusion injury. Kiss Attila
C0020 Quercetin prevents ischemia-reperfusion injury in normal and doxorubicin-treated rats: role of superoxide dismutase, connexin-43, and akt signaling. Monika Bartekova
C0022 Urocortin-1 preserve xiap and cd40-ligand to reduce ischemia/reperfusion-induced cardiac myocyte apoptosis via the activation of erk1/2 through epac. Eva Mª Calderon Sanchez
C0023 Role of cx3cl1 (fractalkine) in acute myocardial ischaemia-reperfusion. S. Cormack
C0024 Pharmacological postconditioning with adenosine induces cardioprotection independently of tnf activation. Lydia Lacerda
C0026 Therapeutic angiogenesis in cardiovascular ischaemia. Rosario Cortina Rguez
C0028 Cardioprotective role of growth hormone secretagogues in mouse models of myocardial ischemia reperfusion and infarction. Hayley McDonald
C0029 Remote ischemic preconditioning during sevoflurane-anesthesia and mitochondrial hexokinase in cabg patients – an exploratory study. Rianne Nederlof
C0030 Remote ischaemic conditioning reduces infarct size in animal in vivo models of ischaemia-reperfusion injury: a systematic review and meta-analysis. Daniel Bromage
C0031 Cyclophilin d ablation is associated with increased end-ischemic mitochondrial hexokinase activity. Rianne Nederlof
C0034 Stimulating the ear to protect the heart: conditioning the heart via transcutaneous vagus nerve stimulation. Jack MJ Pickard
C0035 The impact of pre- and post-conditioning in serum tnf-related apoptosis induced ligand (strail) in patients with acute myocardial infarction. Luz André
C0038 Changes in cardiac survival signaling during postnatal development: implications for cardioprotection. Kim Summers
C0039 Potential mechanisms of cardioprotection by “remote” preconditioning: the role of peroxisome proliferator-activated receptors (ppar). Tana Ravingerova
C0040 Imaging microcirculatory disturbances post-reperfusion injury in the beating mouse heart in vivo. Kavanagh DPJ
C0041 Hypoxic postconditioning and possibilities to improve its cardioprotective potential by molecular hydrogen. Marek Zálesák
C0042 Postconditioning with h2s: molecular pharmacology. Qutuba Karwi
C0043 Impact of diabetes on the efficacy of pre-conditioning in a series of patients with st-elevation myocardial infarction. Luz André
C0044 Role of altered ca2+ homeostasis during adverse cardiac remodeling after ischemia/reperfusion. A. Domínguez Rodríguez
C0045 Hypoxic postconditioning and possibilities to improve its cardioprotective potential by molecular hydrogen. Marek Zálesák
C0046 Post-i/r bimodal edema phenomenon: first-in-man evidence, and modulation of the waves by conditioning strategies. R. Fernandez Jimenez
C0047 Age-dependent effect of remote ischemic preconditioning in hearts of spontaneously hypertensive rats. Veronika Farka ová
C0048 Effect of maturation on resistance of rat hearts to ischemia and effects of classical ischemic and remote preconditioning. Lucia Griecsova
C0049 Cardioprotection using postconditioning with lactate-enriched blood in patients with st-segment elevation myocardial infarction. Takashi Koyama
<table>
<thead>
<tr>
<th>ID</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>C0056</td>
<td>Lrp5 transcription and activation of the canonical Wnt signalling are protective signals in the myocardium after infarction.</td>
<td>Maria Borrell-Pages</td>
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<tr>
<td>C0058</td>
<td>Lrp5 induces the canonical Wnt signalling pathway to protect the myocardium.</td>
<td>Maria Borrell-Pages</td>
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<td>C0064</td>
<td>Cardioprotective effects of angeli’s salt via calcitonin gene-related peptide (CGRP): intracellular signaling in vitro.</td>
<td>Francesca Tullio</td>
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<td>C0065</td>
<td>Effects of delayed remote ischaemic preconditioning on peri-operative myocardial and renal injury in cardiac surgery patients.</td>
<td>Yunseok Jeon</td>
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<tr>
<td>C0067</td>
<td>Lrp1 mediates cardioprotection in ischemia reperfusion injury.</td>
<td>Stefano Toldo</td>
</tr>
<tr>
<td>C0068</td>
<td>Modulation of grk2 levels and functionality in myocardial ischemia/reperfusion and impact in the regulation of cardioprotective signaling pathways.</td>
<td>Penela P</td>
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<tr>
<td>C0069</td>
<td>Platelets protect against myocardial injury, but platelets from patients with type 2 diabetes mellitus (T2DM) lose their protective properties.</td>
<td>Saveria Femminò</td>
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<td>C0070</td>
<td>Are the epidermal growth factor receptor (EGFR) and SRC differently involved in cardioprotection by apelin?</td>
<td>Anna Folino</td>
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<td>C0071</td>
<td>The release of cardioprotective humoral factors after remote ischemic preconditioning in humans is gender- and age dependent.</td>
<td>Friederike Behmenburg</td>
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<td>C0072</td>
<td>Activation of mitochondrial calcium-activated potassium channels improves left-ventricular function after myocardial infarction in mice.</td>
<td>Friederike Behmenburg</td>
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<td>C0073</td>
<td>Evaluation of the mitochondrial transition pore opening in experiment and clinic as an early diagnostic tool for severity of myocardial ischemic injury prognosis.</td>
<td>Yulia Goshovska</td>
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<tr>
<td>C0075</td>
<td>Chronic tempol treatment restores isoflurane preconditioning in the aging heart-role of Pink1/parkin mediated mitophagy.</td>
<td>Li Ma</td>
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<tr>
<td>C0076</td>
<td>The functional role of macrophage migration inhibitory factor (MIF) in cardiac surgery patients undergoing remote ischemic preconditioning—a secondary analysis of the ripheart study.</td>
<td>Christian Stoppe</td>
</tr>
<tr>
<td>C0077</td>
<td>Remote ischemic conditioning provides humoral cross-species cardioprotection before ischemia, but not at the onset of reperfusion, through glycine receptor activation.</td>
<td>J.J. Alburquerque-Béjar</td>
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<td>C0078</td>
<td>Atorvastatin activates aldha2 and reduces cellular oxidative damage in H9c2 cell line.</td>
<td>Sanssononi Sar</td>
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<td>C0079</td>
<td>Edema contributes to cardiomyocyte cell death after myocardial infarction.</td>
<td>Andrés Mireia</td>
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<td>C0080</td>
<td>Cardioprotective role of growth hormone secretagogues in mouse models of myocardial ischemia reperfusion and infarction.</td>
<td>Hayley McDonald</td>
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<td>C0081</td>
<td>Pre-conditioning (pre-infarct angina) is blunted in patients with stage</td>
<td>Luz André</td>
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<tr>
<td>C0082</td>
<td>Impact of ischemic preconditioning on cardiovascular outcomes in symptomatic coronary artery disease patients—five-year follow-up of mass research group patients.</td>
<td>Whady Hueb</td>
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<tr>
<td>C0083</td>
<td>Effect of paroxetine treatment on ROS-production and left ventricular remodeling in an in-vivo rat model of myocardial infarction.</td>
<td>Thomas Ravn Lassen</td>
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<tr>
<td>C0084</td>
<td>Effect of remote ischaemic conditioning on myocardial perfusion in patients with suspected ischaemic coronary artery disease.</td>
<td>Kasper Pryds</td>
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<tr>
<td>C0086</td>
<td>Ischemic preconditioning and inhibition of the malate-aspartate shuttle preserves mitochondrial respiration and decreases ROS production in the isolated rat heart.</td>
<td>Nicholas Riese Jespersen</td>
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<tr>
<td>C0088</td>
<td>Pharmacological inhibition of calpains during reperfusion attenuates post-infarction ventricular remodeling and contractile dysfunction.</td>
<td>Marcos Poncelas Nozal</td>
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<tr>
<td>C0090</td>
<td>Targeting the adrenergic regulation of the SERCA2 complex in the heart—cardioprotective effects in ischemia-reperfusion</td>
<td>Ana I. Calejo</td>
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<tr>
<td>C0091</td>
<td>Combination therapy vs reperfusion injury in stemi with remote ischemic conditioning and exenatide: the combat-MI trial.</td>
<td>Imanol Otaegui</td>
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<td>C0093</td>
<td>Supplemental oxygen has a major influence on cardioprotective strategies in mice.</td>
<td>Sean M. Davidson</td>
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GENERAL INFORMATION:

LANGUAGE:
The course will be taught in English.

ACREDITATION:
The Spanish and Catalan Board for accreditation in cardiology has granted credits for participation in The Ischemic conditioning and targeting reperfusion injury: a 30 year voyage of discovery.

INSCRIPTIONS:
All the inscription must be made through the web site:

<table>
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<tr>
<th>Registration Fee</th>
<th>Early bird fee (before April the 1st)</th>
<th>Late registration</th>
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<tr>
<td>Standard fee</td>
<td>150€</td>
<td>200€</td>
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<td>Young Investigators (less than 35 years)</td>
<td>60€</td>
<td>75€</td>
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<td>Dinner beach (optional)</td>
<td>25€</td>
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Registration fee includes: Daily coffee breaks and lunches

The inscription payment must be made with credit card or bank transfer.
We can’t make any reservation or inscription without the previous payment.

The limit of the inscription period will end on May 2016, the first.
We only accept cancellation of inscriptions made before April 2016, the 15th. Due to the cancellation fees we will be refunded only the 85% of the registration fee.

ABSTRACT will be published in J Moll Cell Cardiol

ACCOMMODATION:
Our Company will not arrange your hotel accommodation but we can recommend some of 4 stars.
It is advisable to book as early as possible since there are a special fees limited for the Congress with the reference: ISCHEMIC CONDITIONING CONGRESS, this must be mentioned when the reservation was made.
You can find the hotel list in order of proximity to the Congress venue:
- Hotel Alimara: www.alimarahotel.com
- Hotel Saint Moritz: www.hcchotels.es
- Hotel Condes de Barcelona: www.condesdebarcelona.com
- Hotel Le Petit http://www.petitpalacemuseumbarcelona.com
CONFERENCE VENUE:
Sala de Actos. Pabellón Docente
Hospital Universitari Vall d’Hebron.
Passeig Vall Hebron 119 -129. Barcelona

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Registrations:
Patricia Ortiz

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