

ANNUAL REPORT 2014-2016

Please complete and return to your Working Groups Coordinator / Officer

(cgomez@escardio.org / lbergamaschi@escardio.org)

Identification

Working Group on: Cellular Biology of the Heart

Nucleus Composition (Sept 2014-Sept 2016) (Precise name, surname and country)

Chairperson: Prof. Péter Ferdinandy, from Hungary

Vice-Chairperson: Assoc. Prof. Joost P.G. Sluijter, from The Netherlands

Past-Chairperson:Dr. Derek John Hausenloy, from United Kingdom

Web-Editor: Prof. Sandrine Lecour, from South Africa ONM: Dr Sean M. Davidson, from United Kingdom

ONM: Assoc. Prof. Felix Engel, from Germany

ONM:Dr. Linda Van Laake, from The Netherlands

ONM:Prof. Jonathan Leor , from Israel

ONM: Assist. Prof. Cinzia Perrino, from Italy

ONM:Prof. Fabrice Prunier, from France

ONM:Prof. Kirsti Ytrehus, from Norway

Ex-Officio: Assist. Prof. Rosalinda Madonna, from Italy

Ex-Officio: Prof. Rainer Schulz, from Germany

Elections in 2016 and other changes in the nucleus

Assistant Prof. Rosalinda Madonna was elected in March 2016 to take the position of Vice-Chair from September 2016

4 positions to replace:

Sean Davidson, Derek J. Hausenloy, Sandrine Lecour, Linda van Laake who have to step down in September 2016

Shortlist of 6 candidate out of 12 applications:

- Delvac Oceandy, UK
- Hans Erik Bøtker, Danmark
- Jean-Sebastien Hulot, France
- Johannes Holfeld, Austria
- Michael Marber, UK
- Sophie Van Linthout, Germany

Elected nucleus members are: to be determined after election

- Hans Erik Bøtker, Danmark
- Jean-Sebastien Hulot, France
- Michael Marber, UK
- Sophie Van Linthout, Germany



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Ex offico members from Sep 2016:

- Rainer Schulz (Germany) for Cardioprotection anniversary position paper
- Derek J Hausenloy (UK) for Cardioprotection anniversary position paper
- Sean Davidson (UK) for Extracellular Vesicles position papers

Other associated nucleus members from Sep 2016:

- Sandrine Lecour (South Africa): representative for the South African Society for Cardiovascular Research
- Linda van Laake (the Netherlands): SoT representative

Activities of the Working Group in 2014-2016

Meetings

(For each meeting, please precise titles, dates, places, number of participants)

WG Annual Meeting(s)

 May 2015: Varenna meeting" SALVAGE PATHWAYS IN HEART REJUVENATION", Italy in conjunction with WG on Myocardial Function: 86 abstracts submitted; 65 accepted. 108 Participants

Endorsed Meeting(s)

 May 12th and 13th 2016, Barcelona, Spain: Ischemic conditioning and targeting reperfusion injury: a 30 year voyage of discovery. 200 Participants

Education programme(s) - Training, Courses & Grants

• the WG submitted a H2020 COST action proposal for cardioprotection

Papers & Guidelines

(Please precise titles, authors and journal/issue where the paper is published)

Publications & Scientific Papers submitted by the WG, not by individuals

1. Position Paper of the European Society of Cardiology Working Group Cellular Biology of the Heart: cell-based therapies for myocardial repair and regeneration in ischemic heart disease and heart failure.

Madonna R, Van Laake LW, Davidson SM, Engel FB, Hausenloy DJ, Lecour S, Leor J, Perrino C, Schulz R, Ytrehus K, Landmesser U, Mummery CL, Janssens S, Willerson J, Eschenhagen T, Ferdinandy P, Sluijter JP. Eur Heart J. 2016 Apr 7. pii: ehw113



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- 2. Review paper: Stem Cell Aging and Age-Related Cardiovascular Disease: Perspectives of Treatment by Ex-vivo Stem Cell Rejuvenation. Madonna R, Engel FB, Davidson SM, Ferdinandy P, Gorbe A, Sluijter JP, Van Laake LW. Curr Drug Targets. 2015;16(8):780-5.
- 3. **Book:** Springer International Publising Switzerland 2016; Stem Cells and Cardiac Regeneration, Stem cell Biology and Regenerative Medicine, DOI 10.1007/978-2-219-25427-2 1

Ongoing Position papers already approved by ESC:

- Epigenomic and transcriptomic approaches in ischemic heart disease: finding the way to novel targets for diagnosis and treatment in the post-genomic era.
 Cinzia Perrino, Sean Davidson, Felix Engel, Derek J Hausenloy, Linda Van Laake, Sandrine Lecour, Jonathan Leor, Rosalinda Madonna, Fabrice Prunier, Joost Sluijter, Rainer Schulz, Kirsti Ytrehus, Peter Ferdinandy (manuscript to be submitted to Cardiovascular Research)
- 2. ESC Joint Working Groups on Cardiovascular Surgery and the Cellular Biology of the Heart and Position Paper: Defining clinically significant peri-operative myocardial injury and infarction in patients undergoing cardiac surgery
 Matthias Thielmann, Vikram Sharma, Nawar Al-attar, Gianluigi Bisleri, Martin Czerny, Péter Ferdinandy, Ulrich Frey, Gerd Heusch, Johannes Holfeld, Gudrun Kunst, Salvo Lentini, Rosalinda Madonna, Claudio Muneretto, Cinzia Perrino, Fabrice Prunier, Joost P.G. Sluijter, Linda W. Van Laake, Derek J Hausenloy (manuscript to be submitted to European Heart Journal)
- 3. ESC Working Group on Cellular Biology of the Heart Position Paper: Facts and fiction after 30 years of research on ischemic conditioning Derek J Hausenloy, Péter Ferdinandy, Hans Erik Botker, Sean M Davidson, James Downey, Felix Engel, Gerd Heusch, Robert Jennings, Sandrine Lecour, Jonathan Leor, Rosalinda Madonna, Michel Ovize, Cinzia Perrino, Fabrice Prunier, Joost P.G. Sluijter, Linda W. Van Laake, Jakob Vinten-Johansen, Derek M Yellon, Kirsti Ytrehus, David Garcia-Dorado, Rainer Schulz (manuscript to be submitted to Cardiovascular Research)
- 4. Extacellular vesicles in cardiovascular disease diagnostics and therapy Position Paper from the Working Group on Cellular Biology of the Heart of the European Society of Cardiology. Sluijter JPG, Davidson SM, Rosalinda Madonna, Linda Van Laake, Felix Engel, Derek J Hausenloy, Sandrine Lecour, Jonathan Leor, Cinzia Perrino, Fabrice Prunier, Rainer Schulz, Kirsti Ytrehus, Peter Ferdinandy. Clothilde Thery, Chantal Boulanger, Dominique de Kleijn, Eduardo Marbán, Saumya Das, Zoltan Giricz, Edit Buzas (manuscript to be submitted to Cardiovascular Research)



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Sessions

(For sessions, please precise titles and accepted/rejected status)

Proposals for pre-arranged sessions at the ESC congress and/or ESC Sub-specialty meetings

2015: SYMPOSIUM PROPOSALS FOR ESC 2015

- Title: Pathways for stem cell rejuvenation; Topic: 08.04 Stem cells and cell therapy, Session Type: Symposium
- Title: Cardiac stem/progenitor cell senescence, aging, and age-related heart disease Topic: 08.12 Cardiac biology and senescence, Session Type: Symposium
- Title: Reversing the aging process through stem cells, Topic: 08.12 Cardiac biology and senescence, Session Type: Symposium

2016: SYMPOSIUM PROPOSALS FOR VARENNA MEETING 2017

- Title: New targets and strategies for cardioprotection: looking beyond the cardiomyocyte
- Title: Immunomodulatory mechanisms of cardiac regeneration
- Title: Extracellular vesicles in cardiovascular disease diagnostics and therapy
- Title: Epigenomic and transcriptomic approaches in ischemic heart disease: finding the way to novel targets for diagnosis and treatment in the post-genomic era. Promises and pitfall of omics approaches in cardiovascular diseases

Other

Task Force(s)

 ESC Women in Cardiology: Video conference, Monday 16 february 2015
 Brainstorming meeting, august 30 2015, London - ESC Meeting Room 1, ESC Meeting Rooms, Level 3

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Perspectives for the next 2 years

List your future projects / business plan

- 25-28 May 2017: Varenna meeting" NON-ISCHEMIC CARDIOMYOPATHIES: TRAVELLING FROM IMMUNITY TO ONCOLOGY", Italy in conjunction with WG on Myocardial Function and Pericardial Diseases
- Further Position papers (at least 2 per year)

Prepare your budget

<u>List your Income from ESC entities & from Industry sponsorship</u> (*Please specify amount & purpose*)

- 10 k for extra nucleus meeting
- 10 k for position paper writing meeting
- Industry sponsorship for the Varenna meeting

List your main expenses

(Please specify amount & purpose)

- Varenna meeting
- Position paper writing group meetings

SWOT analysis of your Working Group

Strength

- Excellent nucleus composition
- Excellent number and quality of applications for nucleus members
- Spirit of collaboration
- Expertise in cutting-edge fields in basic research
- Dedicated time for deadlines and tasks of the working group
- ongoing collaborations with other WGs

Weakness

limited financial support

Opportunity

- Collaboration with further working groups including clinical ones
- Collaboration with ESC sister societies (e.g. ISHR-European Section, national cardiac research societies)

Threaten

None

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Recommendations/suggestions to the ESC for the next 2 years

- 1. To increase the membership
- 2. To increase number of position papers, as well as opinion papers on the major basic research area of the working group, i.e. regenerative medicine, cardioprotection, etc).
- 3. Build up industry relations with small biotech companies