Tuesday, August 29th, 2023

08:15  Venue opening
08:50  Welcome speech and presentation of the meeting

Session 1: Extending the scope of cardiogenic shock models
Chairpersons: Jan Belohlavek (Prague, Czech Republic) and Guillaume Lebreton (Paris, France)

09:00  Alcohol instead of microsphere myocardial embolization
       Alexandre Ouattara (Bordeaux, France)

09:20  Regional myocardial hypoxia and mechanical complications from acute myocardial infarction
       Petr Ostadal (Prague, Czech Republic)

09:40  Single or double acute myocardial infarction? With or without myocardial revascularization?
       Antoine Herpain (Brussels, Belgium)

10:00  Latest results from Odense Lab
       Jacob Moller (Odense, Denmark)

10:20  Discussion
10:35  Break
Session 2: Left ventricular unloading in cardiogenic shock  
Chairpersons: Navin Kapur (Boston, USA) and Jacob Moller (Odense, Denmark)

10:55 | Reduction in myocardial oxygen consumption with different support combinations: in silico evidence  
Daniel Burkhoff (New York, USA)

11:15 | Reduction in myocardial oxygen consumption with different support combinations: in vivo evidence  
Konstantin Yastrebov (Sydney, Australia)

11:35 | Mechanosensation in chronic vs. acute heart failure  
Sophie van Linthout (Berlin, Germany)

11:55 | VA-ECMO with or without intra-aortic balloon pump  
Alexandre Ouattara (Bordeaux, France)

12:15 | Impella-CP®  
Alexander Moiroux (Brussels, Belgium)

12:35 | PulseCath®  
Clement Delmas (Toulouse, France)

12:55 | Atrial septostomy  
Mikulas Mlcek (Prague, Czech Republic)

13:15 | Discussion

13:30 | Lunch

Session 3: Industry corner  
Chairperson: Bart Meyns (Leuven, Belgium)

14:30 | Abiomed: new Impella® devices  
Christoph Nix (Aachen, Germany)

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Session 4: Acute myocardial injuries and coronary circulation disorders  
Chairpersons: Hanne Berg Ravn (Odense, Denmark) and Daphne Merkus (Rotterdam, Netherlands)

14:45  **Ischemia/reperfusion injuries after acute myocardial infarction: full pressure revascularization vs. persistent coronary artery stenosis**  
Piet Claus (Leuven, Belgium)

15:05  **Coronary microvascular dysfunction after acute myocardial infarction**  
Dirk Duncker (Rotterdam, Netherlands)

15:25  **Alterations of coronary blood flow autoregulation in sepsis**  
Celine Boudart (Brussels, Belgium)

15:45  **Systemic inflammatory reaction triggered by acute myocardial infarction**  
Lucas Liaudet (Lausanne, Switzerland)

16:05  *Break*

Session 5: Right ventricular failure  
Chairpersons: Daniel Burkhoff (New York, USA) and Dirk Donker (Rotterdam, Netherlands)

16:25  **Importance of keeping a closed chest animal model**  
Mads Lyhne (Aarhus, Denmark)

16:45  **Right ventricle pressure-volume loops and remodeling in pressure vs. volume overload**  
Daphne Merkus (Rotterdam, Netherlands)

17:05  **Right ventricle reversed remodeling with low-flow mechanical support**  
Piet Claus (Leuven, Belgium)

Consensus roundtable  
Chairpersons: Alexandre Mebazaa (Paris, France) and Holger Thiele (Leipzig, Germany)

17:25  **Unmet needs in cardiogenic shock clinical practice and issues still to be addressed by pre-clinical research?**  
All

18:00  **End of the day**

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Wednesday, August 30th, 2023

Session 1: Cardiac arrest and brain injury
Chairpersons: Asger Granfeldt (Aarhus, Denmark) and Fabio S Taccone (Brussels, Belgium)

08:30 Hypertonic sodium lactate reduces brain injury after cardiac arrest
Filippo Annoni (Brussels, Belgium)
08:50 Microcirculatory blood flow during cardiac arrest and cardiopulmonary resuscitation
Jan Belohlavek (Prague, Czech Republic)
09:10 Brain targeted therapy during extracorporeal life support
Anthony Moreau (Brussels, Belgium)
09:30 Intensive care unit animal models of acute brain injury
Thomas Kapapa (Ulm, Germany)
09:50 Discussion

Session 2: Renin-angiotensin-aldosterone system disturbances in circulatory failure
Chairpersons: Milan Stengl (Prague, Czech Republic) and Filippo Annoni (Brussels, Belgium)

10:00 Renin-angiotensin-aldosterone system and angiotensin-II deficit in septic shock
Feriel Azibani (Paris, France)
10:20 Angiotensin 1-7 administration in septic shock
Bruno Garcia (Brussels, Belgium)
10:40 Procizumab restores vascular tone in septic shock and reduces myocardial injury
Antoine Herpain (Brussels, Belgium)
11:00 Discussion
11:10 Break
Session 3: Pulse wave analysis and hemodynamic monitoring
Chairpersons: Manuela Ferrario (Milan, Italy) and Mikulas Mlcek (Prague, Czech Republic)

11:30  Can it predict sepsis onset and future response to vasopressor therapy
       Finneas Catling (London, UK)

11:50  Pressure-volume vs. pressure-strain loops: regional myocardial work and
       pre-stretch-strain relationship
       Piet Claus (Leuven, Belgium)

12:10  Current and new methods to compute the reflection wave magnitude from
       arterial pressure signal only
       Marta Carrara (Milan, Italy)

12:30  Dynamic arterial elastance to guide fluid resuscitation
       Manuel M Garcia (Jerez de la Frontera, Spain)

12:50  Discussion

13:00  Lunch

Session 4: New investigation techniques and paradigms in circulatory failure
Chairpersons: Sebastien Preau (Lille, France) and Mervyn Singer (London, UK)

14:00  Stable isotope-based quantification of metabolic pathways
       Peter Radermacher (Ulm, Germany)

14:20  Extracellular vesicles from mesenchymal stem cells in a hemorrhagic-
       traumatic rat model
       Sergiu Dumitrescu (Vienna, Austria)

14:40  Circulating histone scavengers in septic shock
       Fuhong Su (Brussels, Belgium)

15:00  High doses of vitamin C in septic shock
       Raphael Favory (Lille, France)

15:20  Heart rate control with ivabradine or esmolol in septic shock
       Antoine Herpain (Brussels, Belgium)

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Session 5: New perspectives in pre-clinical experimental design
Chairpersons: Claude Libert (Ghent, Belgium) and Peter Radermacher (Ulm, Germany)

15:40 | **3R ethical rule application in pre-clinical critical care research**
Marcin Osuchowski (Vienna, Austria)

16:00 | **Insights on non-human primate research**
Rabea Hinkel (Göttingen, Germany)

16:20 | **How reliable are cardiovascular mathematical models in critical illness**
Dirk Donker (Utrecht, Netherlands)

16:40 | **Big data and the computational scientist’s perspective**
Jerome Cartailler (Paris, France)

End of the meeting