Programme

3rd International Danube Symposium

Enabling Whole Person Research:
The Transformative Impact of Total Body PET, Complexity Science and Network Medicine

21st – 22nd September 2023
Park Hyatt Vienna
Am Hof 2, 1010 Vienna

www.meduniwien.ac.at/danube-symposium

DEPARTMENT OF BIOMEDICAL IMAGING AND IMAGE-GUIDED THERAPY

MEDICAL UNIVERSITY OF VIENNA

Vienna Healthcare Group
University Hospital Vienna

Welcome to the 3rd International Danube Symposium

Synopsis

Recently introduced total-body PET systems offer a paradigm shift in medical sciences by providing a comprehensive assessment of the entire patient, considering their biological and clinical state, rather than just isolated diseases or organs. This new and innovative technology enables researchers and healthcare providers to capture total body tracer kinetics, from which quantitative whole body functional parametric images can be obtained. These data provide a means to assess inter-organ communication and track the transition from health to disease. As a result, this technology holds the potential to yield a more complete understanding of the subject's overall health in real time and their progression over time with clinical interventions.

"Enabling Whole-Person Research: The Transformative Impact of Total-Body PET, Complexity Science, and Network Medicine" is organized as an international, cross-discipline symposium aiming to explore the role of total-body Positron Emission Tomography (PET) within a symbiotic partnership with network medicine and complexity sciences. This collaboration seeks to advance medical and clinical sciences towards holistic health research. To fully unlock the potential of total-body PET imaging, appropriate research questions along with corresponding paradigms and protocols must be developed. Advanced computational tools and novel workflows are essential to process the vast amounts of data generated by these systems, addressing clinical research questions and aiding in clinical decision-making. This symposium will convene experts from nuclear medicine, molecular biology, physiology, network medicine, and data sciences. Their collective goal is to assess the current state-of-the-art in their respective domains and to formulate paradigms and protocols for a better comprehension of whole-person health and disease.

Marcus Hacker
Medical University of Vienna

Thomas Beyer
Medical University of Vienna

The symposium will showcase invited presentations by renowned experts in various complementary fields. Moderated debates will be organized along organ axes and physiological interventions. This forward-looking event aims to foster the creation of a cross-specialty community, bringing together experts from diverse disciplines to drive forward the research on whole-person health. This initiative will also complement other meetings that might be more technically or clinically focused. We invite you to join us and become an integral part of this innovative and ambitious community, united in the common goal of advancing the realm of medical and clinical research.

Marcus Hacker and Thomas Beyer
Scientific Organizational Team

General information

Location
Park Hyatt Vienna, Am Hof 2, 1010 Vienna, Austria

Scientific Organizational Team
Thomas Beyer and Marcus Hacker

Scientific Board
Jörg Menche, Enrico Petrillo, Stefan Thurner and Joseph Loscalzo

Contact
www.meduniwien.ac.at/danube-symposium
office@applied-diagnostics.eu

Registration fee
Full registration: 350 Euro
Technologists, Students: 200 Euro
Single-Day Ticket* (onsite only available ticket): 220 Euro

*NO Full registration, Technologists, Students tickets available onsite.
Only Single-Day Tickets can be purchased.

The fee includes registration fee, congress material, coffee breaks, lunch and conference dinner. Cancellation of Registration: after July 1st, 2023 cancellations will not be possible.

This event is approved by the Austrian Medical Chamber with 15 DFP-Points.

Please be aware that photographs and/or video footage will be taken at the event. These may be used for the purpose of documenting or reporting the event and published in print and online media, on various social media platforms and on MedUni Vienna's website.

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Programme

Thursday, 21st September 2023

8.00 – 8.30 am
Welcome and Motivation
Scientific Organizational Team

8.30 – 9.15 am
Basic I
How to endotype and redefine diseases and validate this by clinical trials
Harald Schmidt
Moderator: Marcus Hacker

9.15 – 10.00 am
Basic II
Molecular imaging and TB-PET
Simon Cherry
Moderator: Thomas Beyer

10.00 – 10.30 am
Coffee

10.30 am – 12.00 am

The organization of biology

Moderator: Thomas Beyer

Unlocking the secrets of biology through art, imaging and data science
Jörg Menche

Visualizing life: the science of imaging biology
Zahi A. Fayad

Navigating big and bigger complexity to uncover the secrets of health data
Jean-Luc Balligand

12.00 – 1.30 pm
Lunch

1.30 – 3.00 pm

The network effect: examining inflammation in the body

Moderator: Zahi A. Fayad

Stress and the cardiovascular system: navigating the intersection
Ahmed Tawakol

Immune interactions in chronic inflammation: old friends and new foes
Christoph Binder

Inflammation interactions: understanding cross-talk in the body
Thorsten Derlin

3.30 – 4.00 pm
Coffee

4.00 – 5.30 pm

The network effect: examining inflammation in the body II

Moderator: Ed Silverman

Defending the organs: understanding organ-specific immune responses
Christoph Bock

Novel translational applications in immunology and oncology using total body PET
Christian la Fougère

The impact of psychosocial stress, stress management and new imaging approaches – from psychiatry to oncology
Rupert Lanzenberger

5.30 – 6.30 pm

Case story: proliferation, metabolic networks and stress intervention

Moderator: Christoph Binder

Stress and lung cancer
Marcus Hacker

Lung cancer induced cachexia
Armin Frille

7.30 – 11.00 pm
Scientific Dinner Meeting

Friday, 22nd September 2023

8.00 – 8.45 am
Basic III
The power of AI in whole person research
Lalith Kumar Shiyam Sundar
Moderator: Christoph Bock

8.45 – 9.30 am
Basic IV
Discovering the connections: a deep dive into network graph analysis and causality
Jan Baumbach
Moderator: Jörg Menche

9.30 – 10.00 am
Coffee

10.00 – 11.00 am
Keynote lecture
The origins, evolution of network medicine and impact on health care globally
Ed Silverman
Moderator: Eva Schernhammer

11.00 am – 12.30 pm

Exploring the hormonal symphony: endocrine network analysis

Moderator: Marcus Hacker

The brain-hormone connection: investigating the Influence of sex hormones
Catherine Gebhard

The signaling function of bile acids
Michael Trauner

Viral Invasion: exploring the systemic response
Andreas Bergthaler

12.30 – 2.00 pm
Lunch

14.00 – 15.30 pm

Translational innovations: harnessing technologies for network analysis in health

Moderator: Harald Schmidt

Revolutionizing biology with multiplexing: IHC and spatial transcriptomics in the lead
Andre Rendeiro

Illuminating biology: revealing metabolic fingerprints with spatial multi-omics
David Lewis

The next frontier in cell analysis: radioFACS and radioMACS
Cécile Philippe

3.30 – 4.00 pm
Coffee

4.00 – 6.00 pm

Building a healthier future through early detection and targeted intervention

Moderator: Ramsey Badawi

Vienna prevention project
Helmuth Haslacher

Total-body PET: a window into health and disease
John Prior

Digital twins
Gernot Plank

The future of healthcare: uncovering the whole picture with whole-person research
Helene Langevin

6.00 – 6.30 pm
Closing and Farewell

Faculty

Ramsey Badawi
University of California, Biomedical Engineering, Davis, USA

Jean-Luc Balligand
Cliniques Universitaires Saint-Luc, Université Catholique de Louvain (UCLouvain), Brussels, Belgium

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Vienna, Austria

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John Prior
Department of Nuclear Medicine and Molecular Imaging, Lausanne University Hospital (CHUV) and University of Lausanne (UNIL), Switzerland

Andre Rendeiro
CeMM Research Center for Molecular Medicine of the Austrian Academy of Sciences, Vienna, Austria

Eva Schernhammer
Department of Epidemiology, Center for Public Health, MedUni Vienna, Austria

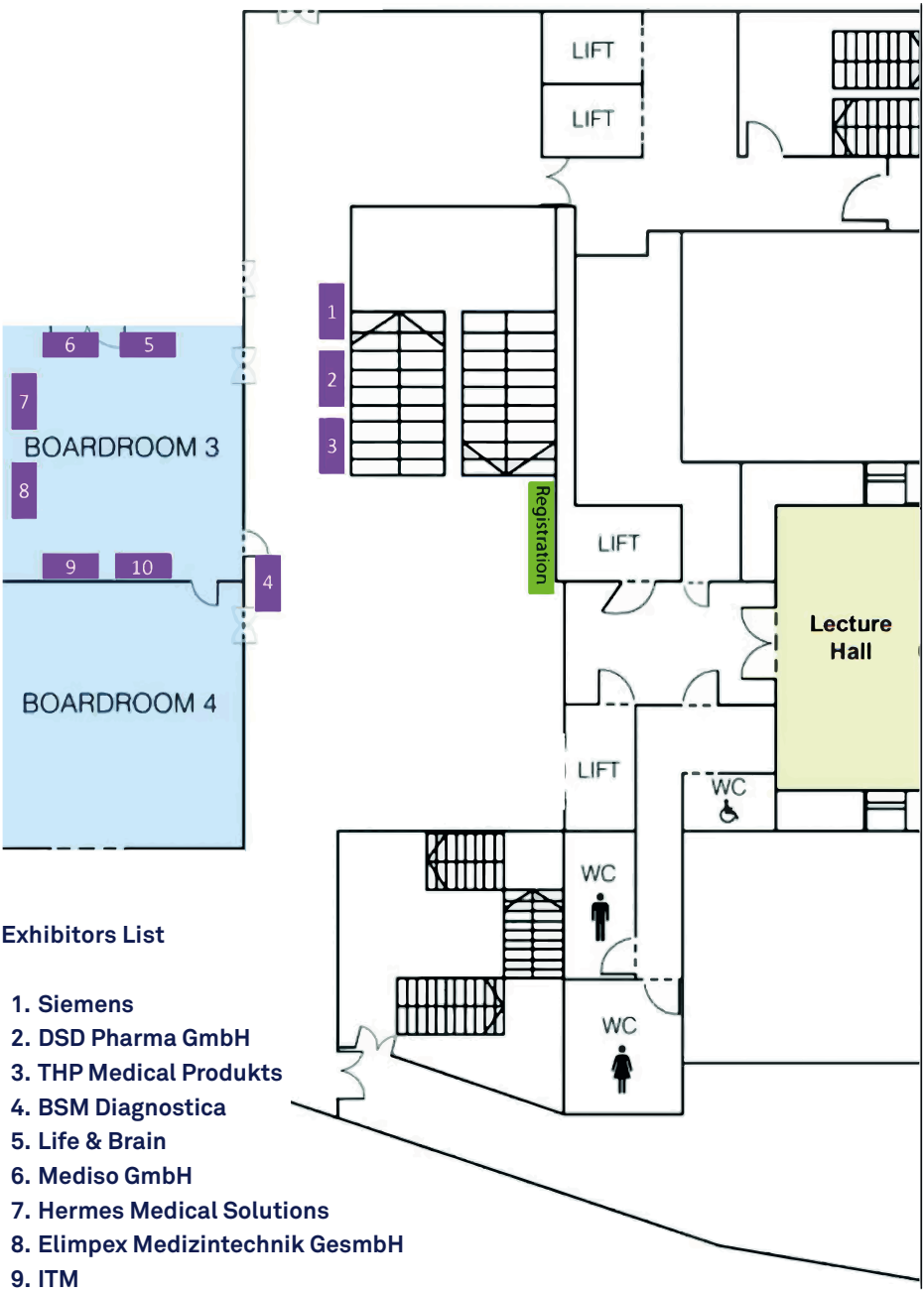
Harald Schmidt
Department of Pharmacology, Cardiovascular Research Institute Maastricht (CARIM), Faculty of Medicine, Health & Life Science, Maastricht University, The Netherlands

Edwin K. Silverman
Channing Division of Network Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, USA

Ahmed Tawakol
Cardiology Division and Cardiovascular Imaging Research Center, Massachusetts General Hospital, Harvard Medical School, Boston, USA

Stefan Thurner
Institute of the Science of Complex Systems, Center for Medical Data Science, MedUni Vienna

Michael Trauner
Division of Gastroenterology and Hepatology, Department of Medicine III, MedUni Vienna/University Hospital Vienna, Austria



Exhibitors List

1. Siemens
2. DSD Pharma GmbH
3. THP Medical Produkts
4. BSM Diagnostica
5. Life & Brain
6. Mediso GmbH
7. Hermes Medical Solutions
8. Elimpex Medizintechnik GesmbH
9. ITM
10. Seibersdorf Laboratories

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Mediso GmbH

Life & Brain GmbH

MethylDetect

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Rotop Pharmaka GmbH

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THP Medical Products Vertriebs GmbH

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Notes

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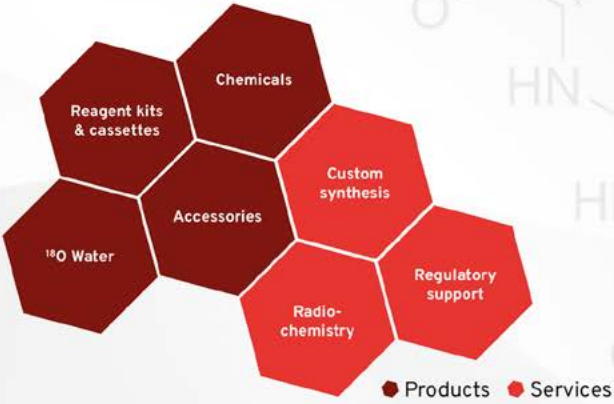

Do you have any questions? Our team of experts is ready to find the right solution for you.

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