

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

Helmut Haslacher

Total-body PET: a window into health and disease

John Prior

Digital twins

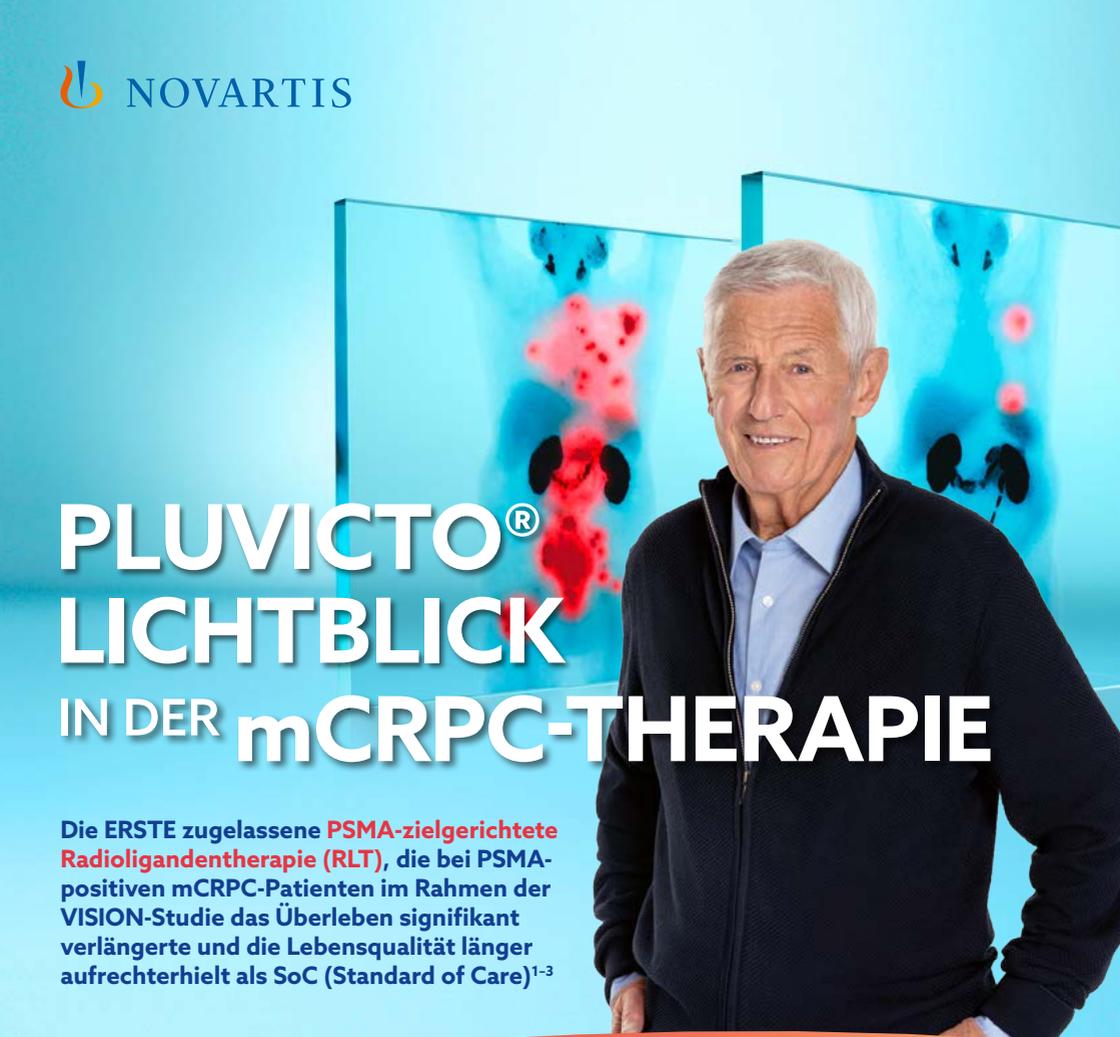
Gernot Plank

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

Helene Langevin

6.00 – 6.30 pm

Closing and Farewell



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Referenzen: 1. Fachinformation Pluvicto® 1 000 MBq/ml Injektions-/Infusionslösung, Stand Dezember 2022. 2. Sartor O et al. N Engl J Med. 2021;385(12):1091-1103. 3. Sartor O, et al. N Engl J Med. 2021 Sep;385(12):1091-1103. Supplementary appendix.

▼ Dieses Arzneimittel unterliegt einer zusätzlichen Überwachung. Dies ermöglicht eine schnelle Identifizierung neuer Erkenntnisse über die Sicherheit. Angehörige von Gesundheitsberufen sind aufgefordert, jeden Verdachtsfall einer Nebenwirkung zu melden. Hinweise zur Meldung von Nebenwirkungen, siehe Abschnitt 4.8.

BEZEICHNUNG DES ARZNEIMITTELS: Pluvicto® 1 000 MBq/ml Injektions-/Infusionslösung. **QUALITATIVE UND QUANTITATIVE ZUSAMMENSETZUNG:** Ein Milliliter Lösung enthält am Tag und zum Zeitpunkt der Kalibrierung 1 000 MBq (¹⁷⁷Lu)Lutetiumvivotidtetraacetat. Die Gesamtmenge an Radioaktivität pro Einzeldosis-Durchstechflasche am Tag und zum Zeitpunkt der Verabreichung beträgt 7 400 MBq ± 10 %. Lutetium-177 zerfällt zu stabilem Hafnium-177 mit einer physikalischen Halbwertszeit von 6,647 Tagen durch Emission von Beta-Minus-Strahlung mit einer Maximalenergie von 0,498 MeV (79 %) und von Photonenstrahlung (γ) mit 0,208 MeV (11 %) und 0,113 MeV (6,4 %). **Sonstiger Bestandteil mit bekannter Wirkung:** Jeder Milliliter der Lösung enthält bis zu 0,312 mmol (7,1 mg) Natrium. Jede Durchstechflasche enthält bis zu 88,75 mg Natrium. **Sonstigen Bestandteile:** Essigsäure 99%, Natriumacetat, Gentsinsäure, Natriumascorbat, Pentetsäure, Wasser für Injektionszwecke. **ANWENDUNGSGEBIETE:** Pluvicto wird in Kombination mit Androgendeprivationstherapie (ADT) mit oder ohne Inhibition des Androgenrezeptor-(AR-)Signalwegs angewendet zur Behandlung von erwachsenen Patienten mit progredientem Prostata-spezifischen-Membranantigen-(PSMA-)positiven, metastasierten, kastrationsresistenten Prostatakarcinom (mCRPC), die zuvor mittels Inhibition des AR-Signalwegs und taxanbasierter Chemotherapie behandelt wurden (siehe Abschnitt 5.1). **GEGENANZEIGEN:** Überempfindlichkeit gegen den Wirkstoff oder einen der in Abschnitt 6.1 genannten sonstigen Bestandteile. **PHARMAKOTHERAPEUTISCHE GRUPPE:** Radiotherapeutika, Andere Radiotherapeutika, ATC-Code: V10XX05. **INHABER DER ZULASSUNG:** Novartis Europharm Limited, Vista Building, Elm Park, Merlion Road, Dublin 4, Irland. Informationen betreffend Warnhinweise und Vorsichtsmaßnahmen für die Anwendung mit anderen Mitteln, Nebenwirkungen und Gewöhnungseffekte sind der veröffentlichten Fachinformation zu entnehmen. Ausführliche Informationen zu diesem Arzneimittel sind auf den Internetseiten der Europäischen Arzneimittel-Agentur <http://www.ema.europa.eu/> verfügbar. **Abgabe:** Rezeptpflichtig, wiederholte Abgabe verboten, Abgabe nur an Inhaber einer Bewilligung für den Umgang mit radioaktiven Stoffen gemäß Strahlenschutzgesetz. **Version:** 12/2022

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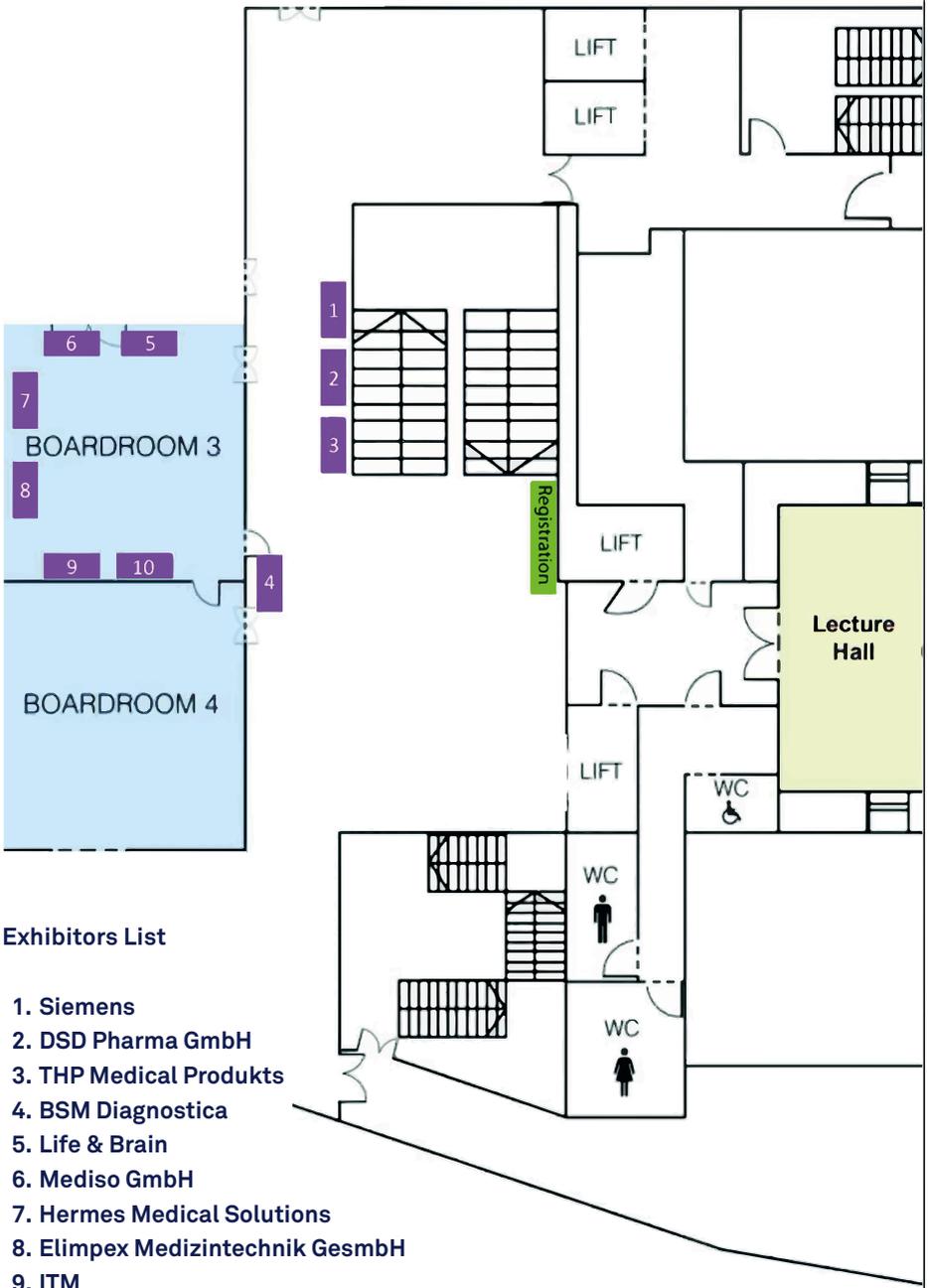
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Exhibitors List

- 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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Siemens

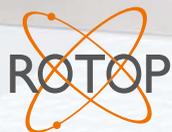


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