



Image credit: MA 53, City Vienna

DIRECTIONS

BY BUS

Bus 46B or 46A to stop Schloß Wilhelminenberg

Connects with:

- Subway (U-Bahn) Line 3 (Ottakring)
- Tram Lines 2, 10, 44, 46
- Local Train "Schnellbahn" S45 in Ottakring

FROM VIENNA CENTRAL RAILWAY STATION (HAUPTBAHNHOF)

1. Take the Subway U1 to Südtiroler Platz
2. Transfer to Subway U3 to Ottakring
3. Transfer to Bus 46A or 46B to Wilhelminenberg

FROM THE AIRPORT

1. Take the City Airport Train (CAT) or "Schnellbahn" from Schwechat Airport
2. Exit at Wien-Mitte (Landstraße)
3. Transfer to Subway U3 to Ottakring
4. Take Bus 46A or 46B to stop Wilhelminenberg

SUPPORTED BY

vetmeduni



ORGANISED BY

JOHANNA PAINER-GIGLER FIWI, VETMEDUNI, VIENNA, AUSTRIA
SZILVIA KALOGEROPOULU FIWI, VETMEDUNI, VIENNA, AUSTRIA
PETER KOTANKO NEW YORK, UNITED STATES
PETER STENVINKEL KAROLINSKA INSTITUTET, STOCKHOLM, SWEDEN
DAVID JÖRG FRANKFURT AM MAIN, GERMANY

A question about red blood cell lifespan sparked an interdisciplinary journey bridging comparative physiology and biological scaling laws. In 2022, Peter Kotanko and David Jörg envisioned a symposium uniting experts from veterinary science, medicine, biology, physics, and economics to explore connections between fundamental biology and health applications.

The inaugural "Allometry and Scaling in Biology" symposium at Alpenzoo Innsbruck (2023), organised with Thomas Haller, covered topics from DNA methylation physics to nutritional medicine. Following its success, a second meeting in Stockholm (2024), organised with Peter Stenvinkel, expanded the concept, renamed "Patterns Across Scales in Living Systems." The third Vienna symposium, organised with Johanna Painer-Gigler and Szilvia Kalogeropoulou, further broadens the scope from kidney research to space biology.

The Patterns Across Scales in Living Systems symposia are an endeavour driven by passion for research. They are privately organised and are funded by private donations, meeting grants by not-for-profit organisations and are supported by the respective hosting institution. They are not associated with or funded by for-profit organisations.

PATTERNS ACROSS SCALES IN LIVING SYSTEMS



VIENNA 2025

DEPARTMENT OF
INTERDISCIPLINARY
LIFE SCIENCES

JUNE 7—9, 2025

/VETERINARY SCIENCES/PHYSICS/BIOLOGY/
/MATHEMATICS/ENGINEERING/MEDICINE/ECOL

PROGRAMME

VIENNA2025

SATURDAY JUNE 7

- 4:00pm **Welcome Reception**
FIWI, Vetmeduni
Savoyenstr. 1, 1160 Vienna
- 4:45pm Wildlife blowpipe competition
and dart gun exercise
- Visit to the Wildlife Veterinary Clinic
- Bus to the restaurant (line 46)
- 6:30pm **Dinner**
Restaurant Grünspar
Ottakringer Str. 266, 1160 Vienna

SUNDAY JUNE 8

SESSION I
ALLOMETRY & SCALING

- 8:45am **Welcome**
- 9:00am **KEYNOTE LECTURE**
JOHN SPEAKMAN The heat dissipation limit hypothesis
UNIVERSITY OF ABERDEEN, UK and its implications for scaling and ecology
- 10:00am Coffee break
- 10:30am **PAUL SHIELS** Modulating the metabolism of ageing:
UNIVERSITY OF GLASGOW, UK A route to harmonising the Peto's paradox and Kleiber's law?
- 11:00am **JOHANNA PAINER-GIGLER** Anatomical variations and scaling of
VETMEDUNI, FIW, AUSTRIA kidneys across mammals
NATALIE FINCH — and —
UNIVERSITY OF BRISTOL, UK Clinical aspects of canine and feline
LANGFORD VETS, UK nephrology
- 11:35am Discussion session
- 12:30pm **Lunch** at the conference venue

SUNDAY, JUNE 8 (continued)

SESSION II
DISEASES

- 1:30pm **KEYNOTE LECTURE**
KEITH SIEW Cosmic kidney disease and
UNIVERSITY COLLEGE LONDON, UK space flight induced renal dysfunction
- 2:30pm **IWAN BURGNER** Same environment—same disease?
VETMEDUNI, FIWI, AUSTRIA The dog as a possible model for inflammatory bowel diseases in humans
- 3:00pm **DAVID EBMER** Co-evolution: The seal louse
ZOO SCHÖNBRUNN, VIENNA, AUSTRIA (Echinophthirius horridus) and the seal heartworm (Acanthocheilonema spirocauda)—a unique host-parasite relationship
- 3:30pm Discussion session
- 4:00pm Coffee break

SESSION III
DEVELOPMENT & EVOLUTION

- 4:30pm **CLAUDIA BIEBER** Sleep and memory during hibernation
VETMEDUNI, FIWI, AUSTRIA
- 5:00pm **IRENE YUTING LI** Phase waves as coordinators of
ISTA VIENNA, AUSTRIA self-organization across developmental systems
- 5:30pm **STEFFEN WERNER** Life history trade-offs in
WAGENINGEN UNIVERSITY & RESEARCH planarian flatworms
THE NETHERLANDS

SUNDAY, JUNE 8 (continued)

- 6:00—7:00pm **Break and discussion**
- 7:30pm **Dinner**
Schloss Wilhelminenberg
Savoyenstr. 2, 1160 Vienna
(across the street)

MONDAY JUNE 9

SESSION IV
GENDER & AGEING

- 9:00am **VIOLA D'AMBROSIO** Sex difference in human
UNIV. CATTOLICA DEL SACRO CUORE physiology and pathology
DI ROMA, ITALY
- 9:30am **SZILVIA KALOGEROPOULU** Review on atherosclerosis
VETMEDUNI, FIWI, AUSTRIA amongst animals
- 10:00am **KEITH SIEW** How to get involved in
UNIVERSITY COLLEGE LONDON, UK space research
- 10:20am Coffee break
- 10:45am **Scientific speed dating**
Meeting new disciplines
(Small group round tables)
- 11:15am **Round table discussion**
- 12:15pm **Closing remarks**
- 12:30pm **Lunch** at the conference venue