

Day of BioMedical Research

Wednesday, 2 July 2025

Auditorium Ettore Rossi

Julie-von-Jenner-Haus A (Kinderklinik),
Freiburgstrasse 19, 3010 Bern

Program

8:30 – 12:00

Poster Exhibition
with Grants Office

Auditorium Ettore Rossi

13:00 – 13:15

Welcome Address
Prof. Dr. h.c. mult. Claudio L. A. Bassetti
Dean, Medical Faculty, University of Bern
Director of Teaching and Research, Insel Gruppe
Prof. Mark A. Rubin MD
Director DBMR

13:15 – 14:00

Keynote Lecture
Prof. Dr. Raphael Gottardo
Director of the Biomedical Data Science Center, Lausanne University Hospital, Switzerland
Full Professor of Biomedical Data Science, University of Lausanne, Switzerland
“Using data science to accelerate clinical and translational insights”

14:00 – 14:45

Johanna Dürmüller-Bol DBMR Research Award 2025
Welcome Address by Mr. Marc Stucki
General Manager of the Foundation Johanna Dürmüller-Bol

Lightning Talks by the shortlisted candidates for the JDB-Award
moderated by Prof. Mark A. Rubin MD

14:45 – 15:15

Break

15:15 – 16:00

Keynote Lecture
Prof. Raphaëlle Luisier
Assistant Professor with Tenure Track for Omics Data Science for Transcriptomics and Head of Research Group,
Department for BioMedical Research DBMR, University of Bern, Switzerland
“Integrating imaging and omics data with AI to decode RNA in complex human disorders”

16:00 – 16:30

Award Ceremony
Benoît Pochon Prize 2024
Research Prize Alumni MedBern
DBMR Poster Prizes 2025
Technician of the Year Award 2025
Best DBMR Publication 2024 Prize
Johanna Dürmüller-Bol DBMR Research Award 2025

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Background

- Despite abundant drug effective; only corticoste
- Emerging SARS-CoV-2 higher transmissibility specific drug therapy.
- Molnupiravir (Merck) is SARS-CoV-2 replication nucleoside analog
- Through modeling and antiviral therapy with within-host reproducti within-host transmissibili

Fig. 1: Viral kinetics model A. Target-cell limited mode



B. Ordinary Differential Equation system

$$\begin{aligned} \frac{dT}{dt} &= -\beta TV \\ \frac{dI}{dt} &= \beta TV - \delta I \\ \frac{dV}{dt} &= (1 - \eta) \rho I - c(1 + \epsilon \text{activity}) V \end{aligned}$$

Results

- Viral load dynamics reached at 5.4 dpi and 28.4 C_{min} at 8.1 dpi.
- An increased R₀ resu viral load peaks (25.2 (152-402%)), whereas d Treatment with molnup