

NSC-Reconstruct

NSC-Reconstruct Workshop #3, January 25-26th, 2023

Transplant connectomics: Strategies to improve the structural and functional integration of replacement cells

**Conference venue: BioMedical Centre (BMC), Ludwig-Maximilian-Universität
Großhaderner Str. 9 in Planegg, Room N02.040 (part N of the BMC building, 2nd floor)**

Directions to BMC & Munich Public Transport & BMC room finder:

<https://www.en.bmc.med.uni-muenchen.de/contact/directions/index.html>

Program

Day 1: January 25th, 13.00-19.00

13.00 – 14.00 Lunch

14.00 – 14.10 Elena Cattaneo: Welcome and Introduction

Session1: Transplant connectomics

Chair: Magdalena Götz

External speakers: 30+5 min discussion

14.10 – 14.45 Karl-Klaus Conzelmann (Munich)

Rabies virus: neuron tracing and beyond

14.45 – 15.20 Esther Klingler (Geneva)

Transcriptional controls over projection neuron fate identity

15.20 – 15.50 *BREAK*

Internal speakers: 20+10 min discussion

15.50 – 16.20 Marco Tripodi (Torino)

*Combining long-term circuit mapping and network transcriptomics
with SiR-N2c*

16.20 – 16.50 Yvette Zarb (Munich)

*Network integration of transplanted neurons: from connectivity ratio
to functional synapses*

16.50 – 17.20 Discussion

17.20 – 17.30 *BREAK*

Session 2: Approaches to the study of transplant function

Chair: Pierre Vanderhaeghen

External speakers: 30+5 min discussion

17.30 – 18.05 Aya Takeoka (Leuven)

Spinal circuit plasticity for movement generation

18.05 – 18.40 Mark Hübener (Munich)

Two-timeframe RABV tracing for assessing novel connectivity

18.40 – 19.00 Discussion

*Dinner @ 20.30 at **Ratskeller München**, Marienplatz 8, 80331 München*

Day 2: January 26th, 9.00-16.00

Session 2, continued

Internal speakers: 20+10 min discussion

09.00 – 09.30 Lea Berg (Brustle Lab)
Systems for assessing and modulating functionality of programmed neurons

09.30 – 10.00 Ben Vermaercke (Vanderhaeghen Lab)
In vivo toolbox for functional characterization of xenotransplanted human neurons

10.00 – 10.30 *BREAK*

Session 3: **Approaches to the study of neural heterogeneity and transplant composition**

Chair: Dario Besusso

External speakers: 30+5 min discussion

10.30 – 11.05 Clare Parish (Melbourne)
Improving the safety, composition and plasticity of human PSC-derived neural grafts for Parkinson's Disease

11.05 – 11.40 Gonçalo Castelo-Branco (Stockholm)
Oligodendroglia in Development and Multiple Sclerosis: Insights From Single Cell and Spatial Omics

11.40 – 12.00 Discussion

12.00 – 13.00 *LUNCH*

Internal speakers: 20+10 min discussion

13.00 – 13.30 Edoardo Sozzi (Parmar lab)
Co-graft of dopamine progenitors and supporting cells to enhance cell-based therapy for Parkinson's Disease

13.30 – 14.00 Maura Galimberti (Cattaneo lab)
Chimeric WT-HD organoids as proxy to study donor-host cell interaction in HD grafts

14.00 – 14.30 *BREAK*

14.30 – 16.00

Session 4: **Open discussion on the topic**

Chair: Elena Cattaneo & Ernest Arenas

How to standardise the definition of cell identity at single-cell resolution including short 5-10 min presentations by pre-selected speakers