

# Greifswalder Transporttage 2025

## (final program)

Thursday, September 11<sup>th</sup>

| Time:  | Title of the talk:   | Presented by:  |
|--|--|--|
| 16:00-16:30  | Registration   |  |
| 16:30-17:00  | Welcome  | Giuliano Ciarimboli, Stefan Oswald, Marleen Meyer-Tönnies, Mladen Tzvetkov |
| 17:00-17:45  | <u>Keynote:</u> Of Mice and Men - Imaging Cystic Fibrosis Lung Disease                                       | Mark Wielpütz (Greifswald)   |
| <b>Membrane transporters as drug targets<br/>(Chairs: Stefan Engeli / Joachim Geyer)</b> |  |  |
| 17:50-18:20  | NTCP bile acid transporter inhibitors: ligand-based and structure-based drug design                          | Joachim Geyer (Gießen)   |
| 18:20-18:35  | Natural product discovery pipeline to identify antidotes against amatoxin toxicity: Targeting OATP1B3 uptake | Tzu-Ya Hung (Basel, Switzerland)   |
| 18:35-18:50  | Clinically used ASBT inhibitors: mode of inhibition and drug binding sites                                   | Veronica Billo (Gießen)  |
| 18:55-19:15  | Company presentation: Cyagen   |  |

Friday, September 12<sup>th</sup>

| Time:  | Title of the talk:  | Presented by:                    |
|--|---|----------------------------------|
| <b>Membrane transporters in pharmacology &amp; toxicology<br/>(Chairs: Jörg König / Stefan Oswald)</b> |   |                                  |
| 8:00-8:15  | Polypharmacology translates between species and phylogenetic distance: a study on organic anion transporting polypeptides | Sven Marcel Stefan (Lübeck)      |
| 8:15-8:30  | The involvement of miRNAs in ABC and SLC drug transporters regulation in the human liver                                  | Marek Drozdik (Szczecin, Poland) |
| 8:30-8:45  | The mystery of the bile acid transporter homologue SLC10A5  | Emre Karakus (Gießen)            |
| 8:45-9:05  | Biomarkers for assessment of drug transporter function  | Jörg König (Erlangen)            |
| 9:05-9:45  | Coffee break  |                                  |

## Friday, September 12<sup>th</sup> (continued)

| Time:  | Title of the talk:  | Presented by:                           |
|--|---|---|
| <b>Physiological and pathophysiological role of membrane transporters I</b><br><b>(Chairs: Giuliano Ciarimboli / Yohannes Hagos)</b> |   |   |
| 9:45-10:30   | <b>Keynote:</b> Allosteric Modulation of Neurotransmitter Transporters: A Structural and Functional Perspective | Harald Sitte<br>(Vienna, Austria)       |
| 10:30-10:50  | OCT3 as a histamine transporter in granulocytes   | Giuliano Ciarimboli<br>(Münster)        |
| 10:50-11:05  | The role of organic cation transporter 1 in determining serotonin levels in peripheral circulation              | Felix Morof<br>(Greifswald)             |
| 11:05-11:20  | Membrane transport of hepatotoxic phytochemicals and synthetic drugs  | Wouroud Ismail Al-Khalil<br>(Göttingen) |
| 11:20-11:30  | <b>Short break</b>  |   |

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|---|---|--------------------------------------|
| <b>Physiological and pathophysiological role of membrane transporters II</b><br><b>(Chairs: Giuliano Ciarimboli / Yohannes Hagos)</b> |   |                                      |
| 11:30-11:45   | Organic solute transporter OSTa/b: Is this SLC transporter (SLC51) actually an uptake transporter or is it more of an efflux transporter? | Yohannes Hagos<br>(Göttingen)        |
| 11:45-12:00   | Interindividual variability in drug transporter expression beyond genetic aspects   | Stefan Oswald<br>(Rostock)           |
| 12:00-12:15   | Not all GAT1 mutations are pathogenic in the same way; biophysical characterization of GAT1 in SLC6A1-Neurodevelopmental disorders        | Tiziana Romanazzi<br>(Varese, Italy) |
| 12:15-12:30   | Localization of Organic Cation and Anion Transporters in the Human Central and Peripheral Nervous System                                  | Aleksandra Sachkova<br>(Göttingen)   |
| 12:30-14:00   | <b>Lunch</b>  |                                      |

|  |   |                                      |
|--|---|--------------------------------------|
| <b>Structure-function relationships I</b><br><b>(Chairs: Mladen Tzvetkov / Mariafrancesca Scalise)</b> |   |                                      |
| 14:00-14:15  | What comes after a cryo-EM structure?   | Mladen Tzvetkov<br>(Greifswald)      |
| 14:15-14:30  | Functional contribution of W354 to the transport mechanism of OCT1                      | Sarah Römer<br>(Greifswald)          |
| 14:30-14:45  | Substrates of SLC transporter provide the energy for triggering its own transport       | Thomas Stockner<br>(Vienna, Austria) |
| 14:45-15:00  | Insights into the molecular bases of substrate recognition and polyspecificity of OCTN1 | Cesare Indiveri<br>(Rende, Italy)    |
| 15:00-15:30  | <b>Coffee break</b>   |                                      |

|   |   |  |
|---|---|--|
| <b>Structure-function relationships II</b><br><b>(Chair: Thomas Stockner)</b> |   |  |
| 15:30-15:45   | OCT3: what can we learn from our mistakes?  | Marleen Meyer-Tönnies<br>(Greifswald)    |
| 15:45-16:00   | Lysine 204 and Phenylalanine 400 are crucial residues for the antiport function of the human LAT1 transporter | Mariafrancesca Scalise<br>(Rende, Italy) |
| 16:00-16:15   | The peculiar Betaine and GABA relationship as substrate of GAT1   | Elena Bossi<br>(Varese, Italy)           |
| 16:15-16:25   | <b>Short break</b>  |  |

## Friday, September 12<sup>th</sup> (continued)

| Progress in transport research by new technologies<br>(Chairs: Jürgen Brockmüller / Marleen Meyer-Tönnies) |   |                                   |
|--|---|-----------------------------------|
| 16:25-16:45  | Comprehensive substrate spectra of organic cation transporters (OCT) and reliability of machine-learning prediction of OCT substrates | Jürgen Brockmüller<br>(Göttingen) |
| 16:45-17:00  | Decoding the Aging Heart: Mechanisms and Consequences of Age-Related Cardiac Dysfunction - a Spatial Transcriptomic Approach          | Niklas Hillig<br>(Greifswald)     |
| 17:00-17:15  | Human kidney organoids for transport research   | Gabriel Estrela<br>(Münster)      |
| Social evening: <i>BBQ at the site of the institute</i>  |   |                                   |

## Saturday, September 13<sup>th</sup>

| Time:   | Title of the talk:  | Presented by:                   |
|---|---|---------------------------------|
| Ion Channels<br>(Chairs: Cesare Indiveri / Dmitry Tsvetkov) |   |                                 |
| 9:00-9:15   | TRPC6 Blockade Ameliorates Fibrotic Remodeling in Chronic Disease   | Dmitry Tsvetkov<br>(Greifswald) |
| 9:15-9:30   | Endothelial Cell Regulation of Inflammation: Nephroprotective Mechanisms of TRPC6 Inhibition                            | Qidi Zhai<br>(Greifswald)       |
| 9:30-9:45   | Electrophysiological Properties of KCNQ Channels: Focus on Subunit interactions and Novel Drugs                         | Juntao Lin<br>(Greifswald)      |
| 9:45-10:00  | Is TRPM5 an essential element for the pharmacological potential of Best-in-Class antidiabetic medications?              | Pascale Schreier<br>(Munich)    |
| 10:00-10:15   | High-Resolution Pressure Myography Mechanisms and Spatiotemporal Patterns of Contraction in the Renal Pelvis and Ureter | Mario Kassmann<br>(Greifswald)  |
| 10:15-10:30   | Dose-dependent kinetics of thiamine in healthy volunteers with and without functional hepatic OCT1 transporter          | Jasmin Schirmer<br>(Greifswald) |
| 10:30-10:45   | Concluding remarks  | Mladen Tsvetkov                 |
| Coffee to go  |   |                                 |

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