

SCIENTIFIC PROGRAM

DAY 1 – GENETICS, BIOLOGY & IMAGING

08:00-08:30 | REGISTRATION

08:30 – 09:00 | WELCOME & OPENING REMARKS

Marcos Tatagiba (Germany) & Ulrich Sure (Germany)

09:00 – 10:30 | SESSION 1 – GENETIC AND MOLECULAR MECHANISMS

Chairs: *Ute Felbor (Germany) / Salim Seyfried (Germany)*

- *Salim Seyfried (Germany): “Mechanobiology and Endothelial Signaling: Insights into Lesion Development in Cerebral Cavernous Malformations using zebrafish and mouse models”* (15 min)
- *Peetra Magnusson (Sweden): “Inflammatory Pathways and Biomarkers in the Pathogenesis and Prognosis of Cerebral Cavernous Malformations ”* (15 min)
- *Jorge Marcondes (Brazil): “Cerebral cavernous malformation: The Role of the Human Astrocyte on its Origin”* (15 min)
- *Yuan Zhu (Germany): “Multiplex Signaling Pathways Driving Aberrant Angiogenesis in Cerebral Cavernous Malformations”* (15 min)
- **Panel Discussion** (20 min)

10:20 – 10:50 | Coffee Break

10:50 – 12:10 | SESSION 2 – BIOMARKERS AND MEDICAL THERAPY

Chairs: *Kelly Flemming (USA) / Peetra Magnusson (Sweden)*

- *Issam Awad (USA): “Imaging and Circulating Biomarkers of CCM: Discovery, Validation and Applications”* (15 min)
- *Roberto Latini (Italy): “Blood Biomarkers for Hemorrhage Risk in Familial CCM”* (15 min)
- *Helen Kim (USA): “Genetic Modifiers identified in the BVMC familial CCM study”* (15 min)
- *Robin Pilz (Germany): “Genetic Drivers of Familial CCM and Translational Models ”* (15 min)
- **Panel Discussion** (20 min)

12:10 – 13:20 | Lunch Break

13:20 – 14:30 | SESSION 3 – SHORT COMMUNICATIONS

(each 7 min + 3 min Discussion)

Chairs: *Issam Awad (USA) / Philipp Dammann (Germany)*

- *Souvik Kar (Germany): „ELTD1 as a Novel Angiogenic Biomarker in Cerebral Cavernous Malformations“*
- *Sasan Adib (Germany): „Surgical Management Of Spinal Cavernous Malformations: Extent Of Resection And Outcome“*
- *Aldo Spolaore (Germany): „Distinct spatial phenotypes of epileptogenic and non-epileptogenic cerebral cavernous malformations“*
- *Kelly Flemming (USA): „Anticoagulant use during acute cerebral cavernous malformation hemorrhage“*
- *Hanah Karadachi (Germany): „Exploring serum biomarkers in the natural course of cerebral and spinal cavernous malformations“*
- *Mykola Gorbachuk (Germany): „Semi-sitting position in microsurgical resection of brainstem cavernous malformations“*

14:30 – 15:00 | Coffee Break

15:00 – 17:00 | SESSION 4 – FROM MOLECULAR PATHOGENESIS TO IMAGING AND PRECISION APPROACHES IN CCM

(each 12 min + 3 min Discussion)

Chairs: *Yuan Zhu (Germany) / Constantin Roder (Germany)*

- *Mónica Gallego-Bonhomme (Spain): “Cerebral Cavernous Malformations: From Endothelial-To Mesenchymal Transition to Targeted Therapeutic Strategies”*
- *Robert Mertens (Germany): “Establishment of a human microvasculature-on-a-chip model to study cerebral cavernous malformations (CCM)”*
- *Iza Erzar (Sweden): “Modelling cerebral cavernous vascular malformations using advanced iPSC-derived in vitro models”*

- *Richard J Price (USA)*: **“Quantitative susceptibility mapping analysis of murine cerebral cavernous malformations treated with focused ultrasound and microbubbles”**
- *Ben Goult (UK)*: **“Is TLNRD1 a fourth CCM gene? – The role of TLNRD1 in CCM disease.”**
- *Christian Schmees/Isabel Gugel (Germany)*: **“PrecAlse – Innovation for next-generation precision oncology”**
- *Delal Bektas (USA)*: **“The role of surveillance MRI scans in patients with sporadic cerebral cavernous malformations”**
- *Georgios Naros (Germany)*: **“a voxel-based 3D atlas of familial and sporadic intracranial cavernous malformations”**
- *Sophie Wang (Germany)*: **“Spatial profile of bleeding-prone regions in cerebral cavernous malformations”**

19:00 | FORMAL DINNER

Restaurant Neckawa, Tübingen

DAY 2 – DECISION-MAKING, PATIENTS PERSPECTIVE & FUTURE DIRECTIONS

08:00 – 08:15 | ADDRESS FOR 2ND DAY OF THE MEETING

Marcos Tatagiba (Germany) & Ulrich Sure (Germany)

08:15 – 09:30 | SESSION 5 – MANAGEMENT OF CCM

Chairs: *Marco Cenzato (Italy) / Marcos Tatagiba (Germany)*

- *Giuseppe Lanzino (USA): “Pre-operative Decision-Making and Imaging”* (15 min)
- *Ulrich Sure (Germany): “Treatment and follow-up of incidental and multiple CCMs”* (15 min)
- *Kelly Flemming (USA): “Medical Risk Factors and Systemic Therapies”* (15 min)
- *Sebastien Froelich (France): „Medical Therapy with Anti-PIK3 in eloquent cavernomas.“* (15 min)
- **Panel Discussion** (15 min)

09:30 – 10:00 | Coffee Break

10:00 – 11:00 | SESSION 6 – ADVANCED SURGICAL STRATEGIES AND SURGICAL OUTCOMES

Chairs: *Giuseppe Lanzino (USA) / Ulrich Sure (Germany)*

- *Marco Cenzato (Italy): “Surgical Planning in eloquent, supratentorial lesions”* (15 min)
- *Marcos Tatagiba (Germany): “Surgery of Eloquent CCM in the posterior fossa”* (15 min)
- *Philipp Dammann (Germany): “Timing and Outcomes Cavernoma Surgery: Risk, Recovery, and Decision Thresholds ”* (15 min)
- **Panel Discussion** (15 min)

11:00 – 11:30 | Coffee Break

11:30-12:30 | SESSION 7 – PATIENT PERSPECTIVE AND LONG-TERM CARE

Chairs: *Jorge Marcondes (Brasil) / Laurel Rauschenbach (Germany)*

- *Connie Lee (USA): “The Patient Voice in Research and Policy”* (15 min)
- *Laurel Rauschenbach (Germany): “CCM and Quality of Life”* (15 min)
- *Deutscher Verband für Kavernome „The European Cavernoma Alliance: Lived Experiences of Cavernoma Patients Across Europe“* (15 min)
- **Panel Discussion** (15 min)

12:30 – 13:30 | Lunch Break

13:30 – 15:15 | SESSION 8 – CLINICAL OUTCOMES, FUNCTIONAL IMPACT, AND DECISION-MAKING IN CEREBRAL CAVERNOUS MALFORMATIONS (PART 1)

(each 12 min + 3 min Discussion)

Chairs: *Ulrich Sure (Germany) / Connie Lee (USA)*

- *Helen Kim (USA): “CCM therapeutic use and risk of hemorrhage in the Brain Vascular Malformation Consortium CCM Project”*
- *Kelly Flemming (USA): “Patient reported outcome worsens with subsequent symptomatic hemorrhage”*
- *Hanah Karadachi (Germany): “Pregnancy in women with cerebral cavernous malformations: a protective state against hemorrhage?”*
- *Lisa Schock (Germany): “Psychosocial resilience in CCM: understanding the interplay of clinical burden and mental health outcomes”*
- *Olga Belousova (Russia): “Clinical course in families with cerebral cavernous malformations carrying CCM3/PCDC10 mutation”*
- *Adrian Engel (Germany): “Surgery versus conservative treatment for cavernous malformation-associated epilepsy: evidence from a two-center retrospective study”*
- *Denis Semenov (Russia): “Gamma-Knife Radiosurgery for Intracranial Cavernous Malformations: Long-term hemorrhage rate and Epilepsy Outcomes”*

15:15 – 15:30 | Short Coffee Break

15:30 – 16:30 | SESSION 8 – CLINICAL OUTCOMES, FUNCTIONAL IMPACT, AND DECISION-MAKING IN CEREBRAL CAVERNOUS MALFORMATIONS (PART 2)

Chairs: *Georgios Naros (Germany) / Philipp Dammann (Germany)*

- Kristina Lapteva (Russia): **“Modality-specific predictive value of motor evoked potentials In Brainstem Cavernous Malformation Surgery”**
- Anton Früh (Germany): **„Using NTMS-based DTI tractography to guide the kawase approach in brainstem cavernoma surgery“**
- Andrey Gavryushin (Russia): **Results of treatment of 350 patients with brainstem cavernous malformations (CMS)**
- Mykola Gorbachuk (Germany): **“Surgical timing versus functional status: determinants of outcome in brainstem cavernous malformations”**

16:30-17:00 | Coffee Break

17:00-17:30 | FUTURE DIRECTION (PANEL DISCUSSION)

Prof. Ulrich Sure (Germany)

Prof. Marcos Tatagiba (Germany)

Mrs. Connie Lee (USA)

Prof. Roberto Latini (Italy)

Prof. Petra Magnusson (Sweden)

Prof. Helen Kim (USA)

17:45 | CLOSING AND FAREWELL & ANNOUNCEMENT OF THE NEXT EUROPEAN CCM MEETING

Ulrich Sure (Germany) / Marcos Tatagiba (Germany)