



Hydrocephalus Society

International Society for Hydrocephalus
and Cerebrospinal Fluid Disorders



2025 HYDROCEPHALUS WORLD CONGRESS

5-8 September | Toulouse, France

www.hydrocephalus-meeting.com

CONGRESS BOOK

Become a Member Now

The Hydrocephalus Society is an open community that encourages collaboration, partnerships and networking between all professionals related to the field of Hydrocephalus and CSF Disorders.

As a member of the Hydrocephalus Society, you will join a community of peers that fosters an environment of cooperation and works towards ensuring ethical, high-quality care for patients, and increasing awareness regarding Hydrocephalus and CSF disorders on a global scale.

Hydrocephalus Society members enjoy several benefits related to personal and professional development, as well as to the creation of opportunities for collaborations and partnerships.

The benefits we offer to our members are the following:



EDUCATION

- Exclusive access to the video minutes of all Hydrocephalus World Congresses
- Exclusive access to the recordings of the Hydrocephalus Society Global Webinar Series (2021,2022,2023,2024,2025)
- Exclusive access to all abstract books of previous Hydrocephalus World Congresses



DISCOUNTS

- Significant Members' discount for the Annual Hydrocephalus World Congress (€200+ depending on registration category)
- Special Discount for scientific paper publications at the Fluids & Barriers of the CNS Journal with impact factor 6.2



PROFESSIONAL DEVELOPMENT & NETWORKING

- Observership opportunities in high volume Hydrocephalus departments
- Right to participate and vote at the General Assembly of the Hydrocephalus Society
- Right to be elected as Board Director
- The chance to host the Hydrocephalus World Congress in your country
- Access (by request) to the Members' Directory of the Society



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READY TO JOIN? VISIT THE HYDROCEPHALUS SOCIETY WEBSITE

ishcsf.com

HYDROCEPHALUS SOCIETY



Hydrocephalus Society

International Society for Hydrocephalus
and Cerebrospinal Fluid Disorders

The Hydrocephalus Society was inaugurated in September 2008 and registered as a nonprofit organization in December of the same year. From the beginning, its mission has been to advance the art and science of the field of clinical care and research in

hydrocephalus and CSF disorders, and thereby promote the best possible care for patients with these disorders. You are encouraged to join the Society to promote international exchanges, worldwide representation, and stimulating research and debate.

The Hydrocephalus World Congress is held annually in different locations around the globe, bringing together experts, researchers, and professionals to advance knowledge and collaboration in the field. In recent years, the congress has taken place in Gothenburg, Sweden (2022), Hamburg, Germany (2023) and Nagoya, Japan (2024). Looking forward, we are excited to host future congresses in Toulouse, France (2025), São Paulo, Brazil (2026), Baltimore, USA (2027), and Rome, Italy (2028).

FLUIDS AND BARRIERS OF THE CNS



FLUIDS AND BARRIERS
OF THE CNS

The Hydrocephalus Society has entered into a partnership with BioMed Central's open access journal Fluids and Barriers of the CNS (FBCNS), in which FBCNS is now an official journal of our Society. The open access publishing model provides articles for free to the general public as well as scientists, clinicians and

other healthcare practitioners throughout the world. FBCNS provides a dedicated avenue for the dissemination of research into all molecular, physiological and pharmacological aspects of brain fluids and barrier systems and their role in neurological disorders.

Members are eligible for a 15% discount on the article-processing charge when publishing with FBCNS and should log into the society's members area to obtain the reference code to use at submission.

HYDROCEPHALUS 2025 ABSTRACTS PUBLICATION

Fluids and Barriers of the CNS is an open access, peer-reviewed, online journal that considers manuscripts on all CNS fluids and barrier systems in health and disease.

Fluids and Barriers of the CNS is affiliated to the International Brain Barriers Society (IBBS) and the International Society for Hydrocephalus and CSF Disorders.

The presented abstracts of the Hydrocephalus 2025 World Congress, September 5-8, 2025, will be published in the online journal Fluids and Barriers of the CNS.

CONGRESS PRESIDENT'S WELCOME ADDRESS



Dear Colleagues and Friends,

It is with immense pleasure and honor that we welcome you to France, and to the radiant city of Toulouse, for the 2025 Hydrocephalus World Congress. Toulouse, nestled in the heart of the Occitanie region, is a city that gracefully balances heritage and progress. Known as “La Ville Rose” for its luminous pink-hued façades, it is equally celebrated for its art de vivre, where science, gastronomy, music, and conviviality flourish side by side. With the Garonne river and the Canal du Midi, a UNESCO world heritage treasure, Toulouse is a place where life and inspiration flow.

But more than its charm, Toulouse stands as a beacon of innovation and science. It is the beating heart of Europe’s aerospace and engineering industries, home to Airbus and an ecosystem of research, design, and technological audacity. This spirit of modernity drives Hydrocephalus 2025.

This year’s congress embraces a resolutely avant-garde vision of hydrocephalus. Our scientific program challenges boundaries, fosters multidisciplinary, and dares to ask the questions to explore new territories of our field. The Educational Seminar “Beyond Idiopathic Normal Pressure Hydrocephalus” invites participants to reframe their assumptions, confront uncertainty, and think ahead. Our dedicated session on “Fundamental Physics Applied to Hydrocephalus” will exemplify how mathematical modelling, physical sciences and engineering, now stand at the forefront of innovation.

We welcome not only neurosurgeons, neurologists, pediatricians, geriatricians, radiologists, and psychiatrists, but also engineers, physicists, neuropsychologists, nurses, therapists, data scientists and others. But crucially, we celebrate this year the voices of patients and advocates, especially through our collaboration with the Hydrocephalus Association and the CSF Leak Association, because true progress is always patient-centered.

On behalf of the Hydrocephalus Society, we invite you to experience a truly avant-garde congress, one that is both scientifically bold and deeply human. A time to connect, challenge ideas, and dream over a glass of wine of new frontiers in hydrocephalus and CSF-related care, all in the spirit of Toulouse.

Warm regards,

Eric Schmidt

President of the Hydrocephalus 2025 World Congress

HYDROCEPHALUS SOCIETY PRESIDENT'S WELCOME ADDRESS



Dear Colleagues & Friends,

It is my honour and sincere pleasure to welcome you to Hydrocephalus 2025, the 17th World Hydrocephalus Congress arranged by the Hydrocephalus Society (The International Society for Hydrocephalus and Cerebrospinal Fluid Disorders).

The Hydrocephalus Society was formed in 2007 with a goal to create an International Society that addressed the entire field of hydrocephalus. During these past 18 years, the Society has grown, engaging more member scientists and clinicians around the world to advance hydrocephalus research and clinical care. Hydrocephalus Society is increasingly engaged in different activities including the educational Global Webinar Series presently running its fourth season, efforts to increase awareness as well as collaborations with other societies. Our Society has worked with the Society Secretariat (Artion) since late 2015 for management of both Society affairs and the Annual Meeting. Fluids and Barriers of the CNS is the official journal of the Hydrocephalus Society and now has an impact factor of 7.3. Over the years, we have witnessed significant progress with our understanding of what hydrocephalus and other cerebrospinal fluid disorders are and do to children and adults and how to improve the care of affected patients. Please consider becoming a full member of the Hydrocephalus Society if you presently are not one.

The peak of our year is the Annual World Congress bringing together experts within this exciting field for some intense days when we share scientific advances and new developments as well as network to foster collaboration. The Young Investigators Award competition has become a crown jewel of the meeting highlighting junior researchers and our annual Keynote speakers are exceptional world experts.

We are very grateful to our host and meeting president Prof. Eric Schmidt and his entire team, to our secretariat Artion and to all people who have contributed to this conference. This year, we have prepared a very exciting scientific program that includes the new, cutting-edge developments in adult and paediatric hydrocephalus and CSF disorders within both clinical and experimental research. Our Keynote speakers are selected for their outstanding records. However, to make the conference a real success, we need your participation, your input, your questions and participation in discussions, i.e. your contributions to the congress. We thank you for making this conference a special, fruitful, and inspiring event.

On behalf of the Hydrocephalus Society, I wish you great days in the lovely city of Toulouse and hope you will bring many new insights and enjoyable memories back home.

Mats Tullberg, Professor
President of the Hydrocephalus Society

CONGRESS PRESIDENT

Eric Schmidt

CONGRESS SCIENTIFIC CHAIR

Carolyn Harris

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conferences & events •

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HYDROCEPHALUS 2025 WORLD CONGRESS

TOULOUSE, FRANCE | 5-8 SEPTEMBER 2025

WWW.HYDROCEPHALUS-MEETING.COM

The Hydrocephalus World Congress - the 17th Meeting of the Hydrocephalus Society Toulouse, France, 05/09/2025 - 08/09/2025 organized by International Society for Hydrocephalus and Cerebrospinal Fluid Disorders - Hydrocephalus Society has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) for a maximum of 19.0 European CME credits (ECMEC®s).

Each medical specialist should claim only those credits that he/she actually spent in the educational activity.

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Through an agreement between the European Union of Medical Specialists and the American Medical Association, physicians may convert EACCME® credits to an equivalent number of AMA PRA Category 1 Credits™. Information on the process to convert EACCME® credits to AMA credits can be found at <https://edhub.ama-assn.org/pages/applications>.

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For other countries, please contact the relevant national/regional accreditation authority.

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2025 HYDROCEPHALUS
World Congress
5-8 September | Toulouse, France

www.hydrocephalus-meeting.com

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14:00-14:30	Coffee Break
14:30-15:45	Educational Seminar: Beyond Idiopathic Normal Pressure Hydrocephalus
15:45-16:15	Award Ceremony

Program Overview

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ARIANE FOYER					
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AUDITORIUM DE SAINT EXUPÉRY		CASSIOPÉE		SPOT	
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08:30-09:00	SESSION 1: MARMAROU LECTURE- CERTAINTY & UNCERTAINTY IN HYDROCEPHALUS Chairs: Eric Schmidt, Mats Tullberg				
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10:30-11:50	SESSION 5: YOUNG INVESTIGATORS AWARDS I Chairs: Fabian Flürenbrock, Hannah Botfield				
11:50-12:30	Hydrocephalus Society Annual General Meeting				
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		09:20-10:20	SESSION 24: INTRACRANIAL PRESSURE Chairs: Fernando Pinto, Anne Benninghaus	09:20-10:20	SESSION 25: ADULT HYDROCEPHALUS Chairs: Ignacio Jusue Torres, Shigeki Yamada
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DETAILED PROGRAM

Friday, 5 September 2025

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13:00-13:15	After Hydrocephalus: Redefining CSF-Related Diseases Mats Tullberg
13:15-13:30	iNPH in the Modern Landscape of Neurodegenerative Diseases Chifumi Iseki
13:30-13:45	Functional Neurosurgery iNPH. A Neuromodulation Hypothesis Benjamin Elder
13:45-14:00	Hallmarks and Biomarkers of NPH: Moving Towards Precision Medicine Eric Schmidt
14:00-14:30	Coffee Break
14:30-14:45	Neuroradiology of iNPH: Beyond Conventional Images Olivier Baledent
14:45-15:00	Neurophysiology in NPH: Measuring What Matters Ahmed Toma
15:00-15:15	Beyond iNPH: A Holistic Approach to Patient Care Sevil Yasar
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Saturday, 6 September 2025	
ARIANE FOYER	
07:00-08:00	Registrations
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08:00-08:30	Opening of the Congress Chairs: Giorgio Palandri, Sevil Yasar, Uwe Kehler
08:00-08:15	Welcome Address Mats Tullberg , <i>Hydrocephalus Society President</i>
08:15-08:30	Welcome to Toulouse Eric Schmidt , <i>Hydrocephalus 2025 World Congress Congress President</i>
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09:15-09:30	Fluid Mechanics of the Neurovascular System Sylvie Lorthois
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CASSIOPÉE	
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Validation of the DESH Score in the Capital Region of Denmark
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- 09:40-09:50

Cerebrospinal Fluid Flow within Ventricles and Perivascular Subarachnoid Space
Evaluated by Velocity Selective Spin Labeling MRI
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SESSION 4:
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Chairs: **Mark Hamilton, Mats Tullberg**

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Early Shunt Surgery in Patients with Probable Idiopathic Normal Pressure Hydrocephalus
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Correlation Between Caregiver Burden and the Normal Pressure Hydrocephalus (Hakim's) triad: A Patient-Caregiver Dyad Analysis
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- 09:30-09:40

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Analysis of Prevalence, Mortality, and Treatment Trends.
Minju Kim
- 09:40-09:50

Patient Symptomatic Self-Assessment in Idiopathic Normal Pressure Hydrocephalus; Flawed or Future Framework?
Oskar Ekman
- 09:50-10:00

Cognitive Assessment Methods and Outcomes Following Shunt Surgery in Idiopathic Normal Pressure Hydrocephalus (iNPH):
A Systematic Review and Meta-Analysis
Lisa Healy

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- 10:00-10:30

Coffee Break & Exhibition

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10:40-10:50	Cognitive-Linguistic Improvements after Shunt Surgery in Idiopathic Normal Pressure Hydrocephalus: Insights from Eye-Tracking during Lexical Retrieval Tasks Seongeun Kwon
10:50-11:00	Bioinspired Anti-Fouling Catheter Material and Design Haritosh Patel
11:00-11:10	Comparison of Gray Matter Alterations Between Normal Pressure Hydrocephalus and Alzheimer’s Disease Hongliang Li
11:10-11:20	Ventriculosubgaleal Shunting May Reduce Shunt Dependency in Preterm Post-Hemorrhagic Hydrocephalus: Evidence from a Single Tertiary Center Rafael Tiza Fernandes
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11:40-11:50	Refining Treatment Paradigms in Idiopathic Normal Pressure Hydrocephalus: A Patient Centric Cluster-Based Approach to Shunt Selection Arya Abaee
11:50-12:30	Hydrocephalus Society Annual General Meeting
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- 15:25-15:35 A Model of Low-Pressure Hydrocephalus as Windkessel Impairment Due to Low
Brain Elastance
Michael Egnor

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- 15:00-15:10 Hakim Disease Diagnosis with Plasma-Based Alzheimer's Detection
Madoka Nakajima

Detailed Program

- 15:10-15:20Non-Invasive Tap Test (Pumping) to Replace Invasive Diagnostics in Underdrained Shunted NPH Patients?
Uwe Kehler
- 15:20-15:30Outcomes in 481 Patients with iNPH Shunt Operated With or Without a Previous Cerebrospinal Fluid Tap Test – a Single Center Longitudinal Follow-Up Study
Hanna C Persson

SPOT

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- 13:50-14:00Genetic and Molecular Determinants of the Human CSF-Ventricular System
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- 14:00-14:10T-cell Infiltration is Associated with Increased Reactive Astrocyte and Proinflammatory Cytokine Activity in Post-Hemorrhagic Hydrocephalus
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- 14:10-14:20Awareness, Screening and Humanitarian Neurosurgery Around the International Hydrocephalus Day
Mama You Esperance Broalet
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Amirhossein Shahriari
- 14:30-14:40Modeling Ciliary Genes in Xenopus Uncovers Novel Mechanisms for Congenital Hydrocephalus
Engin Deniz
- 14:40-14:50Optimization of Human Neural Stem Cells in Transparent Anionic Nanofibrillar Hydrogel as a Model for the Ventricular and Subventricular Xone.
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- 14:50-15:00Analysis of Hydrocephalus Cases in Brazil: Prevalence, Mortality, and Regional Differences (2000–2023)
Kim Wouters
- 15:00-15:10A stereotactic Injection Method to Establish a Clinically Relevant Germinal Matrix Hemorrhage Murine Model
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- 15:10-15:20Predicting Endoscopic Third Ventriculostomy with Choroid Plexus Cauterization (ETV/CPC) Outcome in Infant Hydrocephalus
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- 15:20-15:30External Hydrocephalus: A Hidden Cause of Additional Morbidity after Aneurysmal Subarachnoid Haemorrhage. A Retrospective Study of 89 Adult Patients
Laurent Gergele

EXHIBITION AREA	
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16:35-16:45	Cerebrospinal Fluid Redistribution After Shunt Placement Marcel Wrantjes
16:45-16:55	Are Arachnoid Granulations Necessary for CSF Physiology? Milan Rados
16:55-17:05	Diagnostic Accuracy of Artificial Intelligence-Based Imaging for Idiopathic Normal Pressure Hydrocephalus: Systematic Review and Meta-Analysis Stefeson Gomes Cabral Junior
17:05-17:15	Validating Post-Operative Trans-Burr Hole Ultrasound to Measure Cerebral Ventricular Size in Hydrocephalus: Comparison of Ultrasound to Computed Tomography Ryan Lee
17:15-17:25	Distinct White Matter Connectivity Profiles in iNPH Revealed by Quantitative Anisotropy Connectometry Daniele Piccolo
17:25-17:35	CDESH Decreases After Shunting and Changes Correlate Strongly with Measures of Gait Improvement Jeffrey Gunter
CASSIOPÉE	
16:15-17:45	SESSION 10: EXPERIMENTAL HYDROCEPHALUS Chairs: Pat McAllister, Richard Edwards
Abstracts for this session are on pages 96 - 105	
16:15-16:25	Influence of CSF System Experimental Blockade on Hydrocephalus Development Ivana Jurjevic

Detailed Program

- 16:25-16:35 Inhibition of TRPV4 as a Pharmacological Treatment of Posthemorrhagic Hydrocephalus
Trine L. Toft-Bertelsen
- 16:35-16:45 Brain Pathology in the Model Mice of Chronic Hydrocephalus Concomitant with Alzheimer's Disease
Kaito Kawamura
- 16:45-16:55 Shunt-Related CSF Overdrainage – A Multicenter Consensus Definition
Marianne Juhler
- 16:55-17:05 Alteration of Neuroinflammation and Intracranial Microbiome with Antibiotic Impregnated Catheters
Mark Luciano
- 17:05-17:15 CSF Proteomics in Spontaneous Intracranial Hypotension: A metabolic disease?
Amir El Rahal
- 17:15-17:25 Effect of Anesthesia and Blood Oxygenation on Rodent CSF Secretion.
Thomas Nielsen
- 17:25-17:35 Aquaporin 1 is not Required for CSF Secretion and Brain Fluid Homeostasis in Mice
Nana Macaulay
- 17:35-17:45 Role of the Choroid Plexus in Amyloid- β Clearance in PTPN20 Knockout Mice
Ryo Miyahara

SPOT

- 16:15-17:30 **SESSION 11:**
YOUNG INVESTIGATORS SPECIAL SESSION
Chairs: **Anne Benninghaus, Fabian Flürenbrock & Monica Chau**

- 16:15-16:20 Session Introduction
Anne Benninghaus & Fabian Flürenbrock
- 16:20-16:30 Problem-Solving with Purpose: Navigating a Career in Bioengineering and Hydrocephalus
Carolyn Harris
- 16:30-16:40 Not All Who Wander Are Lost
Michael Williams
- 16:40-16:50 Cerebral Hydrodynamics and Translational Engineering: Toward a Smarter Future for Hydrocephalus Management
Eric Schmidt

- 16:50-17:10 **Panel Discussion and Q&A with Speakers**

- 17:10-17:30 **Networking Activity**

Sunday, 7 September 2025	
AUDITORIUM DE SAINT EXUPÉRY	
08:30-09:20	SESSION 12: HYDROCEPHALUS SOCIETY & HYDROCEPHALUS ASSOCIATION JOINT SESSION - STRONGER TOGETHER: HOW PATIENT - PROFESSIONAL ALLIANCES CAN IMPROVE HYDROCEPHALUS CARE Chairs: Mats Tullberg, Diana Gray
08:30-08:45	Strengthening Hydrocephalus Care, Research and Awareness Through Collaboration Diana Gray , <i>Hydrocephalus Association President</i>
08:45-09:00	The Significance of Collaborations with Patient Associations. Lessons from Sweden Mats Tullberg , <i>Hydrocephalus Society President</i>
09:00-09:20	Roundtable Discussion: Diana Gray, Monica Chau, Ahmed Toma, Mats Tullberg
AUDITORIUM DE SAINT EXUPÉRY	
09:20-10:50	SESSION 13: YOUNG INVESTIGATORS AWARDS II Chairs: Carolyn Harris, Monica Chau
Abstracts for this session are on pages 106 - 114	
09:20-09:30	Exploring the Role of Lateral Ventricle Geometric Features in Detecting Extracellular Deposition of Amyloid-β Peptides in Patients with Idiopathic Normal Pressure Hydrocephalus Andrius Penkauskas
09:30-09:40	Normal Pressure Hydrocephalus: The Role of Emergency Services and Primary Care in its Early Diagnosis Lucia Rodriguez
09:40-09:50	Evaluating the Additive Properties of Differential Pressure Valves in a Novel Benchtop Shunt Model Sai Chandan Reddy
09:50-10:00	Brain Tissue Mimicking Hydrogel for Benchtop Investigation of Hydrocephalus Mechanisms Gwendolyn Williams
10:00-10:10	Postoperative Delirium Following CSF Shunt Surgery for Normal Pressure Hydrocephalus: A 5-Year Retrospective Analysis of 326 Patients Aimilia Moraiti
10:10-10:20	Gait Outcomes of Wheelchair Dependent Patients with Idiopathic Normal Pressure Hydrocephalus Following Shunt Placement Rahul Kumar
10:20-10:30	Quantitative Gait Analysis Using a Deep Learning-Based Application Reveals Distinct Upper and Lower Limb Movement Patterns in Hakim's and Parkinson's Disease Atsuhito Taishaku

Detailed Program

10:30-10:40 **Hyponatremia in Pediatric Patients Under 2 Years Wth Non-Tumour Hydrocephalus Seen at the Kenyatta National Hospital**
Robert Tabu

10:40-10:50 **Discussion**

EXHIBITION AREA

10:50-11:20 **Coffee Break & Exhibition**

AUDITORIUM DE SAINT EXUPÉRY

11:20-12:45 **SESSION 14:**
CHARTING NEW DIRECTIONS IN HYDROCEPHALUS
Chairs: **Uwe Kehler, Romain Manet**

Abstracts for this session are on pages 115 - 120

11:20-11:35 **Update on Basal Ganglia Circuit Dysfunction in NPH**
Fredrik Lundin

11:35-11:45 **The Neurological Foundations of Hydrocephalus: A Critical Perspective**
Cristopher Carswell

11:45-11:55 **Feasibility and Safety of the Non-Invasive Tap Test (Pumping-Test) in Shunted NPH-Patients**
Uwe Kehler

11:55-12:05 **Home ICP Monitoring – A New Paradigm for Management of Patients with Hydrocephalus**
Simon Malpas

12:05-12:15 **How Low Can We Go? The Optimal Initial Opening Pressure Setting for Idiopathic Normal Pressure Hydrocephalus**
Rodolfo Reis

12:15-12:25 **The Textbooks were Right - The Intracranial Pressure-Volume Relationship Holds Up in Long-Term, at-Home ICP Monitoring of Hydrocephalus.**
Simon Malpas

12:25-12:35 **A Link Between Radiological Features and Intracranial Pressure Waveform Components in Normal Pressure Hydrocephalus**
Magdalena Kasprowicz

12:35-12:45 **Upright Cerebral Venous Pressure and Its Implications for Glymphatic Driving Forces and Sulcal Narrowing in Normal Pressure Hydrocephalus**
Yoshinaga Kajimoto

CASSIOPÉE

11:20-12:45 **SESSION 15:**
ADULT HYDROCEPHALUS
Chairs: **Nicole Keong, Sevil Yasar**

Abstracts for this session are on pages 121 - 127

11:20-11:35 **NPH: A Silent Challenge with Far-Reaching Societal Consequences**
Fernando Pinto

- 11:35-11:45

A Study on Optimal Valve Pressure After Ventriculoatrial Shunt in Patients with Normal Pressure Hydrocephalus
Ryosuke Takagi
- 11:45-11:55

Necessity of the Tap Test in Patients with DESH: Validation of the Japanese Treatment Guidelines
Ryo Oike
- 11:55-12:05

From MRI Imaging to Infusion: Investigating the Role of Convexity Tightness in CSF Circulation Impairment
Afroditì Lalou
- 12:05-12:15

Stability Analysis of Intracranial Pressure
Michael Egnor
- 12:15-12:25

Spontaneous Intracranial Hypotension (SIH) Affects all Ages and Body Types: Results from 397 Patients.
Katharina Wolf
- 12:25-12:35

DRAIN – Double-blind Randomized Acetazolamide trial in Idiopathic Normal pressure hydrocephalus
Johan Virhamar
- 12:35-12:45

Advancing Hydrocephalus Patient Education and Support: Implementing and Assessing Improvements in a Virtual Normal Pressure Hydrocephalus Support Group
Jeff Chen

SPOT

- 11:20-12:45

SESSION 16:
TECHNICAL ADVANCES IN TREATMENT AND DIAGNOSIS
Chairs: **Anne Benninghaus, Sylvie Lorthois**

Abstracts for this session are on pages 128 - 134

- 11:20-11:30

Brain and Eye in Space: Impact of Real and Simulated Microgravity
Anne Pavy le Traon
- 11:30-11:40

The Brain in Space: MRI Quantification of Structural Changes to the Cerebrospinal Fluid, Brain and Eye in Astronauts
Bryn Martin
- 11:40-11:50

CSFsim: A Simulation Framework for Cerebrospinal Fluid Dynamics and Hydrocephalus Shunt Systems
Fabian Fluerebrock
- 11:50-12:00

New Ce-Authorized Non Invasive Adjustable CSF Flow Device with a Real off Function for the Treatment of Complex Hydrocephalus
Jan Muegel
- 12:00-12:10

Endoscopic Ventricular Lavage Versus Conventional External Drainage in Spontaneous Intraventricular Haemorrhage: Matched-Cohort Evidence of Superior Clot Clearance and Outcomes
Thomas Radovnický
- 12:10-12:20

Management of Chronic Subdural Hematoma in Spontaneous Intracranial Hypotension
Amir El Rahal

Detailed Program

12:20-12:30	Quantitative Analysis of Neurofluid Dynamics in Chiari Syndrome: Toward a Better Understanding of Symptom Genesis Pauline Carlier
12:30-12:40	Diagnostic Accuracy of Shuntography in Suspected Cerebrospinal Fluid Shunt Malfunction: A Safe and Effective Non-Invasive Imaging Modality Hassan Bin Ajmal
12:45-14:00	Industry Sponsored Lunch Seminar (CARAVELLE 1)
AUDITORIUM DE SAINT EXUPÉRY	
14:00-15:30	SESSION 17: YOUNG INVESTIGATOR AWARDS III Chairs: Sara Qvarlander, Jürgen Beck
Abstracts for this session are on pages 135- 143	
14:00-14:10	Assessing Intracranial Fluid Dynamics Using Fundoscopy Mathias Just Notrvig
14:10-14:20	Cognitive Reasoning in Adult Ventriculoperitoneal (VP) Shunt Surgery: A Human Factors Pilot Study Yuewei Tao
14:20-14:30	Valve-Agnostic Cranial Implant in Normal Pressure Hydrocephalus Ventriculoperitoneal Shunting: A Case Series Cristopher Lane
14:30-14:40	Management of Shunted Hydrocephalus During Transition from Childhood to Adulthood: Is Routine Clinic Review Required? Taufiq Khan
14:40-14:50	Assessing Cognitive Change in iNPH Using the Sound Symbolic Words Texture Recognition Test (SSWTRT) Chihiro Kamohara
14:50-15:00	Idiopathic Normal Pressure Hydrocephalus Diffusion Imaging Abnormalities in Relation to a Biomechanical Model of Ventricular Expansion Martina Del Giovane
15:00-15:10	Early Cranioplasty as a Risk Factor for Post-Traumatic Hydrocephalus Emily Blakeney
15:10-15:20	Endoscopic Third Ventriculostomy versus Ventriculoperitoneal Shunt for Idiopathic Normal Pressure Hydrocephalus: A Systematic Review and Updated Meta-analysis Raphael Bertani
15:20-15:30	Application of Machine Learning-Based Clustering to Identify Clinical Subgroups and Treatment Outcomes in Normal Pressure Hydrocephalus Emalee Burrows
EXHIBITION AREA	
15:30-16:10	Coffee Break & Exhibition

AUDITORIUM DE SAINT EXUPÉRY	
16:10-17:20	SESSION 18: PEDIATRIC HYDROCEPHALUS Chairs: Richard Edwards, Mats Tullberg
Abstracts for this session are on pages 144 - 148	
16:10-16:30	Genotype vs Phenotypes of Hydrocephalus Kristopher Kahle
16:30-16:40	Research Priorities for Improving Cognitive and Neuropsychological Outcomes in Hydrocephalus Monica Chau
16:40-16:50	Dual-Approach Surface Engineering of Ventricular Catheters to Reduce Cellular Occlusion in the Treatment of Hydrocephalus Seunghyun Lee
16:50-17:00	Proximal Hole Disocclusion via Retrograde Flushing: In Vitro Evaluation Michael Le
17:00-17:10	Change in Optic Nerve Sheath Diameter and Cerebrospinal Fluid Shunt Failure in Children Brian Hanak
17:10-17:20	Long-term Clinical Outcomes of the Flow Ventricular Catheter for Hydrocephalus: A Follow-up Study Raphael Bertani
CASSIOPÉE	
16:10-17:30	SESSION 19: NEUROIMAGING Chairs: John Oshinski, Karin Kockum
Abstracts for this session are on pages 149 - 156	
16:10-16:20	Diagnostic Utility and Clinical Correlates of Automated MRI Indices in Normal Pressure Hydrocephalus (NPH) Padraig Osuilleabhain
16:20-16:30	Comparison of Infusion-Derived and Physiological Craniospinal Compliance in Chronic Hydrocephalus Patients Kimi Owashi
16:30-16:40	Volumes and Velocities: Meta Analysis of PC MRI Studies in Normal Pressure hydrocephalus Petr Skalicky
16:40-16:50	Can Semi-Automated Brain Morphometrics Distinguish Between Asymptomatic and Symptomatic Type I Chiari Malformation, and Age and Gender Matched Controls? Mark Luciano
16:50-17:00	Cardiac Frequency by Itself can Change CSF Dynamics in the Brain Compartments. A New Realistic 2D Numerical Model Investigation Olivier Baledent
17:00-17:10	The Utility of Phase-Contrast MRI and ICP Monitoring in Chiari I Malformations: A Systematic Review Shivani Rajkumar

Detailed Program

- 17:10-17:20 Age-Related Changes in Venous Drainage in Adults with Chiari Syndrome Assessed by Phase-Contrast MRI
Heimiri Monnier
- 17:20-17:30 Study Protocol: A randomized Clinical Trial on Non-Invasive Evaluation of Shunt Obstruction in Adult Hydrocephalus at Two Hydrocephalus Research Centers in Sweden
Rebecca Groenning

SPOT

- 16:10-17:30 **SESSION 20:**
GERIATRIC HYDROCEPHALUS
Chairs: **Sevil Yasar, Lawrence Bories**

Abstracts for this session are on pages 157 - 163

- 16:10-16:20 **From Home to Care Home: The Role of Hydrocephalus in Loss of Independence**
Lawrence Bories
- 16:20-16:30 Bridging Gaps in Geriatric Neurosurgery: A Public and Professional Perspective on Normal Pressure Hydrocephalus in Brazil
Caio Arruda Maciel
- 16:30-16:40 Role of Multidisciplinary Approach in the Diagnosis and Therapy of Normal Pressure Hydrocephalus: A Single Center Experience
Stefano Borsa
- 16:40-16:50 Correlation Between Cerebrospinal Fluid Tau Biomarkers and CSF Tap Test Responsiveness in iNPH Patients
Yan Xing
- 16:50-17:00 Cerebral Blood and CSF Flow Dynamics in Healthy Elderly Subjects and Chronic Hydrocephalus Patients
Kimi Owashi
- 17:00-17:10 A Minimally Invasive Approach for Disconnection of Cerebrospinal Fluid Venous Fistula
David Rowland
- 17:10-17:20 Was Foramen Magnum Decompression Surgery Inappropriately Performed in Patients with Spontaneous Intracranial Hypotension?
Gillian Pace
- 17:20-17:30 Orthostatic Headache: Treatment Response Stratified by Spinal Imaging Findings
Olga Fermo

Monday, 8 September 2025

AUDITORIUM DE SAINT EXUPÉRY

08:00-10:30 **SESSION 21:**
HYDROCEPHALUS SOCIETY-EANS-CSF LEAK ASSOCIATION SESSION

Chairs: **Jürgen Beck, Manjit Mantharu**

Abstracts for this session are on pages 164 - 168

08:00-08:20 **Introduction to SIH: Clinical Presentation & Differential Diagnosis**
Manjit Mantharu

08:20-08:40 **Imaging Basics and Recent Advances**
Lalani Carlton Jones

08:40-09:00 **From Bloodpatch to Endovascular Therapy**
Tomas Dobrocky

09:00-09:20 **Surgical Treatment of Spinal CSF Leaks**
Jürgen Beck

09:20-09:40 Roundtable Discussion:
How to get Started in SIH; How to Build a Center; What Convinced you to Take up
the Cause of SIH Leak Patients; Post-Treatment
Headaches-What do we Miss?

Moderated by Rigmor Højland Jensen and Eric Schmidt

09:40-09:50 Socioeconomic Effect of Surgical Treatment of Spinal CSF Leaks in Spontaneous
Intracranial Hypotension
Amir El Rahal

09:50-10:00 Spinal CSF Volumetry in Patients with SIH Before and after Treatment
Eike Immo Piechowiak

10:00-10:10 Locating Spinal Leaks in Spontaneous Intracranial Hypotension: How Many
Dynamic Myelographies Does It Take?
Toma Dobrocky

10:10-10:20 Evaluation of Finger Function in iNPH: A Comparative Cueing Study
Yoko Shimizu

10:20-10:30 Investigation of Coexisting Disproportionately Enlarged Subarachnoid Space
Hydrocephalus (DESH) on Imaging in Cases of Dementia with Lewy Bodies (DLB)
Chifumi Iseki

CASSIOPÉE

08:00-09:20 **SESSION 22:**
TECHNICAL ADVANCES IN TREATMENT AND DIAGNOSTICS

Chairs: **Olivier Baledent, Andreas Spiegelberg**

Abstracts for this session are on pages 169 - 174

08:00-08:10 **Delivering High-Quality Care with Low-Tech Solutions for Hydrocephalus
Management?**
Romain Manet

08:10-08:20 **Optimizing Hydrocephalus Surgery: Preoperative Simulation and Symptom
Improvement Prediction**
Shigeki Yamada

Detailed Program

- 08:20-08:30

B-waves in Non-Invasive Capacitance Signal Correlate with B-waves in ICP in Recordings of 51 Patients
Andreas Spiegelberg
- 08:30-08:40

Laparoscopic Peel-Away Sheath Technique versus Mini-Open Laparotomy for Lumboperitoneal Shunt in Idiopathic Normal Pressure Hydrocephalus: A Prospective Comparative Cohort Study
Xuhao Fang
- 08:40-08:50

Wearable, Non-Invasive Spot Check Measurements of Shunt Flow via Thermal Anisotropy: Device Advancements for Improving Depth of Measurement
R. Chad Webb
- 08:50-09:00

Shunt Flow Throughout Daily Life: Data from the First use of Continuously Worn Cerebrospinal Fluid Shunt Flow Monitors on 25 Shunted Hydrocephalus Subjects Over 30-Day Periods.
R. Chadd Webb
- 09:00-09:10

Beyond Monitoring at Rest: Real-Life Insights into ICP Dynamics
Andreas Bunge
- 09:10-09:20

Higher Harmonic Centroid in Hydrocephalus: Early Insights from Telemetric Intracranial Pressure Monitoring.
Sang Ho Kim

SPOT

- 08:00-09:20

SESSION 23:
ADULT HYDROCEPHALUS
Chairs: **Sevil Yasar, Giulia Bommarito**

Abstracts for this session are on pages 175 - 181

- 08:00-08:10

Predictive Value of Risk Analysis Index and Modified Frailty Index for Gait Outcomes Following Shunt Surgery in Idiopathic Normal Pressure Hydrocephalus
Abdelrahman Hamouda
- 08:10-08:20

Impact of Volume Input Frequency on Craniospinal Compliance: A Spectral Approach
Agnieszka Kazimierska
- 08:20-08:30

Is ICP Really Normal in NPH? - First Insights from Home-Based Telemetric Monitoring
Sang ho Kim
- 08:30-08:40

Feasibility of Patient-Led Home ICP Monitoring
Sang Ho Kim
- 08:40-08:50

Effect of a Structured Exercise Program on Center of Mass Variables During Walking in Individuals with Idiopathic Normal Pressure Hydrocephalus: A Preliminary Study
Sunee Bovonsunthonchai
- 08:50-09:00

Handwriting Analysis in Patients with Normal Pressure Hydrocephalus: A Study on 18 Patients
Gianpaolo Petrella
- 09:00-09:10

Pre- and Post-Shunt Evaluation of Auditory Signs in Patients with Normal Pressure Hydrocephalus
Juan Daniel Ramirez Munoz
- 09:10-09:20

Validation of a Prognostic Prediction Table for Hakim disease (iNPH)
Teruo Kimura

CASSIOPÉE	
09:20-10:20	SESSION 24: INTRACRANIAL PRESSURE Chairs: Fernando Pinto, Anne Benningahus
Abstracts for this session are on pages 182 - 187	
09:20-09:30	Beyond the Cardiac Pulse Waves: Gait-Related Oscillations in Intracranial Pressure Profiles Andreas Bunge
09:30-09:40	Establishing a Standard Protocol for Telemetric ICP Monitoring: Learning Points from Externalized Shunt Systems Hassan Bin Ajmal
09:40-09:50	Neurosurgical Management of Idiopathic Intracranial Hypertension (IIH): Preliminary Insights From the European Association of Neurosurgical Societies Guidelines Filippos Chelmis
09:50-10:00	Impact of Distal Catheter Tip Placement on Ventriculoperitoneal Shunt Dynamics Martina Roncoroni
10:00-10:10	What Happens to the Brain after a CSF Tap-Test? Marcel Warntjes
10:10-10:20	Investigating the Utility of ICP Monitoring in Chiari I Malformation: Insights from a Long-Term Observational Study Shivani Rajkumar (Virtual)
SPOT	
09:20-10:20	SESSION 25: ADULT HYDROCEPHALUS Chairs: Ignacio Jusue Torres, Shigeki Yamada
Abstracts for this session are on pages 188 - 192	
09:20-09:30	Hydrocephalus Does not Matter Gianpaolo Petrella
09:30-09:40	Physical Therapy-Evaluated Shunt Taps in the Management of Incomplete Response and Relapse in Shunted Idiopathic Normal Pressure Hydrocephalus Ryan Lee
09:40-09:50	Challenges in Neuropsychological Improvement After Shunt Surgery for Idiopathic Normal Pressure Hydrocephalus Ondrej Bradac
09:50-10:00	Implementing a Clinical Pathway for Normal Pressure Hydrocephalus (NPH): A Standardized Approach for the Care of NPH Patients Undergoing Ventriculoperitoneal Shunt Insertion Jeff Chen
10:00-10:10	The Economic Impact of Underdiagnosis in Idiopathic Normal Pressure Hydrocephalus Gianpaolo Petrella
10:10-10:20	Identifying Secondary Hydrocephalus in Post-Intensive Care Patients: An Infusion Study Approach Laurent Gergele

Detailed Program

EXHIBITION AREA	
10:30-11:00	Coffee Break & Exhibition
AUDITORIUM DE SAINT EXUPÉRY	
11:00-12:30	SESSION 26: HYDROCEPHALUS SOCIETY-SOCIETY FOR RESEARCH INTO HYDROCEPHALUS AND SPINA BIFIDA JOINT SESSION Chairs: Carolyn Harris, Hannah Botfield
Abstracts for this session are on pages 193 - 198	
11:00-11:15	Session Introduction Pat MacAllister
11:15-11:30	Modulating CSF Dynamics for Hydrocephalus Therapy Hannah Botfield
11:30-11:40	Benchtop Investigation of Tissue Pull-In of Shunt Catheters in Hydrocephalus Kenae Thompson
11:40-11:50	A Material-Mediated Decrease in Neurological Cell Adhesion to Hydrocephalus Shunt Catheters Quentin Aten (Virtual)
11:50-12:00	Ventricular and Choroid Plexus Volume Changes in Alzheimer's and Non-Alzheimer's Dementias: Implications for Shared Pathological Features and Cerebrospinal Fluid Dynamics Yuyue Qiu
12:00-12:10	Investigating Choroid Plexus Organogenesis Using an Organoid Model Celine Thao-Quyen
12:10-12:20	Changes in Choroid Plexus Macrophages Across Neonatal Development in a Genetic Model of Hydrocephalus Audrey Kruse
12:20-12:30	Biomarkers of Neurodegeneration: Comparison Between iNPH, Lova, and Other Neurodegenerative Diseases
CASSIOPÉE	
11:00-12:35	SESSION 27: ORAL FLASH PRESENTATIONS OF EPOSTERS Chairs: Shigeki Yamada, Zofia Czosnyka
Abstracts for this session are on pages 213 - 231	
11:00-11:05	Hydrocephalus in Leptomeningeal Metastasis May Lack Typical Imaging Features of Normal Pressure Hydrocephalus Ko-Ting Chen
11:05-11:10	No Correlation Between Functional Dopaminergic Imaging, Iron Load and CSF Outflow Resistance in Suspected Idiopathic Normal Pressure Hydrocephalus Lubin Klotz
11:10-11:15	Transmission of Pulsatility Across the Level of the Foramen Magnum in Chiari Syndrome: Alteration of Mobile Compliance? Pauline Carlier

- 11:15-11:20 Diagnostic Accuracy of Thermal Transcutaneous Flow Compared with Radionuclide Shunt Patency Study to Detect Shunt Obstruction in Adults with Hydrocephalus- A Cross Sectional Analytic Study
Naomi Abel
- 11:20-11:25 Continuous Telemetric Intracranial Pressure Measurement (ctICPM) Assessing the Effect of Different Body Positions, Activity, Time and Shunt Valve Adjustments
Vincent Prinz
- 11:25-11:30 Pure Endoscopic Cysto Ventriculostomy for Arachnoid and Gliopendymal Cysts: Technical Aspects in a Cohort Series with Long Follow up
Francesco Tuniz
- 11:30-11:35 Fluid Dynamics Model of the Cerebral Ventricle System
Haritosh Patel
- 11:35-11:40 Wireless Monitoring of CSF Flow Rate, Pressure, and Device Patency for Timely Diagnosis of Hydrocephalus Shunt Failure
Sascha Lee
- 11:40-11:45 Lumboperitoneal Shunt Is Comparable to Ventriculoperitoneal Shunt for the Treatment of Idiopathic Normal Pressure Hydrocephalus
Yasuaki Inoue
- 11:45-11:50 Predictive Accuracy of a Clinical Model for Pathogenic Gene Carriage in PUMCH Dementia Patients with a Positive Family History
Jialu Bao
- 11:50-11:55 Lack of Correlation Between Functional Imaging and Brain Volumetry in Idiopathic Normal Pressure Hydrocephalus: A Multimodal Diagnostic Study
Lubin Klotz
- 11:55-12:00 Treatment-Responsive Changes in Positional Cerebral Compliance in Patients with Idiopathic Normal Pressure Hydrocephalus Demonstrated by Non-Invasive Monitoring
Giana Fote
- 12:00-12:05 Spacing Shunt Valves In Series: A Novel Strategy to Mitigate Siphon-Induced Overdrainage
Michael Le
- 12:05-12:10 MRI Evidence of Choroid Plexus Enlargement in Post-Hemorrhagic Pediatric Hydrocephalus
Leandro Castaneyra Ruiz
- 12:10-12:15 Determining the Utility of Baseline Gait and Cognitive Assessments in the Decision for Trial of CSF Drainage in Suspected Normal Pressure Hydrocephalus
Matthew Boissaud-Cooke
- 12:15-12:20 Utility of Blood Biomarkers in Prediction of Post-Operative Outcomes in Patients with Idiopathic Normal Pressure Hydrocephalus
Abdelrahman Hamouda
- 12:20-12:25 Evaluating the Effect of the Tap Test on Cognitive Test Scores in Suspected Idiopathic NPH
Matthew Boissaud-Cooke

Detailed Program

- 12:25-12:30

Quantifying Changes in Measures of Gait Following Tap Test to Validate Clinical Decision Making for Shunt Surgery in Suspected Idiopathic Normal Pressure Hydrocephalus
Matthew Boissaud-Cooke
- 12:30-12:35

Hierarchical Bayesian Modeling Improves Shunting Outcome Prediction in NPH Patients
Jeremi Chabros

SPOT

- 11:00-12:35

SESSION 28:
ORAL FLASH PRESENTATIONS OF EPOSTERS
Chairs: **Masakazu Miyajima, Snejana Jurici**

Abstracts for this session are on pages 231 - 247

- 11:00-11:05

Is Davson's Equation Reliable in Hydrocephalus? A Systematic Review and Meta-Analysis
Ihsane Olakorede
- 11:05-11:10

Adjusting the Unknown: Intracranial Pressure and Clinical Outcomes in Idiopathic Intracranial Hypertension Using Non-Invasive Telemetric Monitoring
Hannah Eskender
- 11:10-11:15

Telemetric Intracranial Pressure Monitors: Current Status and Future Trends – A Systematic Review
Andreas Bunge
- 11:15-11:20

Surgical Findings in Chronic Post Dural Puncture Headache Syndrome
Amir El Rahal
- 11:20-11:25

Influence of CSF Volume Changes and Body Position on Cranial and Spinal CSF Pressure in Patients with iNPH
Nenad Kudelic
- 11:25-11:30

Application of Lumboperitoneal Shunting in the Treatment of Complex Cranial Wound Healing Disorders
Vincent Prinz
- 11:30-11:35

Expanding Hakim's Triad: Shunting Enhances Upper-Limbs Function in Idiopathic Normal Pressure Hydrocephalus – The Pro Hydro Study
Arianna Vignaroli
- 11:35-11:40

Effects of a Ventriculoperitoneal Shunt on Hearing in Patients with Normal Pressure Hydrocephalus – Interim Results of a Prospective Cohort Study
Emily Wang
- 11:40-11:45

Clinical Outcomes of Lumboperitoneal Shunt Surgery for Normal Pressure Hydrocephalus: A 5-Year Single-Center Retrospective Study of Patients with at Least 1 Year of Follow-Up
Ki-Su Park
- 11:45-11:50

Geriatrics and Normal Pressure Hydrocephalus: A Science Mapping Review
Liliana Mazza
- 11:50-11:55

Desh Score Reliability In Chronic Hydrocephalus
Cyrille Capel

- 11:55-12:00 Elevated CSF Acceleration at the Craniospinal Junction Suggests Reduced Spinal Compliance in iNPH: A Phase-Contrast MRI Study
Katharina Wolf
- 12:00-12:05 The Impact on the Caregiver in the Treatment in Patients with Normal Pressure Hydrocephalus
Gianpaolo Petrella
- 12:05-12:10 Creative Strategies in Managing Complex Cerebrospinal Fluid Dynamics: A Case Series on Multi-Valve Shunt Systems
Alexandra Ramos Marquez
- 12:10-12:15 Sensitivity of Physiotherapy-Based Clinical Tests in Detecting Gait and Balance Performance Following a 50 mL CSF Tap Test in Idiopathic Normal Pressure Hydrocephalus
Kardelen Akar
- 12:15-12:20 Evaluating Outcome of Shunt Insertion in Idiopathic Normal Pressure Hydrocephalus (iNPH) Patients within a Dedicated NPH Clinic
Afsana Afrin Nisa

12:20-12:35 **Discussion**

12:35-13:40 **Industry Sponsored Lunch Seminar (CARAVELLE 1)**

AUDITORIUM DE SAINT EXUPÉRY

13:40-15:30 **SESSION 29:
ADULT HYDROCEPHALUS**
Chairs: **Ben Elder & Gianpaolo Petrella**

Abstracts for this session are on pages 199 - 209

- 13:40-13:50 Differential Improvement in Patient-Reported Outcomes Measurement Information System (PROMIS) Domains after Ventriculoperitoneal Shunting (VPS) for Idiopathic Normal Pressure Hydrocephalus (iNPH)
Rahul Kumar
- 13:50-14:00 Is Shunting Worthwhile for Bedridden Patients with Normal Pressure Hydrocephalus?
Romain Manet
- 14:00-14:10 Development of a Non-invasive Multimodal System for NPH Monitoring Through Speech, Gaze, and Hearing Parameters
Jiho Lee
- 14:10-14:20 Cerebral pseudoatrophy in Normal Pressure Hydrocephalus (Hakim's syndrome): Clinical and Volumetric Changes Following Shunting
Fernando Hakim
- 14:20-14:30 Targeted CSF Metabolomics Suggests Potential Diagnostic Biomarkers for Idiopathic Normal Pressure Hydrocephalus
Ulrika Hofling
- 14:30-14:40 CSF Biomarkers are Related to Symptomatology and Outcome in Idiopathic Normal Pressure Hydrocephalus – The Gothenburg POiNT-CSF Study
Mats Tullberg
- 14:40-14:50 AK9 Mutations and Normal Pressure Hydrocephalus: Validating Genetic Evidence from a Case-Control Study
Yoav D. Piura

Detailed Program

- 14:50-15:00 Transcranial Doppler during CSF infusion test
Afrodit Lalous
- 15:00-15:10 Variability of Cerebral Venous Drainage in Patients with Chronic Hydrocephalus: A Phase-Contrast MRI Study
Heimiri Monnier
- 15:10-15:20 Beyond Idiopathic: Secondary Normal Pressure Hydrocephalus (sNPH) – Etiological Patterns and Surgical Outcomes
Alexandra Ramos Marquez
- 15:20-15:30 Speed Matters: Maximal 10m Walking Test is superior to Normal Pace in Predicting Gait Recovery following Ventriculoperitoneal Shunt Insertion in Normal Pressure Hydrocephalus
Christoph Wiest

CASSIOPÉE

- 13:40-15:30 **SESSION 30:**
ORAL FLASH PRESENTATIONS OF EPOSTERS
Chairs: **Cristopher Carswell, John Pickard**

[Abstracts for this session are on pages 248 - 269](#)

- 13:40-13:45 Real-time Phase Contrast MRI of CSF flow in Patients with Hydrocephalus. Heart or Lung! Which is the Driver?
Olivier Baledent
- 13:45-13:50 Mapping Clinical Measures of CSF Responsiveness vs. Non-Responsiveness in Complex Normal Pressure Hydrocephalus using the Strategy of the Periodic Table of DTI Elements
Nicole Keong
- 13:50-13:55 Clinical Relevance of DESH Subtypes in Normal Pressure Hydrocephalus (Hakim's Syndrome): Implications for Therapeutic Outcomes
Juan Daniel Ramirez
- 13:55-14:00 Association Between Cerebral Microbleeds and Idiopathic Normal Pressure Hydrocephalus
Chun Yan Liu
- 14:00-14:05 Quantification of the Contribution of Metabolism-Derived Water to Cerebrospinal Fluid in Humans and Rats
Cecilie Hvass
- 14:05-14:10 Mapping Human Glymphatic Flow with 7T MRI: A Safer Alternative to Intrathecal Imaging
Danielle van Westen
- 14:10-14:15 Is Sagittal T2 Flow Void MRI in Diagnosing Third Ventriculostomy Reliable?
Arianna Vignaroli
- 14:15-14:20 Ventriculomegaly after Vestibular Schwannoma Treatment : Assessing Cerebral Hydrodynamics to Guide Hydrocephalus Management
Vincent Grandjean
- 14:20-14:25 Glioblastoma and Ventriculomegaly: Hydrodynamic Disturbances as Emerging Biomarkers for Hydrocephalus Diagnosis and Management
Vincent Grandjean

14:25-14:30	Environmental Impact of Shunt Surgery: A Green Work of the French Neurosurgery Scientific Committee on Eco-Responsibility Tuan Le Van
14:30-14:35	Evaluating Baseline Cognitive Impairment and Impact of Treatment in Idiopathic Normal Pressure Hydrocephalus (iNPH) Using a Standardised Assessment Battery and Composite Score Lisa Healy
14:35-14:40	Functional Response to Large Volume Lumbar Puncture Predicts Shunt Surgery and Perceived Benefit in Suspected Normal Pressure Hydrocephalus Mark Luciano
14:40-14:45	Brain Compliance in Normal Pressure Hydrocephalus and Post-Traumatic Hydrocephalus: Use of Novel Radiographic and Non-invasive Intracranial Waveform Methodologies Jeff Chen
14:45-14:50	To shunt or Not to Shunt : Idiopathic Normal Pressure Hydrocephalus and Physical Frailty Dounia Rouabhia
14:50-14:55	Surgical Effects in Patients with Normal-Pressure Hydrocephalus Based on CT Perfusion Imaging Hao Xu
14:55-15:00	Association of Pre-Shunt MRI Metrics with Gait Outcomes after Shunt in Idiopathic Normal Pressure Hydrocephalus Rahul Kumar
15:00-15:05	Diagnostic Performance Of The Main Diagnostic Tools In Chronic Hydrocephalus Cyrille Capel
15:05-15:10	No Predictive Value of Aqueduct CSF Flow Dynamics for Shunting Efficacy in Idiopathic Normal Pressure Hydrocephalus Afroditi Lalou
15:10-15:15	CSF Lysophospholipids as Potential Biomarkers for Hydrocephalus Teruhiko Yoshida
15:15-15:20	LP Shunt in Patients with iNPH : Surgical Technique Naoyuki Samejima
15:20-15:25	MRI-Based Characterization of Torcular Configurations in Chronic Hydrocephalus Patients and Healthy Controls Heimiri Monnier
15:25-15:30	Pericatheter Cysts as a Postoperative Complication of VP and VA Shunt Procedures Koichi Miyazaki

SPOT	
13:40-15:00	SESSION 31: ORAL FLASH PRESENTATIONS OF EPOSTERS Chairs: Laurence Watkins, Fernando Hakim

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13:40-13:45	Atypical Manifestations of Idiopathic Normal Pressure Hydrocephalus Gianpaolo Petrella
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Detailed Program

- 13:45-13:50 Phase-contrast MRI Cerebrospinal Fluid Flow Parameters as Predictive Markers of ETV Efficacy in Idiopathic Normal Pressure Hydrocephalus: Prospective Observation Study
Karel Pistek
- 13:50-13:55 The impact of Alzheimer's and Vascular Dementia on Shunt Outcomes in Idiopathic Normal Pressure Hydrocephalus, a Systematic Review of 1.394 Patients
Kim Wouters
- 13:55-14:00 Long-Term Body Weight Changes in the Patients with Normal Pressure Hydrocephalus Received Ventriculoatrial Shunt
Kiyoshi Takagi
- 14:00-14:05 Awareness of Normal Pressure Hydrocephalus in Healthcare Personnel
Gianpaolo Petrella
- 14:05-14:10 Simultaneous Clinical Assessment of Siblings with Familial Normal Pressure Hydrocephalus (Hakim's Syndrome)
Juan Daniel Ramirez
- 14:10-14:15 From Cure to Control: Redefining Success in Normal Pressure Hydrocephalus Management
Ahmed Toma
- 14:15-14:20 Maternal-Child Characteristics at Birth and Congenital Hydrocephalus: A Population-Based Case-Control Study
Kim Wouters
- 14:20-14:25 Molecular Genetics as a Tool for Personalised Treatment of Hydrocephalus
Tina Noergaard Munch
- 14:25-14:30 Head Circumference in Hydrocephalic Children: Differential Pressure Valve versus Anti Siphon Devices
Stefanie Kaestner
- 14:30-14:35 Implementation of CSF Flow MRI in the Management of Pediatric Hydrocephalus in Ivory Coast
Vakaramoko Mohamed Kone
- 14:35-14:40 Neural Tube Defects, Hydrocephalus, and Associated Central Nervous System Malformations: A Nationwide Ecological Study in Latin America
Juan Fernando Ramon
- 14:40-14:45 Shunt Revision and Long-Term Durability in Hydrocephalus: Insights from 589 Patients
Niclas Lynge Eriksen
- 14:45-14:50 Endoscopic Third Ventriculostomy vs Ventriculoperitoneal Shunt for iNPH: Effects on Neuropsychological and Motor Function— ENVENTOR-iNPH: Study Protocol
Francesca Graziano
- 14:50-14:55 Development of a New Gait Rating Tool for Patients with Idiopathic Normal Pressure Hydrocephalus
Rick Mills
- 14:55-15:00 Non-Invasive ICP Waveform Analysis in Hydrocephalus: Comparing Asymptomatic Patients and Those with Shunt Dysfunction
Raphael Bertani

AUDITORIUM DE SAINT EXUPÉRY	
15:30-16:30	Closing of the Congress
15:35-15:45	Highlights from the Hydrocephalus World Congress John Pickard
15:45-15:55	Young Investigators Awards-Winners Announcement Sevil Yasar
15:55-16:05	Closing Address by the Hydrocephalus 2025 World Congress President Eric Schmidt
16:05-16:15	Closing Address by the Hydrocephalus Society President Mats Tullberg
16:15-16:25	Hydrocephalus Society Presidency Handover Mats Tullberg, Giorgio Palandri
16:25-16:30	Hydrocephalus 2026 World Congress Sao Paulo Welcome Fernando Pinto

E-POSTERS - ALL DAYS -
AVAILABLE THROUGH THE MOBILE APP AND SCREENS

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EP20	SIMPLIFIED LUMBOTRANSVERSE SHUNT SURGERY USING TWO SMALL SKIN INCISIONS Yukihiro Goto
EP25	REVERSIBLE MIMIC OF NORMAL PRESSURE HYDROCEPHALUS: A CASE HIGHLIGHTING THE NEED FOR CAREFUL PRE-SHUNT ASSESSMENT Peter Adidharma
EP27	VENTRICULOPERITONEAL SHUNT INFECTION IN PEDIATRIC PATIENTS – A BIBLIOMETRIC ANALYSIS Reza Akbar Bastian
EP35	A PRAGMATIC DIAGNOSTIC PATHWAY FOR INPH PATIENTS : INTEGRATING GERIATRIC AND HYDRODYNAMIC ASSESSMENT IN A TERRITORIAL HOSPITAL Snejana Jurici
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EP54	SHUNT SURVIVAL OF 809 INPH PATIENTS Siiri Oksa

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