14th Interdisciplinary Cerebrovascular Symposium

June 28-30, 2017

FINAL PROGRAM

CHAIRMAN
Alain Bonafé, Montpellier

CO-CHAIRMAN
Franck Nicoud, Montpellier

ICS 2017

Corum
Montpellier
FRANCE

It is a great pleasure to welcome you for the fourteenth Interdisciplinary Cerebrovascular Symposium (ICS) in Montpellier France, from June 28 to 30.

ICS first established as the intracranial stent meeting has evolved as the interdisciplinary cerebrovascular symposium where MD and PhD experts have the unique opportunity to exchange their views in their fields of interest.

ICS offers the opportunity to learn in a very synthetic manner about the latest scientific developments related to neuro-intervention.

This year the following topics will be covered:
- aneurysms computed flow dynamics,
- interaction device arterial wall,
- stroke biomarkers,
- advanced imaging,
- genetics of brain vascular malformations,
- intrasaccular aneurysmal thrombosis.

Furthermore a full session will be devoted to innovative start-ups in the field of neuro-intervention. This session will bring the latest evolving technologies to the knowledge of the neuro-intervention community and will be followed by a thorough discussion of their daily practice applicability.

A parallel session of e-poster presentation will be restricted to the youngest researchers that will have the opportunity to present their latest results.

We are welcoming you in Montpellier.

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14th Interdisciplinary Cerebrovascular Symposium is compliant with Ethical Medtech
**Synoptic & Faculty**

**CHAIRMAN**

Alain Bonafé, Montpellier

**CO-CHAIRMAN**

Franck Nicoud, Montpellier

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Vincent Costalat, Montpellier

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Makoto Ohta, Sendai, Japan

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Yi Qian, Macquarie, Australia

Richard Redon, Nantes

Daniel Rüfenacht, Zürich, Switzerland

Ynte Ruigrok, Utrecht, The Netherlands

David A. Steinman, Toronto Canada

Victor Vagne, Montpellier

Kristian Valen-Sendstad, Oslo, Norway

Axel Van Rossum, Charleroi, Belgium

Yiannis Ventikos, London, United-Kingdom

Denis Vivien, Caen

Isabel Wanke, Zürich, Switzerland

Karim Zouaoui Boudjeltia, Montigny-Le-Tilleul, Belgium

**Wednesday June 28**

07:30 Welcome coffee in the exhibition hall (level 1)

Pasteur Amphitheatre (level 0)

08:00 Opening

Welcome coffee in the exhibition hall (level 1)

08:30 HEMODYNAMICS

ISCHEMIC

HEMORRAGIC

09:00

09:30 Coffee break - Demonstration stands (level 1)

Joffre 4 room (level 1)

10:00 HEMODYNAMICS (continued)

ISCHEMIC (continued)

HEMORRAGIC (continued)

10:30 Workshop

Pasteur Amphitheatre (level 0)

11:00 HEMODYNAMICS (continued)

ISCHEMIC (continued)

HEMORRAGIC (continued)

12:30 Lunch break in the exhibition hall (level 1)

Lunch break in the exhibition hall (level 1)

Synthesis and Closing

12:00

13:00 Synthesis and Closing

13:30

14:00 DE Vincent & START-UP

DE DEVICE - ARTERIAL WALL INTERACTIONS

Coffee break (level 1)

Demonstration stands Joffre 4 room (level 1)

Stryker Workshop

15:00 ADVANCED IMAGING

15:30 Medtronic Workshop

16:00 Einstein Amphitheatre (level 0)

Crowne Plaza terrace (ground floor)

16:00 End of the sessions

18:20 End of the sessions

19:00 Homages

19:30 Cocktail

19:15 Schubert concert

19:15 Jazz concert
**Wednesday**  
**JUNE 28**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>07:30</td>
<td>Welcome coffee in the exhibition hall (level 1)</td>
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<tr>
<td></td>
<td>Pasteur Amphitheatre (level 0)</td>
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<tr>
<td>08:00</td>
<td>Opening. Alain Bonafé, Jacques Mercier</td>
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<tr>
<td></td>
<td><strong>HEMODYNAMICS</strong></td>
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<td></td>
<td>Moderators: Frantz Nicoud, Vitor Pereira</td>
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<tr>
<td>08:30</td>
<td>Towards understanding mechanisms of aneurysm evolution: connecting experimental, computational and clinical data, Juan R. Cebral</td>
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<td>09:00</td>
<td>Consistent prediction of intracranial aneurysm hemodynamics: challenging or not? Kristian Valen-Sendstad</td>
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<tr>
<td>09:30</td>
<td>Virtual intracranial stenting research update and perspectives: modelisation, clinical evaluation and CFD, Vitor Pereira</td>
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<td>10:00</td>
<td><strong>phenox Workshop</strong> (Joffre 4 room, level 1)</td>
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<td>10:00</td>
<td>Coffee break - Demonstration stands (level 1)</td>
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<td>10:30</td>
<td>Aneurysm flow quantification in patient-specific 3D models, Andrea Froelich</td>
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<td>11:00</td>
<td>CFD-based shape optimization of flow diverter stents for patient-specific cases, Gabor Janiga</td>
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<td>11:30</td>
<td>In silico and in vivo validation process for new simulation software, Grégory Gascou, Vincent Costalat</td>
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<td>12:00</td>
<td>Towards clinical protocols for aneurysm CFD in rupture risk assessment, David A. Steinman</td>
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<td>12:30</td>
<td>Lunch break in the exhibition hall (level 1)</td>
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<td>13:00</td>
<td><strong>DEVICE - ARTERIAL WALL INTERACTIONS</strong></td>
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<td>Moderators: Jean-Baptiste Michel, Isabel Wanke</td>
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<td>14:00</td>
<td>The role of NF-kB in shear stress and aneurysm formation, Rob Krams</td>
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<td>14:30</td>
<td>Role of terminal and anastomotic circulation in the patency of arteries jailed by flow diverting stents: animal study and clinical findings, Charles Mounayer</td>
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<td>15:00</td>
<td>Experimental evaluation of stent retrievers mechanical properties and thrombi removal effectiveness, Paolo Machi</td>
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<td>15:30</td>
<td>Aneurysm treatment devices: in situ tissue engineering, Matthew Gounis</td>
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<td>16:00</td>
<td>Duality of thrombi, from healing to injury of the wall, Jean-Baptiste Michel</td>
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<td>16:30</td>
<td>Medtronic Workshop (Joffre 4 room, level 1)</td>
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<td>16:30</td>
<td>Coffee break - Demonstration stands (level 1)</td>
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<tr>
<td>17:00</td>
<td><strong>BRAIN VASCULAR MALFORMATIONS GENETICS</strong></td>
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<td>Swissneuro Foundation</td>
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<td>Moderators: Philippe Bijlenga, Richard Redon</td>
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<td>17:00</td>
<td>Contribution of NGS-based studies to the genetic architecture of complex disorder, Richard Redon</td>
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<td>17:20</td>
<td>Genetic modifiers of disease severity in cerebral cavernous malformations, Helen Kim</td>
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<td>17:40</td>
<td>Genetics of moyamoya disease and intracranial stenosis, Satoro Miyawaki</td>
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<tr>
<td>18:00</td>
<td>Current knowledge on genetic risk factors for intracranial aneurysms, Ynte Ruigrok</td>
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<td>18:20</td>
<td>End of the sessions</td>
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<tr>
<td>19:00</td>
<td><strong>Einstein Amphitheatre</strong> (level 0)</td>
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<td>19:00</td>
<td>Homages to Patrick Courtheoux and Jean Gabrillargues</td>
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<td>19:15</td>
<td>Schubert concert: Voyage d’hiver</td>
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<td>Dalton Baldwin, Philippe Coubes</td>
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<td>Included in your registration. Accompanying person fee: 20€.</td>
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</table>
08:00 Welcome coffee in the exhibition hall (level 1)

Pasteur Amphitheatre (level 0)

ISCHEMIC

Moderators: Denis Vivien, Nicola Marchi

08:30 Molecular imaging of neuroinflammation for diagnosis and prognosis of stroke. Denis Vivien

09:00 Biomarkers for stroke: ready for the clinic? Joan Montaner

09:30 Impact of downstream microvascular thrombosis on the benefit of large artery recanalization in acute ischemic stroke: pathophysiology and therapeutic applications. Jean-Baptiste Michel

10:00 Workshop (Joffre 4 room, level 1)

10:00 Coffee break - Demonstration stands (level 1)

10:30 An in-vitro investigation of clot properties and their consequences to mechanical thrombectomy. Gillian Gunning, NEURAVI

11:00 THROMBO-NETS study: impact of neutrophil extracellular traps (NETs) composition of thrombi retrieved during endovascular therapy in acute ischemic stroke (AIS) patients on IV t-PA induced thrombolysis, clinical outcome and AIS etiologies. Célina Ducroux

11:20 Association of thrombus perviousness with recanalization and functional outcome in patients with acute ischemic stroke. Charles Majoie

11:40 MR characterization of acute thrombi. Romain Bourcier

12:00 ICS meeting 2018 announcement. Philippe Bijlenga

12:10 Lunch break in the exhibition hall (level 1)
**Innovation & Start-up**

Moderator: Vincent Costalat

14:00 Start-up #1 IN STENT, Franz Bozsak
14:30 Start-up #2 SIM & CURE, Mathieu Sanchez
15:00 Start-up #3 BIOMODEX, Thomas Marchand
15:30 Start-up #4 SMARTWISEAB, Johan Lundberg

16:00 Workshop (Joffre 4 room, level 1)
Introducing the Lucid System: The future of Large Vessel Stroke Detection

16:00 Coffee break - Demonstration stands (level 1)

**Advanced Imaging**

Moderators: Emmanuelle Le Bars, Makoto Ohta

16:30 Assessment of In-Uivo cerebrovascular hemodynamics with 4D flow MRI, Michael Markl
17:00 NIRS-TDCS as a potential new technic to screen for ischemic stroke tissue: ELEVANT PROJECT, Victor Vague, Stéphane Perrey
17:30 Intravascular imaging will change intracranial stenting, Demetrios K. Lopes
18:00 Phase contrast MRI segmentation methods for flow measurements, Omer Eker

18:30 End of the sessions

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**HEMORRAGIC: intrasaccular thrombosis**

Moderators: Karim Zouaoui Boudjeltia, Sakai Nobuyuki

08:30 Aneurysm spatial orientation and thrombosis, Axel Van Rossomme
09:00 Platelet - arterial wall interaction, Yacine Boulaftali
09:30 Intra saccular hemostasis changes following flow diverter placement, Omer Eker

10:00 Workshop (Joffre 4 room, level 1)

10:00 Coffee break - Demonstration stands (level 1)

10:30 Simulation of intrasaccular thrombosis, Jean-Luc Falcone
10:50 Estimation for the outcomes of flow diverter treatment intracranial aneurysms: FD deployment process (compaction), FD selection (size and type), analysis successful/unsuccessful, clot formation process, and CFD simulation results, Yi Qian
11:20 Integrated treatment planning for cerebral aneurysms: Deployment, haemodynamics and thrombosis for flow diversion devices, Yiannis Ventikos
11:50 Impact of stents and coils on thrombus biology, Jean-Baptiste Michel

12:20 Pharmacological therapy to reduce flow-driven aneurysm wall remodeling, growth and eventual risk of rupture, Juhana Frösen

12:50 Synthesis and closing, Alain Bonafé, Franck Nicoud

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**Analysis of relationship between gross pathology of the aneurysm wall and local pressure of the aneurysm inner wall.** Takeshi Yanagisawa, Hiroyuki Takao, Takashi Suzuki, Rakuja Tanikawa, Hiroyasu Kamiyama, Yuichi Hirose, Makoto Yamamoto, Yuichi Murayama

15:46 Impact of stent-induced vessel deformation on the hemodynamic of intracranial aneurysms. S. Uo, P. Berg, G. Janiga, O. Beuing

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**Get together cocktail.** Crowne Plaza terrace (ground floor) 190 rue d’Argencourt, Montpellier (5 min. walking distance)
Jazz concert and cocktail, Duo Fumar Phil Furneaux (saxophonist) and Krys Markowski (piano)

19:00 Jazz concert and cocktail. Duo Fumar Phil Furneaux (saxophonist) and Krys Markowski (piano)
INFO

Exhibition hours
Wednesday June 28  07:30 - 18:30
Thursday June 29  08:00 - 18:30
Friday June 30   08:00 - 10:30

EXHIBITION

Exhibition hours
Wednesday June 28  07:30 - 18:30
Thursday June 29  08:00 - 18:30
Friday June 30   08:00 - 10:30

ACKNOWLEDGEMENTS 2017

Sponsors and Exhibitors

BALT is celebrating its 40th year.
As ever, rather than looking back we are looking forward and inspiring innovation.

please visit us at booth #8

Phenox

AB Medica

Microvention

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Stryker

Neuravi

Balt

Sim & Cure

Instent

Endorsments
Bending expectations of conformability and stability.

- **Adaptive cell structure** is designed to enhance stent opening and wall apposition
- **Segmental™ Expansion** is designed to provide radial force and stability
- **Low foreshortening** and predictable recrossability simplify use
- **All stent sizes deliverable** through Excelsior™ SL-10™ Microcatheter
REFERENCES: 1. Internal testing TRNV1191-Performance Evaluation of Pipeline™ Flex Embolization Device with Shield Technology™ - September 2014.

Results may vary. Not all patients receive the same results. This device should be used only by physicians trained in percutaneous, intravascular techniques and procedures at medical facilities with the appropriate fluoroscopy equipment. The Pipeline™ Flex embolization device should be used by physicians who have received the appropriate training for this device.

Indications for Use: The Pipeline™ Flex embolization device is intended for endovascular embolization of cerebral aneurysms.

FULL FLOW DIVERSION EFFECT,
LOW THROMBOGENIC PROFILE.