

Continuing Medical Education (CME) course/event

Friday, June 09, 2017

Aula Magna of the University of Turin at the Dental School, Lingotto, Turin, Italy

#### CEREBROVASCULAR MALFORMATIONS: NATURAL HISTORY, PATHOGENIC MECHANISMS, DIAGNOSIS AND TREATMENT OF CAVERNOUS ANGIOMAS AND OTHER CEREBROVASCULAR MALFORMATIONS

Scientific supervisors and coordinators:

- Prof. Saverio Francesco Retta (Department of Clinical and Biological Sciences DSCB, University of Turin, Italy)
- Prof. Marco Fontanella (Department of Neurosurgery, University of Brescia, Italy)
- Prof. Lorenza Trabalzini (Department of Biotechnology, Chemistry and Pharmacy, University of Siena, Italy)
- Dr. Luca Goitre (Department of Clinical and Biological Sciences DSCB, University of Turin, Italy)

#### Program

08:00 - 08:15 Registration of participants

### 08:15 - 08:45 INTRODUCTION

- 08:15 08:20 Prof. Antonio Amoroso University of Turin Welcome message from the Directorate of the School of Medicine of the University of Turin
- 08:20 08:25 Dott. Guido Giustetto OMCeO, Turin

Welcome message from the President of the Order of Physicians, Surgeons & Dentists - Turin 08:25 - 08:30 Sig. Massimo Chiesa – President of Associazione Italiana Angiomi Cavernosi – AIAC

- *The unwanted journey: living day-by-day with a cerebrovascular disease* 08:30 - 08:45 Prof. **Saverio Francesco Retta** – Applied Biology, Turin
  - *Cavernous angiomas: a journey back and forth from clinic to basic research*

# 08:45 - 10:30 SESSION I - PHYSIOPATHOLOGY, CLINICAL AND DIAGNOSIS OF CEREBROVASCULAR MALFORMATIONS

Chairmen: Dr. Paolo Cerrato (Neurology, Turin), Dr. Sergio Duca (Neuroradiology, Turin)

- 08:45-09:15 Dr. Paolo Cerrato & Dr. Giovanni Bosco Neurology, Turin Different cerebrovascular malformations and different clinical features
   09:15-09:45 Prof. Mauro Bergui – Neuroradiology, Turin Classification of cerebrovascular malformations and diagnostic and interventional neuroradiology
- 09:45-10:15 Dr. Luigi Poliani Pathological Anatomy, Brescia Many cerebrovascular malformations: does pathological anatomy help us find a common pathogenesis?
- 10:15-10:20 Discussion

## <u> 10:20 - 10:30 Break</u>

#### 10:30 - 12:00 SESSION II - SURGICAL AND RADIOSURGICAL APPROACHES

Chairman: Prof. Alessandro Ducati (Neurosurgery, Turin)

- 10:30-11:00 Dr. Diego Garbossa Neurosurgery, Turin Cerebrovascular malformations: aneurysms, AVMs, cavernomas, who operate?
   11:00-11:30 Prof. Marco Fontanella – Neurosurgery, Brescia Familiar and sporadic cerebrovascular malformations (CCM): clinical and neurosurgical
- *aspects* 11:30-11:55 Dr. **Piero Picozzi** – Radiosurgery, Humanitas, Milan
- Therapeutic possibilities of Gamma Knife radiosurgery in AVMs and cavernomas
- 11:55-12:00 Discussion



# 12:00 – 13:00 SESSION III - GENETIC BASES AND NEW METHODS OF MOLECULAR DIAGNOSIS OF CEREBRAL CAVERNOUS MALFORMATIONS (CCM)

Chairmen: Dr. Alfredo Brusco (Medical Genetics, Turin), Dr. Luca Goitre (Applied Biology, Turin)

- 12:00-12:10 Dr. Luca Goitre Applied Biology, Turin Genetic bases of Cerebral Cavernous Malformations: the CCM genes
  12:10-12:30 Dr. Marta Melis – Neurology/Medical Genetics, Cagliari The "Common Sardinian Mutation (CCM1-CSM)" and CCM case history in Sardinia
- 12:30-12:55 Dr. Souvik Kar Neurosurgery Centre, Hannover (Germany) Genome-Wide sequencing reveals MicroRNAs Downregulated in Cerebral Cavernous Malformations
- 12:55-13:00 Discussion

#### 13:00 - 14:00 Lunch break

# 14:00 - 16:05 SESSION IV – CEREBROVASCULAR MALFORMATIONS IN THE PEDIATRIC AGE

Chairmen: Dr. Mino Zucchelli (Neurosurgery, Bologna), Dr. Carlo Arduino (Medical Genetics, Turin)

- 14:00-14:25 Dr. Irene Toldo Pediatric Neurology, Padua Cerebral Cavernous Malformations in Pediatric Age: from the onset to neurological outcomes
   14:25-14:50 Dr. Mino Zucchelli – Pediatric Neurosurgery, Bellaria, Bologna
- Cerebral Cavernous Malformations in Pediatric Age: Neurosurgical Aspects14:50-15:15Dr. Marco Pavanello Pediatric Neurosurgery, Gaslini, Genova
- Surgical indication for revascularization in Quasi-Moyamoya associated to RASopathies 15:15-15:35 Dr. Alessandro Raso Medical Genetics, Gaslini, Genova
- Moyamoya vasculopathy shows a genetic mutational gradient decreasing from East to West 15:35-16:00 Dr. Valeria Capra – Medical Genetics, Gaslini, Genova

Aneurysms of the vein of Galen and AVM: embryonic origin and pathogenesis 16:00-16:05 Discussion

## <u> 16:05 - 16:15 Break</u>

# 16:15 - 18:00 SESSION V - PATHOGENIC MECHANISMS, RISK FACTORS AND NEW DIAGNOSTIC AND THERAPEUTIC PROSPECTIVES

Chairmen: Prof. Paolo Pinton (General Pathology, Ferrara), Prof. Lorenza Trabalzini (Biochemistry, Siena)

- 16:15-16:40 Dr. Giorgio Aquila Cardiovascular Research, Ferrara Identification of pathogenic mechanisms and development of therapeutic strategies in animal models of cardiovascular diseases
- 16:40-17:05 Dr. **Saverio Marchi** General Pathology, Ferrara Cellular processes underlying Cerebral Cavernous Malformations: autophagy as another point of view
- 17:05-17:30 Dr. Eliana Trapani Applied Biology, Turin Role of molecular mechanisms of cell response to oxidative stress and genetic risk factors in the pathogenesis of Cerebral Cavernosal Malformations
- 17:30-17:55 Prof. Fiorella Biasi General Pathology, Turin Potential risk factors and molecular markers in cerebrovascular diseases
- 17:55-18:00 Discussion

18:00 - 18:30 Participants' questions/comments, concluding remarks and perspectives



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# Provider

University of Turin - Provider ID 173 - ECM Training Staff, e-mail: ecm@unito.it, tel.: 011.6705314 (Dr. Chiara Cordero)

The course/conference was accredited by the Italian Ministry of Health with 9 Continuing Medical Education (CME) Credits (CME/ECM code: 173-195824)

Participation is open to researchers, physicians, physician assistants, biologists and other professional healthcare professionals, including medical specialists and students (up to 100 people) by registering at the following link:

https://www.dam.unito.it/eventiecm/?event=le-malformazioni-cerebrovascolari-storia-naturalemeccanismi-patogenetici-diagnosi-e-trattamento

# Rational

The event will include seminars/lectures on the major forms of Cerebrovascular Malformations, with a particular focus on Cerebral Cavernous Malformations (also known as Cavernous Angioma or Cavernoma).

These are important biomedical issues for updating medical training, and of great interest in clinical and basic research. Indeed, while cerebrovascular diseases are the third cause of death and the second most common cause of neurological disability in western countries, natural history, pathogenic mechanisms and risk factors are largely unknown; moreover, therapeutic strategies are often limited to surgical intervention, although this is not always possible or resolutive.

The course aims at addressing these issues through a multidisciplinary and integrated approach, progressively analyzing the disease natural history and genetic and physiopathological bases, new clinical, instrumental and laboratory diagnostic approaches, potential risk factors, and current and future surgical and pharmacological strategies.

Indeed, the multidisciplinary approach is a strategy to provide a comprehensive overview, allowing specialists working in complementary clinical and research fields to better define and pursue the most effective and efficient clinical management procedures.

## > The event is dedicated to the memory of Davide Della Rocca



**Event promoted by:** 







