



## 2<sup>nd</sup> International Conference on Regenerative Medicine in Neurology (ICRMN)

### Stem Cell-Based Therapies for Neurological Disorders: Advancements and Challenges



Olsztyn, Poland, 29-30 June 2017

Sponsors



## **Welcome address**

It is our great pleasure to invite you to join us at the 2<sup>nd</sup> International Conference on Regenerative Medicine in Neurology in Olsztyn, Poland. This year the overarching theme for the meeting is “**Stem Cell-Based Therapies of Neurological Disorders: Advancements and Challenges**”.

We are honored to host many world-renowned experts in the fields of regenerative medicine, neurology, immunology, biomaterials and imaging. The program is covering broad spectrum of topics and disciplines and this reflects growing appreciation of multidisciplinary effort to achieve efficacious restorative treatment of neurological disorders.

We certainly hope this will be a stimulating meeting and one that will help all participants to gain deeper knowledge about treatment of neurological disorders, design better preclinical experiments and plan treatment strategies that will bring a breakthrough for deadly diseases of the central nervous system.

Looking forward to meeting you in Olsztyn, the capital of Warmia and Mazury region, the Land of Thousands Lakes.

**Piotr Walczak, MD/PhD**  
**Chairperson**  
**of the Organizing Committee**

**Mirosław Janowski, MD/PhD**  
**Scientific Program Director**

**Day 1 Thursday, 29 June 2017**

- 08:00 – 08:45**    **Breakfast**  
**09:00 – 09:15**    **Welcome Address**

**Session I**

**Stroke, Outcome Measures and Immunology (Chair: Miguel Oliveira)**

- 09:15 – 09:35**    The role of inflammatory cells in stroke  
(**Tim Magnus, University of Hamburg**)
- 09:35 – 09:55**    Behavioral outcome measures to improve experimental stroke recovery  
research (**Jukka Jolkonnen, University of Eastern Finland**)
- 09:55 – 10:15**    Immunological microenvironment of the CNS and interactions with peripheral  
immune system – implications for cell transplantation procedures  
(**Aleksandra Klimczak, Institute of Immunology and Experimental  
Therapy PAS, Wroclaw, Poland, and Institute of Human Genetics PAS,  
Poznan, Poland**)
- 10:15 – 10:35**    Fate of mouse GRPs administrated intrathecally in allogenic and semiallogenic  
mouse model for potential therapy of ALS (**Urszula Kozłowska, Institute of  
Human Genetics, PAS, Poznan, Poland**)
- 10:35 – 10:50**    **Panel discussion**
- 10:50 – 11:00**    **Coffee break**

**Session II**

**Intraarterial Route for Stem Cell Delivery (Chair: Jeff Bulte)**

- 11:00 – 11:20**    Real-time MRI of intra-arterially delivered stem cells (**Mirosław Janowski,  
Johns Hopkins University, Mossakowski Medical Research Center, PAS**)
- 11:20 – 11:40**    Intra-arterial delivery of stem cells in patients with stroke  
(**Sean Savitz, University of Texas Health Science Center**)
- 11:40 – 11:55**    Inducing Expression of VLA4 in Glial Restricted Progenitors for improved  
intraarterial targeting in stroke (**Anna Jabłonska, Johns Hopkins University**)
- 11:55 – 12:10**    Genetic engineering of mesenchymal stem cells for intra-arterial delivery  
(**Anna Andrzejewska, Mossakowski Medical Research Centre, PAS,  
Warsaw**)
- 12:10 – 12:25**    Target intra-arterial drug delivery in brain diseases. Current technical  
possibilities and limitations (**Michał Zawadzki, Central Clinical Hospital  
of the Ministry of Internal Affairs, Warsaw**)
- 12:25 – 12:45**    **Panel discussion**
- 13:00 – 14:00**    **Lunch**
- 14:00 – 19:00**    **Outdoor Activity**
- 20:00 – 22:00**    **Dinner**

**Day 2 Friday, 30 June 2016**

**08:00 – 09:00 Breakfast**

**Session III**

**Biomaterials in support of Stem Cell Transplants (Chair: Wojciech Maksymowicz)**

- 09:00 – 09:20** Engineering Biomaterials for CNS Applications  
(**Miguel Oliveira, 3B's Research Group, University of Minho, Portugal**)
- 09:20 – 09:35** UltraPure Alginates and HA in biomedical applications  
(**Lise Cathrine Asdahl, Quality Manager, NovaMatrix, FMC, Norway**)
- 09:35 – 09:50** Advanced Therapies for Amyotrophic Lateral Sclerosis:  
Providing the Tools for Neural Repair  
(**Eduarda Oliveira, 3B's Research Group, University of Minho, Portugal**)
- 09:50 – 10:05** Hydrogels for regenerative medicine  
(**Silvia Vieira, 3B's Research Group, University of Minho, Portugal**)
- 10:05 – 10:20** Injectable hydrogels - promising biomaterials for intrathecal stem cells delivery  
(**Izabela Malysz-Cymborska, University of Warmia and Mazury, Poland**)
- 10:20 – 10:35** The concept of proteolytic rafts for cells integration with host tissue  
(**Marcin Piejko, Jagiellonian University**)
- 10:35 – 10:50** Multi-Functional Micro-/Nano-materials for Targeted Delivery of Cells and  
Drugs  
(**Luisa Carvalho, 3B's Research Group, University of Minho, Portugal**)
- 10:50 – 11:10** Panel discussion
- 11:10 – 11:20** Coffee break

**Session IV**

**Imaging in Regenerative Medicine (Chair: Jukka Jolkonnen)**

- 11:20 – 11:50** Developing Non-Invasive Imaging Biomarkers for Probing Neuroregeneration  
and Repair  
(**Jeff WM. Bulte, Johns Hopkins University**)
- 11:50 – 12:20** MRI based theranostics in stroke  
(**Pedro Ramos, CIC biomaGUNE**)
- 12:20 – 12:35** MRI-guided convection enhanced delivery for modeling multiple sclerosis  
in swine  
(**Lukasz Kalkowski, University of Warmia and Mazury**)
- 12:35 – 12:50** Panel discussion
- 13:00 – 14:00** Lunch

### **Session V**

#### **Glial progenitor-based therapies (Chair: Johannes Boltze)**

- 14:00 – 14:20** Perspectives for therapeutic use of glial progenitors in dysmyelination, stroke, ALS, neurooncology and beyond (**Piotr Walczak, Johns Hopkins University and University of Warmia and Mazury**)
- 14:20 – 14:35** Research and clinical value of canine glial restricted precursors (**Luiza Stanaszek, Mossakowski Medical Research Center, PAS, Warsaw**)
- 14:35 – 14:50** Immunodeficient, low copy SOD1/Rag2<sup>-/-</sup> mouse model of ALS dedicated to cell replacement therapies (**Malgorzata Majchrzak, Mossakowski Medical Research Center, PAS, Warsaw**)
- 14:50 – 15:05** Use of GRP in the treatment of degenerative myelopathy - model of ALS (**Dominika Golubczyk, University of Warmia and Mazury**)
- 15:05 – 15:25** **Panel discussion**
- 15:25 – 15:35** **Coffee break**

### **Session VI**

#### **Manufacturing clinical grade cellular therapeutics, Regulatory Considerations and Clinical trials (Chair: Sean Savitz)**

- 15:35 – 15:55** Transplantation of stem cells for treatment of patients with ALS (**Wojciech Maksymowicz, University of Warmia and Mazury**)
- 15:55 – 16:25** Safety aspects and safety assessment of cell therapies for CNS applications (**Johannes Boltze, University of Leipzig, Germany**)
- 16:25 – 16:45** Regulatory considerations in new advanced therapies (**Terje Svendsen, Operations Manager, NovaMatrix, FMC, Norway**)
- 16:45 – 17:05** How to prepare for a clinical trial of ATMP – own experience (**Marcin Majka, Jagiellonian University**)
- 17:05 – 17:20** **Panel discussion**
- 17:20 – 17:50** **Closing remarks Wojciech Maksymowicz/Piotr Walczak**
- 18:00** **Departure**
- 18:00 – 19:00** **NanoTech4ALS business meeting**
- 19:00 – 20:00** **GRP&ALS business meeting**

**Organizer:**

**Department of Neurology and Neurosurgery  
Faculty of Medical Sciences  
University of Warmia and Mazury, Olsztyn, Poland**

**Co-organizer:**

**National Center for Research and Development**

**Local Organizing Committee:**

**Chairperson: Piotr Walczak**

**Members:**

**Izabela Małysz-Cymborska  
Dominika Gołubczyk  
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**Application of Glial Progenitors for Treatment of ALS  
acronym GRP&ALS**

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