



9th International Symposium on  
**NEUROPROTECTION  
NEUROREPAIR | 2016**

April 19 – 22, 2016 | Leipzig, Germany



**SCIENTIFIC  
PROGRAM**



# I AM UNIQUE

SHOULDN'T  
MY BoNT THERAPY  
BE UNIQUE TOO?

Birte, 48, Spasticity patient



**XEOMIN<sup>®</sup>**, 50 units or 100 units, powder for solution for injection. **Active substance:** Clostridium Botulinum neurotoxin type A (150 kD), purified from Clostridium Botulinum cultures (Hall strain), free from complexing proteins. Prescription-only medicine! **Qualitative and quantitative composition:** One vial contains: 50 LD<sub>50</sub> units or 100 LD<sub>50</sub> units of Clostridium Botulinum neurotoxin type A (150 kD), free from complexing proteins, human albumin, sucrose. Due to the differences in the potency assays, unit doses are specific to XEOMIN<sup>®</sup>. Therefore the recommended dose units for XEOMIN<sup>®</sup> are not interchangeable with those for other Botulinum toxin preparations. **Therapeutic indications:** For the symptomatic treatment of blepharospasm, cervical dystonia of a predominantly rotational form (spasmodic torticollis), and of post-stroke spasticity of the upper limb presenting with flexed wrist and clenched fist in adults. **Contraindications:** Hypersensitivity to Botulinum neurotoxin type A or to any of the excipients, generalised disorders of muscle activity (e.g. myasthenia gravis, Lambert-Eaton syndrome), infection or inflammation at the proposed injection site. XEOMIN<sup>®</sup> must not be used during pregnancy unless clearly necessary. Do not use during breast-feeding. **Undesirable effects:** Undesirable effects usually occur within the first week following injection and are temporary in nature. They may be related to the active substance, the injection procedure, or both. Indication-independent: Localised pain, inflammation, paraesthesia, hypoaesthesia, tenderness, swelling/oedema, erythema, itching, localised infection, haematoma, bleeding and/or bruising. Application-related: Pain and/or anxiety may lead to vasovagal reactions such as transient symptomatic hypotension and syncope. Toxin spread: Undesirable effects related to spread of toxin distant from the site of administration have been reported very rarely such as exaggerated muscle weakness, dysphagia, and aspiration pneumonia with fatal outcome in some cases. Hypersensitivity reactions: Rare reports of serious and/or immediate hypersensitivity reactions such as anaphylaxis, serum sickness, urticaria, soft tissue oedema, and dyspnoea, sometimes either following the administration of conventional Botulinum toxin type A complex preparations alone or in combination with other active substances known to cause similar reactions. **Spasmodic torticollis:** Dysphagia of varying degrees of severity may cause aspiration which may require medical intervention. Duration: 2-3 weeks post-injection, in one case up to 5 months. The following undesirable effects were observed with the clinical use of XEOMIN<sup>®</sup>: *Very common* ( $\geq 1/10$ ); *common* ( $\geq 1/100$  to  $< 1/10$ ); *uncommon* ( $\geq 1/1,000$  to  $< 1/100$ ). **Blepharospasm:** *Very common:* Eyelid ptosis, dry eyes; *Common:* Headache, facial paresis, vision blurred, visual impairment, diplopia, lacrimation increased, dry mouth, dysphagia, rash, injection site pain, fatigue, muscular weakness. **Spasmodic torticollis:** *Very common:* Dysphagia; *Common:* Headache, pre-syncope, dizziness, dry mouth, nausea, hyperhidrosis, neck pain, muscular weakness, muscle spasm, musculoskeletal stiffness, myalgia, injection site pain, asthenia, upper respiratory tract infection; *Uncommon:* Speech disorder, dysphonia, dyspnoea, rash. **Post-stroke spasticity of the upper limb:** *Common:* Headache, dysaesthesia, hypoaesthesia, dysphagia, muscular weakness, pain in extremity, feeling hot, injection site pain; *Uncommon:* Myalgia, asthenia. Some of these undesirable effects may be disease related. **Post-marketing experience:** Flu-like symptoms and hypersensitivity reactions such as swelling, oedema (also apart from the injection site), erythema, pruritus, rash (local and generalized), and breathlessness have been reported. Merz Pharmaceuticals GmbH, 60048 Frankfurt/Main, Germany. Date of revision of the text: August 2015. Further information is provided in the Summary of Product Characteristics and the Package Leaflet. PLEASE CHECK YOUR LOCAL APPROVAL STATUS

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### DEAR COLLEAGUES AND FRIENDS,

We warmly welcome you to the 9th International Symposium on Neuroprotection and Neurorepair (ISN&N) in Leipzig! We are looking forward to 4 exciting days of outstanding talks and posters, intensive scientific discussions, and fruitful exchange of novel ideas together with you.

Leipzig is one of the most vibrant and fastest-growing cities in Germany, often compared to Berlin, Paris and other major metropolises. It has a rich and long history of scientific discoveries in neuroscience, which continue into the present days. We also were lucky to hold our meeting in one of the most beautiful locations Leipzig has to offer: its world-famous zoo.

The meeting itself will be at least as exciting as the location in which it takes place. The number of attendees was steadily increasing over the last years and peaked at over 450 this year. Hence, the 9th ISN&N is the largest in the meeting's history. The size of the 2016 meeting and the fact that we have received so many suggestions for excellent talks triggered our decision to leave traditional paves, allow parallel sessions on two of our four meeting days.

Despite these changes, we are proud that our meeting continuously stands for lively interactions, fruitful discussions and exchange of ideas between young researchers and senior experts. This would not be possible without your contributions and support, so thank you very much for being a part of our meeting.

Finally, we want to thank all ISN&N organizers and sponsors. The meeting would not have been possible without your outstanding support!

Sincerely yours,



Johannes Boltze



## CONFERENCE COORDINATOR

Fraunhofer Research Institution for Marine Biotechnology  
Johannes Boltze, MD, PhD  
Mönkhofer Weg 239a, 23562 Lübeck

## CONFERENCE OFFICE

event lab. GmbH **on site**  
Dufourstr. 15, 04107 Leipzig Phone: +49 (0)162 433 20 83

## CONFERENCE DATES | OPENING HOURS REGISTRATION DESK

Tuesday, April 19, 2016 11:00 am – 08:00 pm  
Wednesday, April 20, 2016 07:30 am – 07:00 pm  
Thursday, April 21, 2016 07:30 am – 06:00 pm  
Friday, April 22, 2016 08:30 am – 01:30 pm

## SPEAKER'S PREVIEW

The speaker's preview room will be open at all times during the conference. Please come to the speaker's preview room as soon as possible and no later than 2 hours before your session starts. Presentations will be delivered to the lecture hall.

## LANGUAGE

The official language of the symposium is English. There will be no translations.

## PARTICIPATION | NAME TAGS

Official conference name tags will be required for admission to all conference functions, scientific sessions and exhibition areas. Participants who lose their name tags will have to pay a fee of 25.00 EUR to obtain a replacement tag.

## CERTIFICATION

The Medical Association of Saxony certified the meeting with 18 continuing education points. Certificates will be issued at the registration desk.

## INTERNET

You can obtain free access to the local WiFi with the following access code:  
SSID: NEURO; username: neuro2016; password: neuro2016

## EXHIBITION INFORMATION

The exhibition will be located in the hall "Großer Saal". The exhibition will be open as follows:

Tuesday, April 19, 2016 12:00 pm – 10:00 pm  
Wednesday, April 20, 2016 07:30 am – 05:00 pm  
Thursday, April 21, 2016 07:30 am – 04:30 pm

## POSTER SESSIONS

Poster session I – 1, I – 2, I – 3, I – 4, I – 5 Wednesday, April 20, 2016 01:00 pm – 02:30 pm  
Poster session II – 1, II – 2, II – 3, II – 4, II – 5 Thursday, April 21, 2016 01:00 pm – 02:30 pm

The poster exhibition will be located in the hall "Großer Saal". Poster presenters are requested to be present at their posters at least during the respective guided poster session. You will have about 1.5 to 2 minutes to present your poster to all interested participants.

## Mounting and dismounting of posters

The poster boards will be marked with numbers referring to those in the program. Materials for poster mounting will be provided.

Please follow the following schedule of the poster mounting and dismounting:

### Poster session I on Wednesday April 20, 2016

Mounting time:  
Tuesday, April 19 after your registration

Dismounting time:  
Wednesday, April 20 at latest until 6:30 pm

### Poster session II on Thursday April 21, 2016

Mounting time:  
Thursday, April 21 at latest until 10:00 am

Dismounting time:  
Thursday, April 21 at latest until 06:00 pm.

Poster that haven't been removed until then will be removed by the staff.  
Please note that we cannot accept responsibility for lost material.



WINNERS OF THE KLAUS REYMANN YOUNG SCIENTIST'S AWARD



**Claudia Alia (Italy)**

Abstract „Reducing GABAergic inhibition improves forelimb motor function after focal cortical stroke in mice“



**TaeHee Kim (USA)**

Abstract „Role of  $\alpha$ -Synuclein in ischemic brain damage“



**Jordi Pedragosa Ollé (Spain)**

Abstract „Perivascular macrophages attract leukocytes to the ischemic brain tissue“

WINNER OF THE GEORG REISER AWARD ON NEUROBIOCHEMISTRY



**Suresh Mehta (USA)**

Abstract „Long noncoding RNA FosDT promotes ischemic brain injury by interacting with REST-associated chromatin modifying proteins“

We are pleased to express our congratulations.

KONGRESSHALLE





TUESDAY, APRIL 19		WEDNESDAY, APRIL 20		
"Weißer Saal"		"Weißer Saal"	"Händel-Saal"	"Telemann-Saal"
8:00 am		Novel approaches to enhance post-stroke functional outcome	Neuroprotection 1: neurobiochemical mechanisms	Understanding and controlling neuroimmunology
8:30 am				
9:00 am				
9:30 am				
10:00 am	9:45 am Coffee break in the exhibition area			
10:30 am		New connections: neurorehabilitation and human brain plasticity	Pressure, penumbra and promising acute stroke therapies	Immunity in post-stroke neuronal damage and repair: the jury is still out
11:00 am				
11:30 am				
12:00 pm	Opening ceremony	Lunch break in the exhibition area		
12:30 pm	Presidential opening lecture			
1:00 pm	Translational stories: from bench to bedside – and back	Poster viewing		
1:30 pm		Roots and routes for stroke recovery	Proteases before, during and after stroke	Role of non-coding RNAs in neuroprotection and plasticity after stroke
2:00 pm				
2:30 pm				
3:00 pm	Coffee break exhibition area	Coffee break in the exhibition area		
3:30 pm	Improving stroke care: imaging and novel diagnostics			
4:00 pm		Post-stroke immunity: Has the time come for clinical trials?	Protein expression and posttranslational modifications in neuro-degenerative disorders	Challenges to improving clinical translation: the role of large animal models of CNS injury
4:30 pm				
5:00 pm	Selective cerebral hypothermia in stroke	Meet the chief editor: How to publish in high ranking journals?		
5:30 pm				
6:00 pm	Coffee break exhibition area			
6:30 pm	Hot news			
7:00 pm		Get together in the exhibition area free poster viewing		
7:30 pm				
8:00 pm				

THURSDAY, APRIL 21			FRIDAY, APRIL 22	
"Weißer Saal"	"Händel-Saal"	"Telemann-Saal"	"Händel-Saal"	
8:00 am	Neural vasculature and neural network pathology	Clinical translation: from bench to bedside and back	Neuroprotection 2: new and re-newed approaches	
8:30 am				
9:00 am				
9:30 am				
10:00 am	9:45 am Coffee break in the exhibition area			Pathophysiology of vascular cognitive impairment
10:30 am	The haunted hedge: the role of glial cells in injury and repair	Pharmacology of stroke recovery	Thromboinflammation in stroke and other brain diseases	
11:00 am				Coffee break
11:30 am				Neuroprotection 3: non-cell autonomous mechanisms
12:00 pm	Lunch break in the exhibition area			Presidential closing lecture
12:30 pm	<b>Luncheon Axiogenesis</b> Human induced pluripotent stem cells (iPSC) derived neurons: a novel approach for neuroscience research and drug discovery  Buffet will be served.			
1:00 pm	Poster viewing	Closing ceremony		
1:30 pm				
2:00 pm		Imaging tools to advance the understanding of neuroinflammation	The role of blood in brain injury	
2:30 pm	White matter mechanisms in CNS injury and disease			
3:00 pm				
3:30 pm		Coffee break in the exhibition area		
4:00 pm				
4:30 pm	The spleen as a novel target for new stroke therapies	Modelling vascular contributions to cognitive impairment and dementia with Alzheimer's disease	Non-invasive neuromodulation for CNS diseases	
5:00 pm				
5:30 pm				
6:00 pm	Gondwanaland tour and congress dinner Gondwanaland Leipziger Zoo			



## TUESDAY, APRIL 19, 2016

### "Weißer Saal"

#### 12:00 – 12:30 PM OPENING CEREMONY

12:00 – 12:10 PM Boltze J. (Lübeck, Germany)  
**Opening remarks**

12:10 – 12:30 PM Claßen J. (Leipzig, Germany)  
**Neuroprotection and Neurorepair at Leipzig**

#### 12:30 – 1:30 PM PRESIDENTIAL OPENING LECTURE

Chairs: Boltze J., Claßen J.

Kroemer G. (Paris, France)  
**Therapeutic autophagy induction: from theory to clinical application**

#### 1:30 – 3:00 PM TRANSLATIONAL STORIES: FROM BENCH TO BESIDE – AND BACK

Chairs: Boltze J., Claßen J.

1:30 – 2:00 PM Dirnagl U. (Berlin, Germany)  
**In the field of translation, chance favors the prepared mind**

2:00 – 2:20 PM Ayata C. (Boston, USA)  
**Intracranial pressure and spreading injury depolarizations**

2:20 – 2:40 PM Schäbitz W.-R. (Bielefeld, Germany)  
**Targets to translation**

2:40 – 3:00 PM De Simoni M. G. (Milan, Italy)  
**The lectin complement pathway as a therapeutic target in ischemic brain conditions: experimental and clinical evidence**

3:00 – 3:30 PM Coffee break, industrial exhibition

#### 3:30 – 5:00 PM IMPROVING STROKE CARE: IMAGING AND NOVEL DIAGNOSTICS

Dijkhuizen R., Farr T.

3:30 – 4:00 PM Baron J.-C. (Cambridge, UK)  
**Recent developments in experimental and clinical stroke imaging**


4:00 – 4:20 PM Oliveira S. (Coimbra, Portugal)  
**Carbon monoxide as a metabolic and brain-blood barrier modulator with protective effects following stroke – a MRI and behavioural study**

4:20 – 4:40 PM Modo M. (Pittsburgh, USA)  
**Image-guided delivery and monitoring of in situ tissue engineering in stroke**

4:40 – 5:00 PM Hoehn M. (Cologne, Germany)  
**Structural and functional connectivity networks: dynamic changes after stroke**

#### 5:00 – 6:00 PM SELECTIVE CEREBRAL HYPOTHERMIA IN STROKE

Chairs: Boltze J., Kleinschnitz C.

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5:00 – 5:20 PM Fritz H. (Halle/Saale, Germany)  
**Therapeutic hypothermia in acute ischemic stroke – an upcoming approach for clinical use**

5:20 – 5:40 PM Cattaneo G. (Pforzheim, Germany)  
**A new approach for selective cerebral hypothermia**

5:40 – 6:00 PM Meckel S. (Freiburg, Germany)  
**In-vivo experience with a novel endovascular cooling catheter system for selective cerebral hypothermia**

6:00 – 6:30 PM Coffee break; industrial exhibition

#### 6:30 – 8:00 PM HOT NEWS

Chairs: Planas A., Schilling S.

6:30 – 6:50 PM Schwaninger M. (Lübeck, Germany)  
**NF-κB protects the blood-brain barrier**

6:50 – 7:10 PM Bix G. (Lexington, USA)  
**Interleukin-1 alpha is profoundly neuroprotective in experimental ischemic stroke**

7:10 – 7:30 PM Lemere C. (Boston, USA)  
**Pyroglutamate-3 amyloid-β immunotherapy for Alzheimer's disease**

7:30 – 7:50 PM Aronowski J. (Houston, USA)  
**Cytoprotection, cleanup and recovery after ischemic stroke is modulated by neuronal IL-4 and PPARγ**

#### 8:00 – 10:30 PM GET TOGETHER IN THE EXHIBITION AREA | FREE POSTER VIEWING



## WEDNESDAY, APRIL 20, 2016

## "WeiBer Saal"

## 8:00 – 9:45 AM NOVEL APPROACHES TO ENHANCE POST-STROKE FUNCTIONAL OUTCOME

Chairs: Abe K., Boltze J.

- 8:00 – 8:15 AM Alia C. (Pisa, Italy)  
**Reducing GABAergic inhibition improves forelimb motor function after focal cortical stroke in mice**
- 8:15 – 8:30 AM Abe K. (Okayama, Japan)  
**Neuroprotective therapy both for acute ischemic stroke and ALS**
- 8:30 – 8:45 AM Lietzau G. (Stockholm, Sweden)  
**Type 2 diabetes-induced neuronal pathology in the piriform cortex of the rat is reversed by the glucagon-like peptide-1 receptor agonist exendin-4**
- 8:45 – 9:00 AM Borlongan, Cesar (Tampa, USA)  
**Intravenously delivered IL2-targeted one marrow stem cell-derived exosomes, but not NCAM-Directed exosomes, home to the spleen, dampen inflammation, and ameliorate stroke-induced functional deficits**
- 9:00 – 9:15 AM Blondeau N. (Paris, France)  
**Alpha-Linolenic Acid nutritional intervention to support post-stroke functional recovery: the ultimate step preparing the ground for clinical trials?**
- 9:15 – 9:30 AM Sobey C. (Clayton, USA)  
**Acute or delayed systemic administration of human amnion epithelial cells improves outcome after stroke**
- 9:30 – 9:45 AM Popa-Wagner A. (Rostock, Germany)  
**Is the aged brain microenvironment refractory to cell therapy?**

## "Händel-Saal"

## 8:00 – 9:45 AM NEUROPROTECTION 1: NEUROBIOCHEMICAL MECHANISMS

Chairs: Harms C., Reiser G.

- 8:00 – 8:15 AM Mehta S. (Madison, USA)  
**Long noncoding RNA FosDT promotes ischemic brain injury by interacting with REST-associated chromatin modifying proteins**
- 8:15 – 8:30 AM Laettig G. (Berlin, Germany)  
**RNA-interference against sentrin-specific isopeptidase7 (SEN7) enhances SUMOylation at proteins of the pericentric heterochromatin and leads to transcriptional silencing in primary cortical neurons**
- 8:30 – 8:45 AM Edwards D. (Lexington, USA)  
**Acute inhibition of  $\alpha 5\beta 1$  integrin after stroke is neuroprotective and functional restorative via stabilization of the blood-brain barrier**

- 8:45 – 9:00 AM Paschen W. (Durham, USA)  
**Role of ER Stress-Induced unfolded protein response branches and downstream pathways in the fate and function of post-ischemic neurons in stroke**
- 9:00 – 9:15 AM Lie M. E. K. (Copenhagen, Denmark)  
**Substrates of the GABA transporters GAT3 and BGT1 improve functional recovery after focal ischemic stroke**
- 9:15 – 9:30 AM Balaganapathy P. (Singapore, Singapore)  
**Interplay between activated notch receptor and P53 in neuronal cell death during cerebral ischemia**
- 9:30 – 9:45 AM Moszczynska A. (Detroit, USA)  
**Knockout of Park2 gene alters dopamine and phenylethylamine signaling in the rat striatum: the insight into the role of E3 Ligase parkin in neuroprotection**

## "Telemann-Saal"

## 8:00 – 9:45 AM UNDERSTANDING AND CONTROLLING NEUROIMMUNOLOGY

Chairs: Liesz A., Lambertsen K.

- 8:00 – 8:15 AM Schroeter M. (Cologne, Germany)  
**Osteopontin treatment is beneficial after permanent cerebral ischemia by separating M1 and M2 polarized microglial activation**
- 8:15 – 8:30 AM Vogelgesang A. (Greifswald, Germany)  
**Considering age for treg function post stroke in man and mice**
- 8:30 – 8:45 AM Ortega S. B. (Dallas, US)  
**B-cells directly mediate neuronal viability and functional recovery following stroke**
- 8:45 – 9:00 AM Sadler R. (Munich, Germany)  
**Minimal microbiota differences between commercial breeders impacts post-stroke immunity**
- 9:00 – 9:15 AM Benakis C. (New York, USA)  
**Commensal microbiota affect ischemic stroke outcome by regulating intestinal immune cells**
- 9:15 – 9:30 AM Andjus P. (Belgrade, Serbia and Montenegro)  
**Brain oxidative status in the rat model of amyotrophic lateral sclerosis – in search of causes and consequences**
- 9:30 – 9:45 AM Pedragosa Ollé J. (Barcelona, Spain)  
**Perivascular macrophages attract leukocytes to the ischemic brain tissue**
- 9:45 – 10:30 AM Coffee break, industrial exhibition





## “Weißer Saal”

**10:30 AM – 12:00 PM** **NEW CONNECTIONS: NEUROREHABILITATION AND HUMAN BRAIN PLASTICITY**

Chairs: Carmichael T., Nudo R.

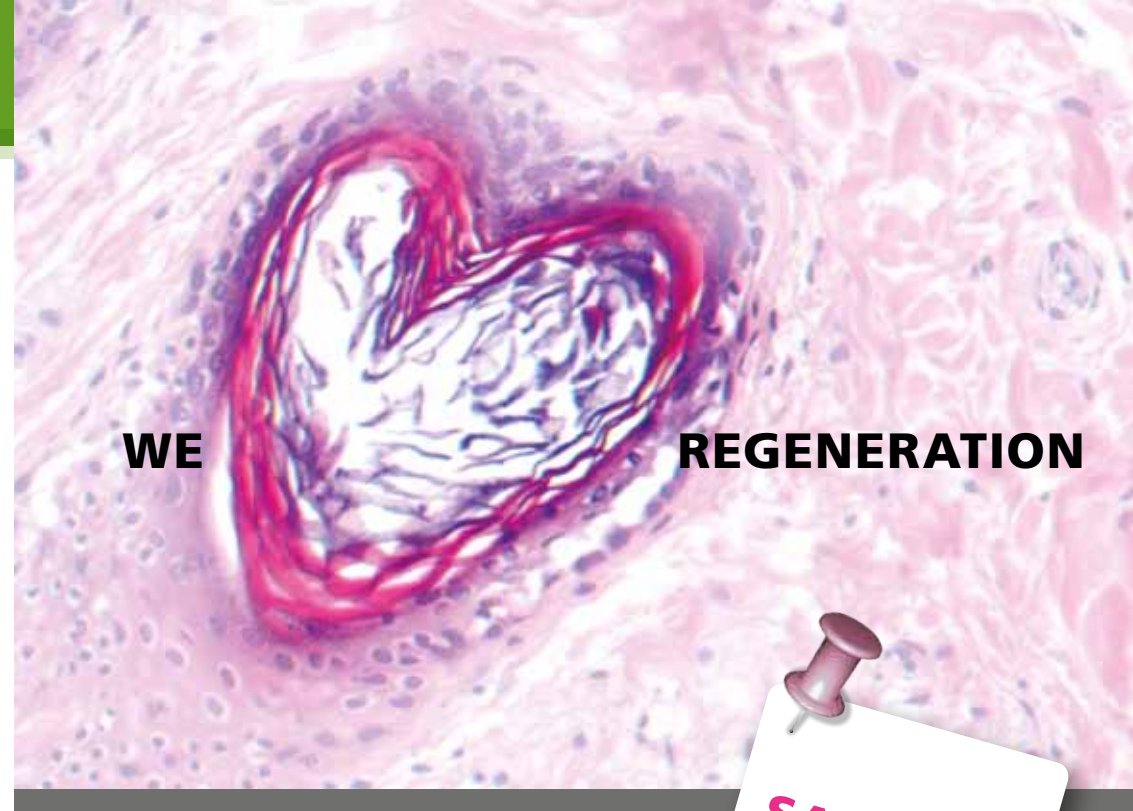
- 10:30 – 11:00 AM Villringer A. (Leipzig, Germany)  
**“Good” and “bad” plasticity after stroke**
- 11:00 – 11:20 AM Kim Y.- H. (Seoul, Republic of Korea)  
**Noninvasive brain stimulation for modulating neural network plasticity in stroke rehabilitation**
- 11:20 – 11:40 AM Saur D. (Leipzig, Germany)  
**Reorganisation and modulation of language networks after stroke**
- 11:40 – 12:00 PM Sabel B. (Magdeburg, Germany)  
**Neurorepair and vision restoration with brain synchronization: a network problem?**

## “Händel-Saal”

**10:30 AM – 12:00 PM** **PRESSURE, PENUMBRA AND PROMISING ACUTE STROKE THERAPIES**

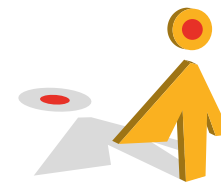
Chairs: Spratt N., McLeod D.

- 10:30 – 10:45 AM Howells D. W. (Hobart, Australia)  
**Human stem cell derived neurons to screen drugs for human therapeutic potential**
- 10:45 – 11:05 AM McLeod D. (Callaghan, Australia)  
**Intracranial pressure regulation after ischemic stroke and the effect of therapeutic hypothermia**
- 11:05 – 11:20 AM Spratt N. (Callaghan, Australia)  
**Mechanisms of intracranial pressure elevation and collateral failure after stroke**
- 11:20 – 11:35 AM Turner R. (Adelaide, Australia)  
**Take the pressure down: targeting neuropeptides to reduce ICP**
- 11:35 – 11:50 AM Macrae M. (Glasgow, UK)  
**A new spin on experimental stroke research: using oxygen to image & treat the ischaemic brain**
- 11:50 – 12:00 PM **General discussion**



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## „Telemann-Saal“

### 10:30 AM – 12:00 PM IMMUNITY IN POST-STROKE NEURONAL DAMAGE AND REPAIR: THE JURY IS STILL OUT

Chairs: Gelderblom M., Offner H.

- 10:30 – 10:47 AM Gelderblom M. (Hamburg, Germany)  
**Role of  $\gamma\delta$  T cells in stroke**
- 10:47 – 11:04 PM Lambertsen K. (Odense, Denmark)  
**Microglia mediate neuroprotection following acute trauma to the CNS**
- 11:04 – 11:21 AM Liesz A. (Munich, Germany)  
**Post-stroke peripheral immune activation in neuronal injury and repair**
- 11:21 – 11:38 AM Neumann J. (Magdeburg, Germany)  
**Neutrophils and microglia: features in the injured brain**
- 11:38 – 11:55 AM Offner H. (Portland, USA)  
**Immunotherapeutic approaches for stroke**
- 11:55 – 12:00 PM Gelderblom M. (Hamburg, Germany)  
**Closing remarks**
- 12:00 – 2:30 PM Lunch break, industrial exhibition

## Exhibition Area

### 1:00 – 2:30 PM POSTER SESSIONS I – 1 - I – 5

- I – 1: The neurovasculature in stroke and dementia  
I – 2: Neuroprotection: molecular targets and further research directions  
I – 3: Future research directions in basic and clinical neuroscience  
I – 4: Neural and neuronal network pathology in neurotrauma and –degeneration / Understanding and controlling neuroinflammation  
I – 5: Glial cells, the blood brain barrier and the neurovascular unit

## „WeiBer Saal“

### 2:30 – 4:00 PM ROOTS AND ROUTES FOR STROKE RECOVERY

Chairs: Dijkhuizen R. M., Bauer A. Q.

- 2:30 – 2:40 PM Dijkhuizen R. M. (Utrecht, Netherlands)  
**Opening remarks**
- 2:40 – 3:00 PM Otte W. (Utrecht, Netherlands)  
**Whole-brain network modeling in post-stroke recovery: unbiased topological change characterization in relation to sensorimotor outcome**
- 3:00 – 3:20 PM Bauer A. Q. (St. Louis, USA)  
**Contralesional homotopic activity negatively influences functional recovery after stroke**

- 3:20 – 3:40 PM Lee J.-M. (St. Louis, USA)  
**Sensory deprivation following cortical focal ischemia facilitates remapping and accelerates behavioral recovery**
- 3:40 – 4:00 PM Nudo R. J. (Kansas City, USA)  
**Spike-driven neuromodulation for repair of the injured brain**

## „Händel-Saal“

### 2:30 – 4:00 PM PROTEASES BEFORE, DURING AND AFTER STROKE

Chairs: Vivien D., Montaner J.

- 2:30 – 2:50 PM Yepes M. (Atlanta, USA)  
**Urokinase-type plasminogen activator improves neurological outcome and promotes dendritic spine recovery in the ischemic brain**
- 2:50 – 3:10 PM Orbe J. (Pamplona, Spain)  
**Could MMP-10 improve tPA-induced thrombolysis and offer neuroprotection in stroke?**
- 3:10 – 3:30 PM Montaner J. (Barcelona, Spain)  
**Proteases as biomarkers for stroke**
- 3:30 – 3:50 PM Viven D. (Caen, France)  
**How to improve the benefit of rt-PA-induced thrombolysis following stroke?**
- 3:50 – 4:00 PM **General discussion**

## „Telemann-Saal“

### 2:30 – 4:00 PM ROLE OF NON-CODING RNAs IN NEUROPROTECTION AND PLASTICITY AFTER STROKE

Chairs: Vemuganti R., Sohrabji F.

- 2:30 – 2:50 PM Giffard R. (Palo Alto, USA)  
**MicroRNAs and stroke - approaches to protection and recovery**
- 2:50 – 3:10 PM Vemuganti R. (Madison, USA)  
**Noncoding RNAs and neuroprotection after stroke**
- 3:10 – 3:30 PM Sohrabji F. (College Station, USA)  
**Sex and age differences in the efficacy of miRNA as stroke neuroprotectants**
- 3:30 – 3:50 PM Yin K. (Ann Arbor, USA)  
**MicroRNAs: novel mediators in cerebral angiogenesis after stroke**
- 4:00 – 4:30 PM Coffee break, industrial exhibition



## “WeiBer Saal”

### 4:30 – 6:00 PM POST-STROKE IMMUNITY: HAS THE TIME COME FOR CLINICAL TRIALS?

Chairs: Savitz J., Iadecola C.

- 4:30 – 5:00 PM Anrather J. (New York, USA)  
**The brain-immune interface: Players, hurdles and opportunities**
- 5:00 – 5:20 PM Planas A. (Barcelona, Spain)  
**Myeloid cells in the brain after stroke: microglia, macrophages, and dendritic cells**
- 5:20 – 5:40 PM Magnus T. (Hamburg, Germany)  
**Post stroke inflammation: A treatment option?**
- 5:40 – 6:00 PM Veltkamp R. (London, UK)  
**Perspectives for leukocyte alpha4 Integrin blockade in stroke after randomized experimental and clinical trials**

## “Händel-Saal”

### 4:30 – 6:00 PM PROTEIN EXPRESSION AND POST-TRANSLATIONAL MODIFICATIONS IN NEURODEGENERATIVE DISORDERS

Chairs: Demuth H.-U., Roßner S.

- 4:30 – 4:50 PM von Hörsten S. (Erlangen, Germany)  
**Mutant huntingtin expression in models of Huntington’s disease and their post-translational modifications**
- 4:50 – 5:10 PM Gröger V. (Halle, Germany)  
**Putative role of envelope proteins from human endogenous retroviruses (HERV) in neurodegenerative diseases**
- 5:10 – 5:30 PM Walter J. (Bonn, Germany)  
**Phosphorylation of A $\beta$  peptides modulates aggregation and deposition in Alzheimer’s disease**
- 5:30 – 5:50 PM Roßner S. (Leipzig, Germany)  
**Tlso-glutaminy cyclase-catalyzed pyroglutamate modification of CCL2 in Alzheimer’s disease and a transgenic animal model**
- 5:50 – 6:00 PM Schilling S. (Halle, Germany)  
**Meprin  $\beta$ , but not its isoenzyme Meprin  $\alpha$ , catalyzes the formation of N-truncated A $\beta$  peptides in vitro**

## “Telemann-Saal”

### 4:30 – 5:30 PM CHALLENGES TO IMPROVING CLINICAL TRANSLATION: THE ROLE OF LARGE ANIMAL MODELS OF CNS INJURY

Chairs: Turner R., Boltze J.

- 4:30 – 4:50 PM Gounis M. (Worcester, USA)  
**The role of large animal stroke models in the development of intravascular therapeutic devices**
- 4:50 – 5:10 PM Turner R. (Adelaide, Australia)  
**Don’t follow the herd: ovine models of acute CNS injury**
- 5:10 – 5:30 PM Leonard A. (Birmingham, USA)  
**Large animal models of traumatic spinal cord injury to improve translational research**

## “Telemann-Saal”

### 6:15 – 7:30 PM MEET THE CHIEF EDITOR: HOW TO PUBLISH IN HIGH RANKING JOURNALS?

Aronowski J. (Houston, USA)  
Dirnagl U. (Berlin, Germany)

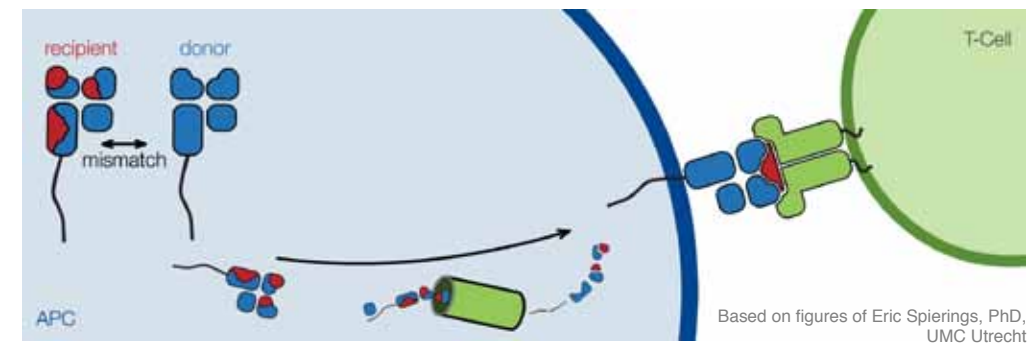


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## THURSDAY, APRIL 21, 2016

## "WeiBer Saal"

- 8:00 – 9:45 AM NEURAL VASCULATURE AND NEURAL NETWORK PATHOLOGY**  
Chairs: Petzold G., Plesnila N.
- 8:00 – 8:15 AM Haley M. (Manchester, UK)  
**Endothelial vesicles as mediators of post-stroke blood-brain barrier permeability**
- 8:15 – 8:30 AM Merkulova-Rainon T. (Paris, France)  
**Impairment of nitric oxide pathway: a principal mechanism underlying the hypertension-mediated aggravation of Alzheimer-like pathology in a mouse model of the disease**
- 8:30 – 8:45 AM Özen I. (Lund, Sweden)  
**Loss of regulator of G-Protein Signaling 5 in pericytes promotes vascular protection after acute stroke**
- 8:45 – 9:00 AM Henrich-Noack P. (Magdeburg, Germany)  
**Neither dead nor alive: silent survivor neurons after brain damage**
- 9:00 – 9:15 AM Jiang Y. (Lübeck, Germany)  
**Protective role of brain endothelial nemo in microvascular pathologies and vascular dementia**
- 9:15 – 9:30 AM Tseng K.-Y. (Helsinki, Finland)  
**Effects of intraventricular administration of CDNF, MANF and GDNF on neuroblast migration toward the infarct boundary after cortical stroke in rats**
- 9:30 – 9:45 AM Redzic Z. (Kuwait, Kuwait)  
**Differential effects of erythropoietin on brain endothelial cells and astrocytes in primary culture during anoxia**

## "Händel-Saal"

- 8:00 – 9:45 AM CLINICAL TRANSLATION: FROM BENCH TO BEDSIDE AND BACK**  
Chairs: Rueger, M. A., Neumann J.
- 8:00 – 8:15 AM Lourbopoulos A. (Munich, Germany)  
**Application of the "post-stroke care" concept for long-term, translational, mouse stroke studies on bone marrow stromal cells treatment**
- 8:15 – 8:30 AM Bieber M. (Würzburg, Germany)  
**SICFAIL - stroke induced cardiac failure in mice and men**
- 8:30 – 8:45 AM Schmidt H. (Münster, Germany)  
**Phase 2 open-label extension (OLE) study of patisiran, an investigational siRNA agent for familial amyloidotic polyneuropathy (FAP)**
- 8:45 – 9:00 AM Roth S. (Munich, Germany)  
**Stroke induces exacerbated atheroprogession via alarmin-signaling**

- 9:00 – 9:15 AM Pallier P. (London, UK)  
**A combination of nutrients designed to enhance synapse formation and function improves functional outcome following spinal cord injury**
- 9:15 – 9:30 AM Beretta S. (Monza, Italy)  
**Cerebral collateral therapeutics in experimental ischemic stroke: a randomized preclinical trial of four modulation strategies**
- 9:30 – 9:45 AM Fraser J. (Lexington, USA)  
**There and back again: a neuroscientist's tale - from bed to bench to bed with verapamil for neuroprotection in ischemic stroke**

## "Telemann-Saal"

- 8:00 – 9:45 AM NEUROPROTECTION 2: NEW AND RE-NEWED APPROACHES**  
Chairs: Blondeau N., Xing C.
- 8:00 – 8:15 AM Hameed B. (Bristol, UK)  
**Impact of selective glucocorticoid receptor blockade on hippocampal neurotrophic response to micro-fluid percussion injury and on histological and cognitive outcome**
- 8:15 – 8:30 AM Ansar S. (Lund, Sweden)  
**Combination treatment with U0126 and t-PA prevents the detrimental effects induced by delayed t-PA treatment and provides potent neuroprotection after stroke**
- 8:30 – 8:45 AM Zvejniece L. (Riga, Latvia)  
**Neuroprotective effects of R-phenibut in experimental models of stroke and neuropathic pain**
- 8:45 – 9:00 AM Airavaara M. (Helsinki, Finland)  
**Structure, biology and neuroprotective and neurorestorative potential of CDNF/MANF family of neurotrophic factors**
- 9:00 – 9:15 AM Kim T.-H. (Madison, USA)  
**Role of  $\alpha$ -Synuclein in ischemic brain damage**
- 9:15 – 9:30 AM Maniskas M. (Lexington, USA)  
**Re-evaluation of nitroglycerin as a therapy following acute ischemic stroke**
- 9:30 – 9:45 AM Shi Y. (Pittsburgh, USA)  
**HSP27 is a novel actin depolymerizing factor-like protein that protects against BBB disruption and long-term neurovascular injury**
- 9:45 – 10:30 AM Coffee break, industrial exhibition



## “WeiBer Saal”

### 10:30 AM – 12:00 PM THE HAUNTED HEDGE: THE ROLE OF GLIAL CELLS IN INJURY AND REPAIR

Chairs: Chen J., Bix G.

- 10:30 – 11:00 AM Sofroniew M. (Los Angeles, USA)  
**Diverse functions of reactive and scar-forming astrocytes**
- 11:00 – 11:20 AM Hu X. (Pittsburgh, USA)  
**ST2-dependent microglia/macrophage phenotype switch limits acute ischemic brain injury**
- 11:20 – 11:40 AM Bechmann I. (Leipzig, Germany) |  
**Microglial aging**
- 11:40 – 12:00 PM Pekny M. (Gothenburg, Sweden)  
**Attenuation of reactive gliosis slows down progression of amyotrophic lateral sclerosis (ALS) in mice**

## “Händel-Saal”

### 10:30 AM – 12:00 PM PHARMACOLOGY OF STROKE RECOVERY

Chairs: Wieloch, T., Borlongan, C.

- 10:30 – 10:50 AM Carmichael S. T. (Los Angeles, USA)  
**Druggable pathways for stroke recovery: molecular memory systems and TGFβ pathways**
- 10:50 – 11:10 AM Ruscher C. (Lund, Sweden)  
**Modulation of functional recovery after stroke – relevance of dopamine signaling**
- 11:10 – 11:30 AM Wahl A.-S. (Zurich, Switzerland)  
**How to close the loop from neuronal rewiring to functional recovery after stroke**
- 11:30 – 11:50 AM Clarkson A. (Dunedin, New Zealand)  
**Defining treatment windows using subunit-specific GABA compounds after stroke**
- 11:50 – 12:00 PM **General discussion**

## “Telemann-Saal”

### 10:30 AM – 12:00 PM THROMBOINFLAMMATION IN STROKE AND OTHER BRAIN DISEASES

Chairs: Kraft P., Pfeilschifter W.

- 10:30 – 10:48 AM Geuss E. (Würzburg, Germany)  
**The role of the contact-kinin system in ischemic stroke**
- 10:48 – 11:06 AM Pankratz S. (Münster, Germany)  
**Coagulation factors as key regulators of neuroinflammation**



- 11:06 – 11:24 AM Albert-Weissenberger C. (Würzburg, Germany)  
**Targeting inflammation and thrombus formation as a therapeutic option in brain trauma**
- 11:24 – 11:42 AM Schuhmann M. K. (Würzburg, Germany)  
**T-cell driven thromboinflammation in stroke**
- 11:42 – 12:00 PM Stegner D. (Würzburg, Germany)  
**Visualizing thrombo-inflammation in the ischemic brain**
- 12:00 – 2:00 PM Lunch break, industrial exhibition

## “Händel-Saal”

### 12:15 – 2:00 PM HUMAN INDUCED PLURIPOTENT STEM CELLS (IPSC) DERIVED NEURONS: A NOVEL APPROACH FOR NEUROSCIENCE RESEARCH AND DRUG DISCOVERY

LUNCHEON Buffet will be served.

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Hess D. (Cologne, Germany)  
**Human iPSC derived neurons recorded by MEA technology: A powerful tool for functional assessment of in vitro neurotoxicity**

Franz D. (Rostock, Germany)  
**Electrophysiological characterization of human induced pluripotent stem cell-derived dopaminergic neurons using manual and automated Patch Clamp systems**

Bader B. (Rostock, Germany)  
**Functional phenotypic comparison of activity patterns from different mouse brain region-specific neuron cultures with developing human iPSC-derived neuronal networks**

Scarabottolo L. (Milan, Italy)  
**Use of iPSC derived cells in HTS: still a dream or a reality?**

## Exhibition Area

### 1:00 – 2:30 PM POSTER SESSIONS II-1 - II-5

- II – 1: Traumatic brain injury and hemorrhagic stroke
- II – 2: Neuroprotection: molecular targets and further research directions
- II – 3: Imaging and novel diagnostics / Post-stroke immunity: has the time come for clinical trials? / The neurovasculature in stroke and dementia / Clinical translation: from bench to bedside and back
- II – 4: Rehabilitation and human brain plasticity
- II – 5: Current controversies and novel hypotheses in neuroprotection and Neurorepair / The neurovasculature in stroke and dementia



**“WeiBer Saal”**

**2:30 – 4:00 PM WHITE MATTER MECHANISMS IN CNS INJURY AND DISEASE**

Chairs: Modo M., Henrich-Noack P.

- 2:30 – 3:00 PM Hamel E. (Montreal, Canada)  
**White matter alterations and cognitive failure**
- 3:00 – 3:20 PM Dijkhuizen R. M. (Utrecht, The Netherlands)  
**DTI of white matter changes in brain disease models - potentials and pitfalls**
- 3:20 – 3:40 PM Benett M. (New York, USA)  
**Improving white matter integrity after traumatic brain injury by modulating microglia/macrophages**
- 3:40 – 4:00 PM Arai K. (Boston, USA)  
**Roles of oligodendrocyte precursor cells in cerebral white matter**

**“Händel-Saal”**

**2:30 – 4:00 PM IMAGING TOOLS TO ADVANCE THE UNDERSTANDING OF NEUROINFLAMMATION**

Chairs: Klohs J., Farr T.

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- 2:30 – 2:33 PM Farr T. (Nottingham, UK)  
**Opening remarks**
- 2:33 – 2:50 PM Klohs J. (Zurich, Switzerland)  
**Near-infrared fluorescence imaging for non-invasive tracking of the neutrophil response after experimental stroke**
- 2:50 – 3:07 PM Denes A. (Budapest, Hungary)  
**SPECT and two photon imaging to reveal early central and peripheral inflammatory changes after stroke**
- 3:07 – 3:24 PM Zinnhardt B. (Muenster, Germany)  
**Novel approaches/probes for PET imaging of inflammatory mediators for brain diseases**
- 3:24 – 3:41 PM Sorokin L. (Muenster, Germany)  
**Imaging of immune cell infiltration in the brain in experimental autoimmune encephalomyelitis**
- 3:41 – 3:58 PM Dedeurwaerdere S. (Antwerp, Belgium)  
**Imaging brain inflammation following brain trauma: implications for acquired epilepsy**
- 3:58 – 4:00 PM Farr T. (Nottingham, UK)  
**Closing remarks**

**“Telemann-Saal”**

**2:30 – 4:00 PM THE ROLE OF BLOOD IN BRAIN INJURY**

Chairs: Zille M., Plesnila N.

- 2:30 – 2:35 PM Zille M. (New York, USA)  
**Opening remarks**
- 2:35 – 2:55 PM Plesnila N. (Munich, Germany)  
**The invisible vessels: their role after subarachnoid hemorrhage**
- 2:55 – 3:15 PM Kempfski O. (Mainz, Germany)  
**Subdural hemorrhage - blood, a mediator of secondary brain damage**
- 3:15 – 3:35 PM Zille M. (New York, USA)  
**Mechanisms of cell death after experimental hemorrhagic stroke**
- 3:35 – 4:00 PM Selim, M. (Boston, USA)  
**Deferoxamine in Intracerebral Hemorrhage: From patient to bench to clinical trials**
- 4:00 – 4:30 PM Coffee break, industrial exhibition

**WeiBer-Saal**

**4:30 – 6:00 PM THE SPLEEN AS A NOVEL TARGET FOR NEW STROKE THERAPIES**

Chairs: Dirnagl U., Anrather J.

- 4:30 – 4:50 PM Offner H. (Portland, USA)  
**Splenic atrophy in experimental stroke**
- 4:50 – 5:10 PM Mays R. (Cleveland, USA)  
**Results of the B01-02 phase 2 trial testing the safety and efficacy of multiStem® in treatment of ischemic stroke: evidence for modulating the peripheral immune response**
- 5:10 – 5:30 PM Savitz S. I. (Houston, USA)  
**The spleen response in patients with acute stroke**

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**“Händel-Saal”**


**4:30 – 5:40 PM MODELLING VASCULAR CONTRIBUTIONS TO COGNITIVE IMPAIRMENT AND DEMENTIA WITH ALZHEIMER'S DISEASE**

Chairs: Wilcock D., Reymann K.

- 4:30 – 4:50 PM Wilcock D. M. (Lexington, USA)  
**The hyperhomocysteinemia model of VCID results in exacerbated CAA and worsened cognition in an amyloid depositing transgenic mouse**
- 4:50 – 5:10 PM Murphy M. P. (Lexington, USA)  
**Modeling vascular contributions to cognitive impairment and dementia (VCID) with co-existing Alzheimer's pathology**
- 5:10 – 5:30 PM Cribbs D. H. (Irvine, USA)  
**Hypertension rapidly increases cerebrovascular and parenchymal pathology in amyloid precursor protein transgenic mice**



**“Telemann-Saal”**

- 4:30 – 5:45 PM NON-INVASIVE NEUROMODULATION FOR CNS DISEASES**  
Chairs: Abe K., Boltze J. KINDLY SUPPORTED BY 
- 4:30 – 5:00 PM Ayata C. (Boston, USA)  
**Vagus nerve stimulation and cortical spreading depression**
- 4:50 – 5:10 PM Rueger M. A. (Cologne, Germany)  
**Transcranial direct current stimulation elicits recovery and stem cell-mediated regeneration in a rat model of stroke**
- 5:10 – 5:30 PM Ziemann U. (Tübingen, Germany)  
**Concepts for individualized non-invasive brain stimulation for neurorehabilitation**

**Gondwanaland**

- 6:00 – 10:00 PM GONDWANALAND TOUR AND CONGRESS DINNER**

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**FRIDAY, APRIL 22, 2016**

**“Händel-Saal”**

- 9:00 – 10:30 AM PATHOPHYSIOLOGY OF VASCULAR COGNITIVE IMPAIRMENT**  
Chairs: Petzold G., Farr T. D.
- 9:00 – 9:03 AM Petzold G. (Bonn, Germany)  
**Opening remarks**
- 9:03 – 9:20 AM Petzold G. (Bonn, Germany)  
**Role of neuroinflammation in animal models of vascular cognitive impairment**
- 9:20 – 9:37 AM Horsburgh K. (Edinburgh, UK)  
**The link between vascular disease and Alzheimer’s disease: insight from a mouse model of chronic cerebral hypoperfusion**
- 9:37 – 9:54 AM Iadecola C. (New York, USA)  
**Neurovascular pathways to cognitive impairment**
- 9:54 – 10:11 AM Murphy T. H. (Vancouver, Canada)  
**Assessment of mouse cortical structure and function in models of focal and diffuse vascular injury**
- 10:11 – 10:28 AM Farr T. D. (Nottingham, UK)  
**Neuroimaging biomarkers in a mouse model of vascular cognitive impairment**
- 10:28 – 10:30 AM Petzold G. (Bonn, Germany)  
**Closing remarks**
- 10:30 – 11:00 AM Coffee break
- 11:00 – 12:30 AM NEUROPROTECTION 3: NON-CELL AUTONOMOUS MECHANISMS**  
Chairs: Lo E., Boltze J.
- 11:00 – 11:30 AM Chen J. (Pittsburgh, USA)  
**Microglia/macrophage polarization: new therapeutic target in CNS injuries**
- 11:30 – 11:50 AM Xing C. (Boston, USA)  
**Help-me signaling: non-cell autonomous mechanisms of neuroprotection and neurorecovery**
- 11:50 – 12:10 AM Perez-Pinzon M. (Miami, USA)  
**Astrocyte-neuronal interactions in ischemic tolerance**
- 12:10 – 12:30 PM Harms C. (Berlin, Germany)  
**Post-stroke angiogenesis and neuroplasticity in stroke recovery**
- 12:30 – 1:00 PM PRESIDENTIAL CLOSING LECTURE**  
Chair: Boltze J.
- 12:30 – 1:00 PM Lo E. (Boston, USA)  
**Injury and repair in the neurovascular unit**
- 1:00 – 1:30 PM CLOSING CEREMONY**



**POSTER SESSIONS**

The poster sessions P I (P I-1; P I-2; P I-3; P I-4; P I-5) will be on Wednesday and the poster sessions P II (P II-1; P II-2; P II-3; P II-5) on Thursday.

**Wednesday, April 20, 2016**

P I – 1 (9 posters)

**The neurovasculature in stroke and dementia**

P I – 2 (28 posters)

**Neuroprotection: molecular targets and further research directions**

P I – 3 (17 posters)

**Future research directions in basic and clinical neuroscience**

P I – 4 (26 posters)

**Neural and neuronal network pathology in neurotrauma and –degeneration / Understanding and controlling neuroinflammation**

P I – 5 (7 posters)

**Glial cells, the blood brain barrier and the neurovascular unit**

**Thursday, April 21, 2016**

P II – 1 (7 posters)

**Traumatic brain injury and hemorrhagic stroke**

P II – 2 (30 posters)

**Neuroprotection: molecular targets and further research directions**

P II – 3 (17 posters)

**Imaging and novel diagnostics / Post-stroke immunity: has the time come for clinical trials? / The neurovasculature in stroke and dementia / Clinical translation: from bench to bedside and back**

P II – 4 (14 posters)

**Rehabilitation and human brain plasticity**

P II – 5 (10 posters)

**Current controversies and novel hypotheses in neuroprotection and neurorepair / The neurovasculature in stroke and dementia**

**The neurovasculature in stroke and dementia**

- P I – 1-1**    **Beneficial effects of electroacupuncture on memory impairments and oligodendrocyte regeneration in a mouse model of prolonged cerebral hypoperfusion**  
Ahn S. M., Kim Y. R., Baek J. U., Shin H. K., Choi B. T.
- P I – 1-2**    **Decline of perineuronal nets and damaged GABAergic neurons in the nucleus reticular-isthami of wildtype and 3xTg mice after experimental cerebral ischemia**  
Härtig W., Appel S., Suttikus A., Grosche J., Michalski D.
- P I – 1-3**    **Anti-depressant effects of aripiprazole may involve a common CREB signaling pathway with cilostazol in chronic mild stress-treated mice after ischemic stroke**  
Kim Y. R., Kim H. N., Shin H. K., Choi B. T.
- P I – 1-4**    **Focus on vasculoprotection by the poly(ADP-ribose)polymerase inhibitor PJ34 after stroke and thrombolysis in mice**  
El Amki M., Lerouet D., Garraud M., Teng F., Beray-Berthat V., Coqueran B., Barsacq B., Abbou C., Palmier B., Marchand-Leroux C., Margaille I.
- P I – 1-5**    **Antenatal inflammation attenuates blood-brain barrier permeability after stroke in young adult mice**  
Mencl S., Neuhaus W., Förster C., Kleinschnitz C.
- P I – 1-6**    **Rivaroxaban and apixaban reduce hemorrhagic complication by protection of neurovascular unit after thrombolysis in ischemic stroke of rat**  
Moriyama R., Kono S., Yamashita T., Abe K.
- P I – 1-7**    **A novel 5-node feed forward loop to generate robust miRNA-TF regulatory network for cerebral ischemia**  
Nampoothiri S., Fayaz S. M., Rajanikant G. K.
- P I – 1-8**    **Angiotensin signaling blockade in the prevention of vascular dementia**  
Niedowicz D., Beckett T., Macheda T., Helman A., Kohler K., Powell D., Murphy M. P.
- P I – 1-9**    **Vasculo- and neuro-protective effect of Wharton jelly derived MSC and EPC on post-ischemic organotypic hippocampal slices**  
Obtulowicz P., Lech W., Strojek L., Sarnowska A., Domanska-Janik K.

**Neuroprotection: molecular targets and further research directions**

- P I – 2-1**    **The role of microglia in reducing oligodendrocyte precursor viability after chemotherapy and the protective effects of anti-depressant and anti-inflammatory treatments**  
Al-Bayti A. A., Rabiaa E., Lasio V., Fowler M., Wigmore P.
- P I – 2-2**    **Vitamin D3 improves decline in cognitive function and cholinergic transmission in pre-frontal cortex of streptozotocin-induced diabetic rats**  
Alrefaie Z., Alhyani A.
- P I – 2-3**    **Angiotensin-(1-7) increases tissue salvage following cerebral ischaemia**  
Arroja M. M. C., Reid E., Holmes W., Nicklin S. A., Work L. M., McCabe C.
- P I – 2-4**    **Development of a neuroprotective peptide that interferes calpain-processing of NM-DAR-GluN2A subunits reducing ischemic brain damage**  
Ayuso-Dolado S., Esteban-Ortega G. M., González-Camacho S., Tejada G. S., Díaz-Guerra M.





- P I – 2-5** **Protective effect of bone marrow mesenchymal stem cells transplantation against ischemic brain injury via JNK pathway regulation**  
Azami A., Vahidinia Z., Atlasi M., Nejati M., Beyer C.
- P I – 2-6** **Ageing induced alterations in Ezrin driven peripheral nerve regeneration**  
Büttner R., Schulz A., Baader S., Bauer R., Morrison H.
- P I – 2-7** **Radicals and radical target repair as new therapeutic approaches in stroke**  
Casas A. I., Langhauser F., Mencil S., Göb E., Dao V. T., Guney E., Kleikers P., Lopez M. G., Menche J., László Barabási A., Kleinschnitz C., Schmidt H.
- P I – 2-8** **Effects of SUMO modulation in neuroprotection and cellular function**  
Cerdeira M., Lättig G., Harms C.
- P I – 2-9** **Sildenafil, a cyclic GMP phosphodiesterase inhibitor, induces microglial polarization after focal ischemia in the neonatal mouse brain**  
Charriaut-Marlangue C., Moretti R., Leger P.-L., Pansiot J., Bonnin P., Baud O.
- P I – 2-10** **Cyclophilin A/CD147 interactions participate in early brain injury after subarachnoid hemorrhage in rats**  
Dang B., Wang Z., Li H., Shen H., Chen G.
- P I – 2-11** **Role of neurexin-1 $\beta$  and neuroligin-1 in cognitive dysfunction after subarachnoid hemorrhage in rats**  
Shen H., Gao A., Wang Z., Li H., Chen G.
- P I – 2-12** **Hydrogen sulfide ameliorates early brain injury following subarachnoid hemorrhage in rats**  
Cui Y., Yu Z., Li H., Shen H., Chen G.
- P I – 2-13** **Conformations of tissue-type plasminogen activator (tPA) orchestrate neuronal survival by a crosstalk between EGFR and NMDAR.**  
Chevilley A., Lenoir S., Lesept F., Bertrand T., Parcq J., Vivien D.
- P I – 2-14** **Neuroprotection of atorvastatin against oxygen-glucose deprivation-induced neural stem cell death**  
Choi N.-Y.
- P I – 2-15** **Effect of monomethyl-fumarate on experimental stroke**  
Clausen B. H., Lundberg L., Yli-Karjanmaa M., Martin N. A., Svensson M., Alfsen M. Z., Nielsen H. H., Finsen B., Deierborg T., Illés Z. L., Lambertsen K. L.
- P I – 2-16** **Modulation of serotonin signaling has no effect on established amyloid pathology in the APP<sup>swePS1 $\Delta$ E9</sup> mouse model of Alzheimer's disease**  
Severino M., Sivasaravanaparan M., Ørum Olesen L., von Linstow C. U., Metaxas A., Bouzinova E., Lambertsen K. L., Babcock A. A., Hasselstrøm J., Gramsbergen J. B., Wiborg O., Finsen B.
- P I – 2-18** **Human iPSC derived neurons recorded by MEA technology: A powerful tool for functional assessment of in vitro neurotoxicity**  
Hess D., Luerman G., Guenther E., Bohlen H.
- P I – 2-19** **Intravenously administered Interleukin-6 improves functional outcome after focal cerebral ischemia without affecting infarct volumes**  
Hjortdal Groenhøj M., Hjelm Clausen B., Fenger C., Lykke Lambertsen K., Finsen B.
- P I – 2-20** **Neuronal death after brain ischemia is blocked by interfering with the E2F4-regulated Orc1 de-novo transcription in neurons**  
Hübner D.

- P I – 2-21** **Effects of clopidogrel resinate and clopidogrel bisulfate against oxygen glucose deprivation-induced neural stem cell death**  
Hwang M. A.
- P I – 2-22** **The PTEN-long isoform influences AKT homeostasis and neuronal survival after ischemic stress**  
Jochner M. C. E., An J., Eickholt B. J., Harms C.
- P I – 2-23** **Neuroprotection using intra-arterial cerebral endothelial cell transplantation in rat cerebral ischemia**  
Kim H.-S., Park M.-S., Choi K.-H.
- P I – 2-24** **Proteomic analysis of the effect of acupuncture on suppressing kainic acid-induced neuronal destruction in mouse hippocampus**  
Kim S., Bae C.-H., Ryu S., Kim D.
- P I – 2-25** **Effects of Sirt5 deletion and PKC $\epsilon$  activation on the brain primary metabolome**  
Koronowski K., Stradecki H., Morris-Blanco K., Garrett T., Perez-Pinzon M.
- P I – 2-26** **Long-term treatment of Statins has negative effects on neural stem cells through inhibiting proliferation and inducing apoptosis**  
Lee E.-H.
- P I – 2-27** **Transcranial low-level light therapy suppresses inflammasome-mediated brain damage in experimental ischemic stroke**  
Lee H. I., Lee S.-W., Kim N. G., Park K.-J., Choi B. T., Shin Y.-I., Shin H. K.
- P I – 2-28** **Glyoxalase 1 determines the extent of neuronal injury**  
Pieroh P., Wagner D. C., Alessandri B., Dabbagh-Nazari M., Boltze J., Ehrlich A., Ghadban C., Hobusch C., Birkenmeier G., Dehghani F.

**Future research directions in basic and clinical neuroscience**

- P I – 3-1** **Thermal plantar test in experimental ischemic stroke**  
Monza L., Cai R., Cuccione E., Pirovano S., Versace A., Riva M., Carone D., Ferrarese C., Beretta S.
- P I – 3-2** **Acute high-fat diet in the absence of obesity worsens stroke outcome**  
Haley M., Krishnan S., Thakrar J., de Hoog L., Schiessl I., Allan S., Lawrence C.
- P I – 3-3** **The stemness properties and neural differentiation potential of Wharton's jelly-derived MSC depending on method of cell isolation**  
Lech W., Dreka K., Strojek L., Sarnowska A., Domanska-Janik K.
- P I – 3-4** **Brain plasticity under different social environment: molecular and behavioral changes**  
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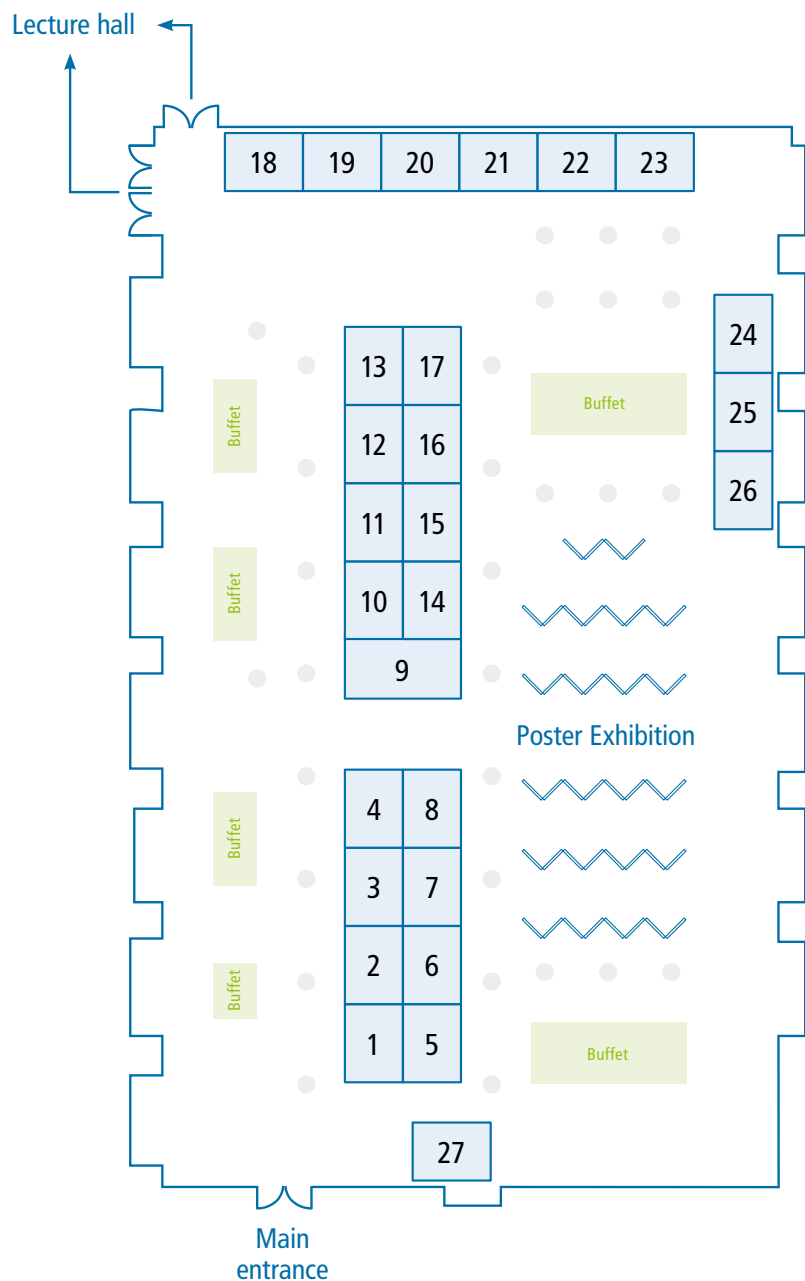
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1 Camm, A. J. et al., Eur Heart J 2015; DOI:10.1093/eurheartj/ehv466

**Dieses Arzneimittel unterliegt einer zusätzlichen Überwachung.** Bitte melden Sie jeden Verdachtsfall einer Nebenwirkung über das Bundesinstitut für Arzneimittel und Medizinprodukte: [www.bfarm.de](http://www.bfarm.de) **Xarelto 15 mg/20 mg Filmtabletten.** Wirkstoff: Rivaroxaban. Vor Verschreibung Fachinformation beachten. **Zusammensetzung:** Wirkstoff: 15 mg/20 mg Rivaroxaban. **Sonstige Bestandteile:** Mikrokristalline Cellulose, Croscarmellose-Natrium, Lactose-Monohydrat, Hypromellose, Natriumdodecylsulfat, Magnesiumstearat, Macrogol (3350), Titanoxid (E171), Eisen(III)oxid (E172). **Anwendungsgebiete:** Prophylaxe von Schlaganfällen und systemischen Embolien bei erwachsenen Patienten mit nicht-valvulärem Vorhofflimmern und einem oder mehreren Risikofaktoren, wie kongestiver Herzinsuffizienz, Hypertonie, Alter ab 75 Jahren, Diabetes mellitus, Schlaganfall oder transitorischer ischämischer Attacke in der Anamnese, Behandlung von tiefen Venenthrombosen (TVT) und Lungenembolien (LE) sowie Prophylaxe von rezidivierenden TVT und LE bei Erwachsenen. **Besondere Patientengruppen:** Patienten, die kardiovertiert werden sollen; Bei Patienten, bei denen eine Kardioversion erforderlich sein kann, kann die Behandlung mit Xarelto begonnen oder fortgesetzt werden. **Gegenanzeigen:** Überempfindlichkeit gegen Rivaroxaban oder einen d. sonst. Bestandteile; akute, klinisch relevante Blutungen; Läsionen od. Situationen, wenn diese als signifikantes Risiko für eine schwere Blutung angesehen werden; gleichzeitige Anwendung von anderen Antikoagulanzen außer in der speziellen Situation der Umstellung der Antikoagulationstherapie od. wenn unfrakt. Heparin in Dosen gegeben wird, die notwendig sind, um die Durchgängigkeit eines zentralvenösen oder arteriellen Katheters zu erhalten; Lebererkrankungen, die mit einer Koagulopathie u. einem klinisch relevanten Blutungsrisiko, einschließlich zirrhotischer Patienten mit Child Pugh B und C, verbunden sind; Schwangerschaft u. Stillzeit. **Vorsichtsmaßnahmen und Warnhinweise:** Klinische Überwachung in Übereinstimmung mit der antikoagulatorischen Praxis während der gesamten Behandlungsdauer empfohlen. Die Gabe von Xarelto sollte bei Auftreten einer schweren Blutung unterbrochen werden. Mit zunehmendem Alter kann sich d. Blutungsrisiko erhöhen. Die Anwendung von Rivaroxaban wird **nicht empfohlen** bei Patienten: - mit einer schweren Nierenfunktionsstörung (Kreatinin-Clearance < 15 ml/min), - die gleichzeitig eine systemische Behandlung mit Wirkstoffen erhalten, die sowohl CYP3A4 als auch P-gp stark inhibieren, z. B. Azol-Antimykotika oder HIV-Proteaseinhibitoren, - mit erhöhtem Blutungsrisiko, - die gleichzeitig mit starken CYP3A4 Induktoren behandelt werden, es sei denn, d. Patient wird engmaschig auf Zeichen u. Symptome einer Thrombose überwacht; da keine Daten vorliegen, bei Patienten: - unter 18 Jahren, - mit künstlichen Herzklappen, - mit einer LE, die hämodynamisch instabil sind oder eine Thrombolysie oder pulmonale Embolektomie benötigen, - die zeitgleich mit Dronedaron behandelt werden. Die Anwendung sollte **mit Vorsicht erfolgen** bei Erkrankungen, die mit einem erhöhten Blutungsrisiko einhergehen; bei Patienten: - mit einer schweren Nierenfunktionsstörung (Kreatinin-Clearance 15–29 ml/min), - mit einer Nierenfunktionsstörung, wenn gleichzeitig andere Arzneimittel eingenommen werden, die zu erhöhten Rivaroxaban Plasmaspiegeln führen, - die gleichzeitig auf die Gerinnung wirkende Arzneimittel erhalten; bei Anwendung von neuraxialer Anästhesie oder Spinal/Epiduralpunktion. Für Patienten mit einer mittelschweren oder schweren Nierenfunktionsstörung sowie für Patienten mit einer TVT/LE, deren abgeschätztes Blutungsrisiko überwiegt, gelten spezielle Dosisempfehlungen. Bei Patienten mit dem Risiko einer ulzerativen gastrointestinalen Erkrankung kann eine ulkusprophylaktische Behandlung erwogen werden. Obwohl d. Behandlung mit Rivaroxaban keine Routineüberwachung d. Exposition erfordert, können d. mit einem kalibrierten quantitativen Anti-Faktor Xa-Test bestimmten Rivaroxaban-Spiegel in Ausnahmesituationen hilfreich sein. Xarelto enthält Lactose. **Nebenwirkungen:** **Häufig:** Anämie, Schwindel, Kopfschmerzen, Augeneinblutungen, Hypotonie, Hämatome, Epistaxis, Hämoptysie, Zahnfleischbluten, gastrointestinale Blutungen, gastrointestinale Blutungen, abdominale Schmerzen, Dyspepsie, Übelkeit, Verstopfung, Durchfall, Erbrechen, Pruritus, Hautrötung, Ekchymose, kutane und subkutane Blutung, Schmerzen in den Extremitäten, Blutungen im Urogenitaltrakt (Menorrhagie sehr häufig bei Frauen < 55 Jahre b. d. Behandlung d. TVT, LE sowie Prophylaxe von deren Rezidiven), Nierenfunktionseinschränkung, Fieber, periphere Ödeme, verminderte Leistungsfähigkeit, Transaminasenanstieg, postoperative Blutungen, Bluterguss, Wundsekretion. **Gelegentlich:** Thrombozythämie, allergische Reaktion, allergische Dermatitis, zerebrale und intrakranielle Blutungen, Synkope, Tachykardie, trockener Mund, Leberfunktionsstörung, Urtikaria, Hamarthros, Unwohlsein, Anstieg von: Bilirubin, alkalischer Phosphatase im Blut, LDH, Lipase, Amylase, GGT. **Selten:** Gelbsucht, Blutung in einen Muskel, lokale Ödeme, Anstieg von konjugiertem Bilirubin, vaskuläres Pseudoaneurysma. **Häufigkeit nicht bekannt:** Kompartmentsyndrom oder (akutes) Nierenversagen als Folge einer Blutung. **Erfahrungen seit der Marktzulassung (Häufigkeit nicht abschätzbar):** Angioödem u. allergische Ödeme, Cholestase und Hepatitis (einschließlich hepatozelluläre Schädigung), Thrombozytopenie. Verschreibungspflichtig, Stand: Fl/15, Juli 2015 Bayer Pharma AG, 13342 Berlin, Deutschland



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**GET TOGETHER**

TUESDAY, APRIL 19, 2016 | 08:00 PM

Do not miss the chance to mingle and mix with highly renowned researchers from every corner of the globe as well as industrial leaders. Be our guest at the Get together in the exhibition area ("Großer Saal") with free drinks and a delicious buffet.

**Admission: free**

**SOCIAL PROGRAM – DINNER | GONDWANALAND ZOO LEIPZIG**

THURSDAY, APRIL 21, 2016 | 06:00 PM

We are delighted to invite you to a social dinner on Thursday, April 21, 2016 in the unique location of the Gondwanaland Zoo Leipzig.

**Discover three continents under one roof**

Entering Gondwanaland will appeal to all of your senses as you come into close contact with the tropical rainforest of Africa, Asia and South America. Under a covered area (larger than two football pitches) there are 100 exotic animal species and approximately 500 different plant and animal species. Follow the jungle paths or treetop trails and drift along in a boat on the jungle river Gamanile.

Enjoy the unique tropical atmosphere and spend an evening with your colleagues and friends.

**Address:** Zoo Leipzig | Pfaffendorfer Str. 29 | 04105 Leipzig

**Begin:** 06:00 pm

**Admission:** 75,00 €

Please note that no more tickets are available at the moment.

Check back at the registration desk if tickets have been returned.

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Located in the heart of Germany and about one hour drive south-west of Berlin, Leipzig is one of the most prosperous German cities, enjoying an extraordinarily diverse and exciting city-flair.

As a university town or a place of business and trade, as a city of leisure and nature as well as a cultural hub – Leipzig captivates its visitors and inhabitants every time anew with its wide range of festivals, cultural highlights and rich history.

Poets, composers and artists such as Goethe, Schiller and Bach have shaped the city's old and strong cultural landscape for centuries. Today, this active cultural life can be experienced in the famous Gewandhaus, the St. Thomas church, the central theater or the Leipzig Opera house. Museums, collections and galleries of contemporary art are a proof of the hip art scene, currently emerging in Leipzig and attracting numerous creative people from larger, but established and settled cultural hotspots.

Moreover, famous neuroscientists such as Paul Flechsig and Bernhard Katz studied and worked in Leipzig, contributing to its scientific reputation which is nowadays represented by one of the most modern European University hospitals as well as a powerful and productive research community.

The Leipzig Fair dates back 800 years and is regarded as the world's oldest commercial and technical exhibition. In recent decades, Leipzig has also achieved economic success with important industry establishments including Porsche and BMW. Combined with an efficient traffic infrastructure, Leipzig has developed as an important hotspot for business and commerce and therefore follows its long reputation as significant center for trade and fairs.

Since autumn 2015 the congress hall adjacent to Zoo Leipzig is available as a new venue for events. The Leipzig congress hall is an ideal location for congresses, conferences, company events, receptions, and evening events of every kind for up to 1500 people.

Welcome to Leipzig – and welcome to the 9th International Symposium on Neuroprotection and Neurorepair!

## STATE OF THE ART

Scissors - Retractors - Magnifiers - Probes & Hooks - Bone Instruments - Animal Identification  
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Wound Closure - Surgical Plates - Instrument Care & Sterilization - Rongeurs - Scalpels & Knives  
Clamps - Pins & Holders - Needles & Needle Holders - Student Quality Instruments & Much More



# CITY MAP



- 1** Kongresshalle
- 2** Gondwanaland
- 3** Seaside Park Hotel

- 4** Mercure Art Hotel
- 5** Arena Hotel
- 6** Main Stadion