The
7th London-Innsbruck Colloquium on Status Epilepticus and Acute Seizures
7-9 April 2019
The Francis Crick Institute
London, UK

Held under the auspices of the ILAE British Chapter

www.statusepilepticus.eu
LIST OF FACULTY
Sándor Beniczky, Roskilde, Denmark
Ahmad Beydoun, Beirut, Lebanon
Nadir Bharucha, Mumbai, India
Meir Bialer, Jerusalem, Israel
Peter Blain, Newcastle upon Tyne, United Kingdom
Tom Bleck, Chicago, USA
Richard Chin, Edinburgh, United Kingdom
Hannah Cock, London, United Kingdom
Andrew Cole, Boston, USA
Mark Cook, Melbourne, Australia
Peter Crino, Baltimore, USA
Helen Cross, London, United Kingdom
Monica Ferlisi, Verona, Italy
Alon Friedman, Halifax, Canada
Renzo Guerrini, Florence, Italy
Cecil Hahn, Toronto, Canada
Raimund Helbok, Innsbruck, Austria
David Henshall, Dublin, Ireland
Sara Hocker, Rochester, USA
Reetta Kälviäinen, Kuopio, Finland
Peter Kaplan, Baltimore, USA
Jaideep Kapur, Chalottesville, USA
Christoph Kellinghaus, Osnabrück, Germany
Matthias Koepp, London, United Kingdom
Dimitri Kullmann, London, United Kingdom
Lieven Lagae, Leuven, Belgium
Stéphane Legriel, Le Chesnay, France
Markus Leitinger, Salzburg, Austria
Holger Lerche, Tübingen, Germany
Brian Litt, Philadelphia, USA
Tobias Loddenkemper, Boston, USA
Daniel Lowenstein, San Francisco, USA
Rosalyn Moran, London, United Kingdom
Ronit Pressler, London, United Kingdom
Ashalatha Radhakrishnan, Thiruvananthapuram, India
Shamima Rahman, London, United Kingdom
Michael Rogawski, Sacramento, USA
Eric Rosenthal, Weston, USA
James Rothman, London, United Kingdom
Stephan Rügg, Basel, Switzerland
Simon Shorvon, London, United Kingdom
Nicola Specchio, Rome, Italy
Eugen Trinka, Salzburg, Austria
Annamaria Vezzani, Milan, Italy
Matthew Walker, London, United Kingdom
Claude Wasterlain, Los Angeles, USA
Rob Wykes, London, United Kingdom
## PROGRAMME

### SATURDAY, APRIL 6\(^{TH}\), 2019

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>09.30</td>
<td>Pre-colloquium Teaching Course on EEG in status epilepticus and on the intensive care unit</td>
<td>Institute of Education, 20 Bedford Way, London</td>
<td>An international faculty leaders in the field, and delegates will receive a pack of teaching materials.</td>
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<td>The course is designed for trainees and consultant level clinicians and for technical staff. Details on the programme you find on <a href="https://ilaebritish.org.uk/events/eeg-in-status-epilepticus-and-on-the-intensive-care-unit/">https://ilaebritish.org.uk/events/eeg-in-status-epilepticus-and-on-the-intensive-care-unit/</a></td>
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### SUNDAY, APRIL 7\(^{TH}\), 2019

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<tr>
<th>Time</th>
<th>Event</th>
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<th>Speakers</th>
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<tbody>
<tr>
<td>09.15 - 09.30</td>
<td>Introduction</td>
<td>Wellcome auditorium</td>
<td>Simon Shorvon, Eugen Trinka, Matthew Walker</td>
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<tr>
<td>09.30 - 12.40</td>
<td>Session 1: Networks and novel targets</td>
<td>Wellcome auditorium</td>
<td>Annamaria Vezzani, Alon Friedman</td>
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<tr>
<td>09.30 - 10.10</td>
<td>Gene therapy for closed-loop seizure suppression</td>
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<td>Dimitri Kullmann</td>
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<td>10.10 - 10.40</td>
<td>Coffee break</td>
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<tr>
<td>10.40 - 11.20</td>
<td>Secondarily generalized convulsive status epilepticus: circuits and mechanisms</td>
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<td>Jaideep Kapur</td>
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<td>11.20 - 12.00</td>
<td>Dynamic causal modeling of the EEG in epilepsy</td>
<td></td>
<td>Rosalyn Moran</td>
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<td>12.00 - 12.40</td>
<td>Targeting reactive oxygen species in status epilepticus</td>
<td></td>
<td>Matthew Walker</td>
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<tr>
<td>Time</td>
<td>Session</td>
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| 10.40 - 12.40| **Parallel session: Workshop - Outcomes in status epilepticus**  
              | Seminar suite  
              | Chairs: Helen Cross, Holger Lerche  
              | Outcome of childhood convulsive status epilepticus  
              | Richard Chin  
              | Electrographic seizure burden and outcome following paediatric status epilepticus  
              | Cecil Hahn  
              | Why do patients die after status epilepticus?  
              | Sara Hocker |
| 12.40 - 14.00| Lunch break & posters & conference photograph |
| 14.00 - 16.00| **Session 2: Biomarkers**  
              | Seminar suite  
              | Chairs: Peter Crino, Claude Wasterlain  
              | 14.00 - 14.40 MicroRNAs as biomarkers and treatment targets in status epilepticus  
              | David Henshall  
              | 14.40 - 15.20 Biomarkers of inflammation and reactive oxygen species in status epilepticus; implications for therapy  
              | Annamaria Vezzani  
              | 15.20 - 16.00 Blood-brain barrier disruption in status epilepticus: mechanisms and role in epileptogenesis  
              | Alon Friedman |
14.00 - 16.00  Parallel session: Workshop - When backs are against the wall. The clinical management of status epilepticus in specific situations
Wellcome auditorium
Chairs: Reeta Kälviäinen, Lieven Lagae

Management of status epilepticus in palliative care patients
Reeta Kälviäinen

Status epilepticus in pregnancy - can we frame a uniform treatment protocol?
Ashalatha Radhakrishnan

A ketamine clinical trial in status epilepticus
Eric Rosenthal

16.00 - 16.30  Coffee break

16.30 - 17.40  Session 3: Physical treatments of status epilepticus
Wellcome auditorium
Chairs: Tom Bleck, Matthias Koepp

16.30 - 17.10  Hypothermia as a treatment of status epilepticus
Stéphane Legriel

17.10 - 17.40  Neurostimulation in the treatment of status epilepticus
Eugen Trinka

19.30  Colloquium Dinner
at The Athenaeum Club, London
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<tr>
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<tr>
<td>08.30 - 10.00</td>
<td><strong>Session 4: Hullabaloo-Controversies</strong></td>
<td>Wellcome auditorium</td>
<td>Meir Bialer, Mark Cook</td>
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<tr>
<td>08.30 - 09.00</td>
<td>Lessons from the ESSET trial</td>
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<td>Hannah Cock</td>
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<tr>
<td>09.00 - 09.30</td>
<td>Do neurosteroids have any future in the treatment of status epilepticus?</td>
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<td>Mike Rogawski</td>
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<td>09.30 - 10.00</td>
<td>What is the role of next-generation sequencing in status epilepticus?</td>
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<td>Renzo Guerrini</td>
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<td>10.00 - 10.30</td>
<td>Coffee break</td>
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<tr>
<td>10.30 - 11.50</td>
<td><strong>Session 5: Big data, seizure detection and prediction</strong></td>
<td>Wellcome auditorium</td>
<td>Daniel Lowenstein, Christoph Kellinghaus</td>
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<tr>
<td>10.30 - 11.10</td>
<td>New avenues in seizure detection and prediction</td>
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<td>Mark Cook</td>
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<td>11.10 - 11.50</td>
<td>Big data – future roles in status epilepticus</td>
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<td>Brian Litt</td>
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<td>11.50 - 13.00</td>
<td>Lunch &amp; posters</td>
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<td>13.00 - 14.00</td>
<td><strong>Satellite Symposium Zogenix</strong></td>
<td>Wellcome auditorium</td>
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<td>13.00 - 13.05</td>
<td>Welcome and introduction</td>
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<td>Matthew Walker</td>
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<td>13.05 - 13.20</td>
<td>The value of preclinical models?</td>
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<td>Benoit Martin</td>
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<td>13.20 - 13.35</td>
<td>Neuropathology: Insights and challenges</td>
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<td>Maria Thom</td>
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<td>13.35 - 13.50</td>
<td>Clinical and family/patient perspectives</td>
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<td>Richard Chin</td>
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<td>13.50 - 14.00</td>
<td>Where might such understanding lead us?</td>
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<td>Matthew Walker</td>
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<tr>
<td>Time</td>
<td>Session/Session 7</td>
<td>Location</td>
<td>Chairs</td>
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| 14.00 - 15.30 | Session 6: Genes and paediatrics                                                 | Wellcome auditorium | Richard Chin, Renzo Guerrini     | Status epilepticus and genetic variations in sodium channel genes (Holger Lerche)  
|               |                                                                                 |                   |                                  | Status epilepticus and mTOR signaling (Peter Crino)                            
|               |                                                                                 |                   |                                  | The role of PCDH19 in refractory status epilepticus (Nicola Specchio)          |
| 14.00 - 15.30 | Parallel session: Workshop - Novel variants of status epilepticus: de novo status and status due to nerve gas | Seminar suite     | Tom Bleck                        | Prospective evaluation of new-onset seizures presenting as status epilepticus (Ahmad Beydoun)  
|               |                                                                                 |                   |                                  | Neurological consequences of organophosphate poisoning (Peter Blain)            
|               |                                                                                 |                   |                                  | Role of KCNQ2/3 potassium channels in cholinergic status epilepticus (Jaideep Kapur) |
| 15.30 - 16.00 | Coffee break                                                                    |                   |                                  |                                                                                |
| 16.00 - 16.30 | Session 7: Nobel laureate lecture                                                | Wellcome auditorium | Simon Shorvon, Matthew Walker   | New insights into the mechanism of synchronous neurotransmitter disease (Professor James Rothman) |
### Session 8: Paediatrics and research networks

**Wellcome auditorium**  
**Chairs:** Cecil Hahn, Reetta Kälviäinen

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<tr>
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<tr>
<td><strong>16.30 - 17.00</strong></td>
<td>The treatable causes of neonatal status epilepticus</td>
<td>Ronit Pressler</td>
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<td><strong>17.00 - 17.30</strong></td>
<td>The SENSE registry of status epilepticus</td>
<td>Christoph Kellinghaus</td>
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<td><strong>17.30 - 18.00</strong></td>
<td>The European Reference Network for rare and complex epilepsies</td>
<td>Helen Cross</td>
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<tr>
<td><strong>18.00 - 18.30</strong></td>
<td>Update on North American pediatric convulsive status epilepticus research networks</td>
<td>Tobias Loddenkemper</td>
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### Parallel session: Data blitz – epidemiology, outcome and novel clinical treatments

**Seminar suite**  
**Chairs:** Sara Hocker, Monica Ferlisi  
**International panel:** Rajashekh Reddi, Sashendra Saxena

| O-01 | Epidemiology of status epilepticus in adults: data on two population based studies in Eastern Finland | Anne-Mari Kantanen, Joni Sairanen, Reetta Kälviäinen (Kuopio, Finland) |
| O-02 | 30-day re-admission after status epilepticus in Unites States: Insights from nationwide re-admission database | Monica B. Dhakar, David Thurman, Hiba A. Haider, Andres R. Rodriguez, Nathalie Jette, Edward Faught (Atlanta, New York; United States) |
| O-03 | Status epilepticus mortality score after 30 days of hospital discharge: Development and validation using competing risks analysis | Somsak Tiamkao, Prapassara Sirikarn, Porjai Pattanittum (Khon Kaen, Thailand) |
| O-04 | Cause of death in status epilepticus patients | Somsak Tiamkao, Prapassara Sirikarn, Porjai Pattanittum (Khon Kaen, Thailand) |
O-05  Factors related to the development of mesial temporal sclerosis after status epilepticus

Estevo Santamarina, Silvana Sarria, Laura Abraira, Elena Fonseca, Xavier Salas - Puig, Manuel Quintana, Manuel Toledo (Barcelona, Spain)

O-06  Neurological outcome of post-anoxic refractory status epilepticus after aggressive treatment

Simone Beretta, Anna Coppo, Elisa Bianchi, Clara Zanchi, Davide Carone, Andrea Stabile, Giada Padovano, Endrit Sulmina, Graziella Bogliun, Giuseppe Foti, Carlo Ferrarese, Ettore Beghi, Leonello Avalli (Monza, Milano; Italy)

O-07  Prolonged seizures in children

Clodagh Mitchell, Libby Dickson, Paul Leonard, Celia Brand, Ailsa McLellan, Jay Shetty (Edinburgh, United Kingdom)

O-08  Long-term safety and efficacy of add-on cannabidiol (CBD) treatment in patients with Lennox Gastaut Syndrome in an open-label extension trial (GWPCARE5)

Richard Chin, Anup Patel, Antonio Gil-Nagel, Wendy Mitchell, M Scott Perry, Arie Weinstock, Lauren Whyte, Kevan VanLandingham (Columbus, USA, Madrid, Spain, Los Angeles, USA, Fort Worth, USA, Buffalo, USA, Cambridge, UK, Carlsbad, USA)

O-09  Serum neurofilament light chain as a prognostic marker in post-anoxic encephalopathy

Giulio Disanto, Chiara Prosperetti, Claudio Gobbi, Christian Barro, Zuzanna Michalak, Tiziano Cassina, Jens Kuhle, Gabriele Casso, Pamela Agazzi (Lugano, Basel, Ticino; Switzerland)

O-10  Responsive neurostimulation therapy for super-refractory autoimmune epilepsy

Anteneh Feyissa, William Tatum, Jeffrey Britton (Jacksonville, Rochester; United States)
0-11  Updated data on the tocilizumab treatment in new onset refractory status epilepticus

Hyoshin Son, Soon-Tae Lee, Hye-Rim Shin, Eun-Young Kim, Woo-Jin Lee, Kon Chu, Kyung-Il Park, Sang Kun Lee (Seoul, South Korea)

0-12  Combination therapy of immunoglobulin, Rituximab, and Tocilizumab in treating acute autoimmune encephalitis

Woo-jin Lee, Han-Sang Lee, Hye-Rin Shin, Eun-Young Kim, Hyoshin Son, Yong-Won Shin, Hyeyeon Chang, Soon-Tae Lee, Kyung-Il Park, Kon Chu, Sang Kun Lee (Seoul, South Korea)
08.30 - 10.00  **Session 9: Sponsored talks, part I: Novel drugs and devices in development in status epilepticus and acute seizures**  
**Wellcome auditorium**  
**Chairs: Daniel Lowenstein, Matthias Koepp**

08.30 - 09.00  Management of prolonged seizures and myoclonic status in CLN2 disease: has this changed over time?  
Nicola Specchio (on behalf of Biomarin Pharmaceuticals, Inc.)

09.00 - 09.30  Staccato Alprazolam for acute treatment of seizures  
Jouko Isojarvi (on behalf of Engage Therapeutics, Inc.)

09.30 - 10.00  Brain distribution and SV2A receptor occupancy of Brivaracetam and Levetiracetam - Comparative PET studies in rodents, primates and healthy human subjects  
Felix Rosenow (on behalf of UCB, S.A.)

10.00 - 10.30  Coffee break

10.30 - 12.00  **Session 9: Sponsored talks, part II: Novel drugs and devices in development in status epilepticus and acute seizures**  
**Wellcome auditorium**  
**Chairs: Daniel Lowenstein, Peter Kaplan**

10.30 - 11.00  Non-Convulsive status epilepticus: letting go of old traditions  
Josef Parvizi (on behalf of Ceribell, Inc.)

11.00 - 11.30  Enabling drug delivery technologies to address unmet needs in epilepsy  
Adrian Rabinowicz (on behalf of Neurelis, Inc.)

11.30 - 12.00  Vagus nerve stimulation in super refractory status epilepticus  
Kristl Vonck (on behalf of LivaNova, Plc.)

12.00 - 13.00  Lunch & Posters
13.00 - 14.00  **Session 10: Novel treatment approaches in status epilepticus**  
Wellcome auditorium  
Chairs: Brian Litt, Nadir Bharucha

13.00 - 13.30  Lessons from the Sage trial  
Andrew Cole

13.30 - 14.00  Polytherapy for status epilepticus: the proof of the pudding  
Claude Wasterlain

14.00 - 14.30  Coffee break

14.30 - 16.30  **Session 11: Novel drugs in the treatment of status epilepticus**  
Wellcome auditorium  
Chairs: Nicola Specchio, Tobias Loddenkemper

14.30 - 15.00  New treatments of mitochondrial disease and their impact on status epilepticus  
Shamima Rahman

15.00 - 15.30  Fenfluramine: a possible treatment for acute repetitive seizures?  
Lieven Lagae

15.30 - 16.00  The promise of new valproic acid amide derivatives in status epilepticus  
Meir Bialer

16.00 - 16.30  Propofol prodrug for the treatment of acute repetitive seizures  
Mike Rogawski

14.30 - 16.30  **Parallel session: Workshop - Data blitz - EEG, basic aspects and experimental treatments**  
Seminar suite  
Chairs: Rob Wykes, David Henshall  
International panel: Chandrashekhar Agrawal, Majid Gaffar

- O-13  
Electrographic predictors of successful weaning from IV anesthetics in refractory status epilepticus  
Daniel B. Rubin, Brigid Angelini, Maryum Shoukat, Manohar Ghanta, J. Valdery Moura, Jin Jing, Sahar Zafar, M. Brandon Westover, Sydney Cash, Eric Rosenthal (Boston, United States)
O-14  How and whom to monitor for seizures in an intensive care unit: a systematic review and meta-analysis

Chusak Limotai-Atiporn Ingsathit, Kunlawat Thadanipon, Mark McEvoy, John Attia, Ammarin Thakkinstian (Bangkok, Thailand; Newcastle, Australia)

O-15  Interaction of GABAA and GABAB antagonists after status epilepticus in immature rats

Pavel Mares, Hana Kubova (Prague, Czech Republic)

O-16  The proposed multimodal mechanism of action of cannabidiol (CBD) in epilepsy: Modulation of intracellular calcium and adenosine-mediated signalling

Colin G Stott, Kathryn Nichol, Nicholas A Jones, Royston A Gray, Michaël Bazelot, Benjamin J Whalley (Cambridge, UK; Carlsbad, USA)

O-17  Drug-drug interaction studies with coadministration of cannabidiol (CBD) and Clobazam, Valproate, Stiripentol or Midazolam in healthy volunteers and adults with epilepsy

David Critchley, Jerzy Szaflarski, Philip Patsalos, Barry Gidal, Kevan VanLandingham, Gilmour Morrison (Cambridge, UK; University of Alabama at Birmingham, USA; London, UK; Madison, USA; Carlsbad, USA)

O-18  NADPH oxidase inhibition modifies antiepileptogenesis and chronic epilepsy

Tawfeeq Shekh-Ahmad, Andreas Lieb, Stjepana Kovac, Lukas Gola, Andrey Y. Abramov, Matthew Walker (London, United Kingdom; Muenster, Germany)

O-19  Acute reduction of the Extracellular Trans-Synaptic Protein LGI1 increases network excitability

Eleonora Lugarà, Marco Leite, Elodie Chabrol, Gabriele Lignani, Matthew C. Walker (London, UK)
O-20 Argonaute-2 sequencing of rodent status epilepticus models identifies multiple microRNA targets for seizure suppression

Gareth Morris, Morten Veno, Cristina Reschke, Sebastian Bauer, Yan Yan, Tobias Engel, R Jereon Pasterkamp, Jochen HM Prehn, Stephanie Schorge, Felix Rosenow, Jorgen Kjems, David C Henshall (Dublin, Ireland; London, United Kingdom; Aarhus, Denmark; Marburg, Germany; Frankfurt am Main, Germany; Utrecht, Netherlands)

O-21 Glio-neuronal imbalance in a stem cell-derived model of Tuberous Sclerosis Complex

Paula Rocktaeschel, Arjune Sen, Zameel Cader (Oxford, United Kingdom)

O-22 Efficacy of intranasal Allopregnanolone in a mouse seizure model

Dorota Zolkowska, Michael A. Rogawski (Sacramento, United States)

O-23 Anticonvulsant and neuroprotective effects of delayed treatment with Midazolam in a rodent model of organophosphate exposure

Jay Spampanato, Wendy Pouliot, Bonnie Roach, Melissa Smolik, F. Edward Dudek (Salt Lake City, United States)

O-24 Rapid intranasal delivery of diazepam utilizing prodrug/enzyme formulations: a promising drug delivery strategy for outpatient treatment of seizure emergencies

Davin Rautiola, Patricia D. Maglalang, Narsihmulu Cheryala, Kathryn M. Nelson, Gunda I. Georg, Jared M. Fine, Aleta L. Svitak, Katherine A. Faltesek, Leah R. Hanson, Usha Mishra, Lisa D. Coles, James C. Cloyd, Ronald A. Siegel (Minneapolis, United States)

16.30 - 17.00 Valedictum
Wellcome auditorium
Simon Shorvon, Eugen Trinka, Matthew Walter

End of Colloquium and farewell reception
Colloquium Chairs

Simon SHORVON, London, UK
Eugen TRINKA, Salzburg, Austria
Matthew WALKER, London, UK

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Conference Organisation

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