2010 Joint Meeting

Swiss Society for Neuroscience

&

Swiss Society of Sleep Research, Sleep Medicine and Chronobiology

Lausanne-EPFL  March 12-13 2010
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PanGas AG
Healthcare, Industriepark 10, CH-6252 Dagmersellen
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Dear Colleagues,

We would like to invite you to the 2010 Joint Meeting of the Swiss Society of Neuroscience (SSN) and the Swiss Society of Sleep Research, Sleep Medicine and Chronobiology (SSSSC) at the EPFL in Lausanne.

Our program on Friday March 12th includes satellite symposia on Sleep Apnea Syndrome, Neurodegenerative disease and REM Sleep Behaviour Disorder presented by world experts in the field. In parallel workshops, the participants have the choice between various topics on Obstructive Sleep Apnea Syndrome, parasomnias and basic sleep research.

The program on Saturday 13th starts with a keynote lecture on “Sleep and Synaptic Plasticity” given by Prof. Chiara Cirelli, University of Madison, Wisconsin, USA. A Datenblitz session will give younger scientists a forum to present their work. In several parallel symposia fundamental, systems, cognitive and clinical neuroscience will be presented by national experts in these fields. During lunch, there will be ample time for poster presentations giving a broad view of the Swiss research activities in neuroscience and sleep.

Both societies will also present several awards, allowing participants to follow major topics published by Swiss research groups.

We also would like to invite you to register for the “Societies Dinner” in the Lausanne Flon Area, providing a unique opportunity to make personal contacts with researchers and clinicians in the fields of neuroscience and sleep.

We look forward to seeing you in Lausanne and hope you will enjoy the meeting.

Prof. Johannes Mathis
President SSSSC

Prof. Nicole. Schaeren-Wiemers
President SSN

Dr. Raphaël Heinzer
Scientific Committee SSSSC

Dr. Micah Murray & Prof. Carmen Sandi
Scientific committee SSN
SOMNObalance
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Literatur
1. Neufang® Arzneimittelführungsamt, Arzneimittelkommis-
ionen der Schweiz (www.bureau-medicament.ch).

Kontaktdinformation
Neufang® Transdermales Pflaster. Rangweil, A; Neufang® ist ein zum Geräte- und Monatlich bis 5 mg/24 h.

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**2010 Joint Meeting**  
Swiss Society for Neuroscience  
&  
Swiss Society of Sleep Research, Sleep Medicine and Chronobiology  

**Friday, March 12th 2010**

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<td>13:15</td>
<td>Resmed Symposium</td>
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<td></td>
<td>“Collateral Damages of Sleep Apnea”</td>
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<td>Moderator: PD Dr. Malcolm Kohler</td>
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<td></td>
<td><strong>Prof. Daniel Mojon</strong></td>
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<td></td>
<td>St. Gallen, Switzerland</td>
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<tr>
<td></td>
<td>“Sleep apnea and ophthalmic disorders, myth or reality?”</td>
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<td></td>
<td><strong>Prof. John Stradling</strong></td>
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<td>Oxford Centre for Respiratory Medicine, UK</td>
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<td></td>
<td>“Is OSA a risk factor for diabetes mellitus and diabetic retinopathy?”</td>
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<td>14:45</td>
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<td>15:15</td>
<td>Boehringer Ingelheim– Sanofi Symposium</td>
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<tr>
<td></td>
<td>“Sleep and Neurodegenerative disorders”</td>
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<td></td>
<td><strong>Prof. Yves Dauvilliers</strong></td>
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<td></td>
<td>Montpelier, France</td>
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<td></td>
<td>“Insomnia and hypersomnia in neurodegenerative disorders”</td>
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<td><strong>Prof. Jacques Montplaisir</strong></td>
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<td></td>
<td>Montréal, Canada</td>
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<td></td>
<td>“REM Behaviour Disorder and Parkinson”</td>
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<td>16:45</td>
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<td>17:15</td>
<td>Workshop 1: * (SG0211)</td>
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<td></td>
<td>“Intermittent hypoxia: good or bad for the cardiovascular system?”</td>
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<td>Dr. Renaud Tamisier, Grenoble, France</td>
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<td>Workshop 2: * (SG Auditorium)</td>
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<td>“Clinical aspects of parasomnias”</td>
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<td>Dr. José Haba -Rubio, Lausanne, Switzerland</td>
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<td>18:00</td>
<td>Break</td>
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<td>18:15</td>
<td>Workshop 3: * (SG0211)</td>
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<td>&quot;Sleep and memory: excitements and pitfalls&quot;</td>
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<td>Prof. Reto Huber, Zurich, Switzerland</td>
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<td>Workshop 4: * (SG Auditorium)</td>
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<td></td>
<td>“Tips and Tricks for Treating Nocturnal Hypoventilation”</td>
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<td></td>
<td>Prof. Konrad Bloch, Zurich, Switzerland</td>
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<tr>
<td>19:00</td>
<td>Transfer to “Lausanne Flon” area (Metro M1)</td>
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<td>19:30</td>
<td>Societies dinner* (registration required)</td>
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Lausanne Flon area “Nomade” Restaurant  
Place de l’Europe 9 - 1003 Lausanne – TEL 021 / 320 13 13
Your coffee break
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Your competent partner in sleep medicine, Narcolepsy and Sleep Apnea.
2010 Joint Meeting
Swiss Society for Neuroscience
&
Swiss Society of Sleep Research, Sleep Medicine and Chronobiology

Saturday, March 13th 2010

9:00-9:30 SG Foyer
Coffee, tea, and croissants

9:15 SG1 Auditorium
Welcome remarks from SSN President, Prof. Nicole Schaeren-Wiemers

9:30-10:30 SG1 Auditorium
Keynote Lecture (sponsored in part by Actelion)
Prof. Chiara Cirelli
Center for Sleep and Consciousness, Psychiatry Department, University of Madison, Wisconsin, USA
“Sleep and Synaptic Plasticity”

10:30-11:00 SG1 Auditorium
Datablitz presentations of selected abstracts (6 x 5 minutes each)

11:00-11:40 SG1 Auditorium
Schellenberg Prize Laureates (Laudation by Prof. Pierre Magistretti):
Dr. Olivier Raineteau
Brain Research Institute, Neuromorphology, University of Zürich/ETHZ
“Regeneration and plasticity after CNS trauma”

Prof. Grégoire Courtine
Experimental Neurorehabilitation Laboratory, Faculty of Medicine, Zürich
“Functional recovery after spinal cord injury”

11:40-12:00 SG 0211
SSSSC Sponsors’ award
11:40-12:00 SG1 Auditorium
SSN 2009 Best Publication Award

12:00-15:00 Posters & Lunch (sponsored by the International Foundation of Research in Paraplegia)

13:00-14:00 SG 0211
Business Meeting of the SSSSC

14:00-14:45 SG1 Auditorium
General Assembly of the SSN and inauguration of honorary member Prof. Alexander A. Borbély

14:30-15:00 Coffee, tea, and snack served in poster area and main hall

15:00-16:30 Parallel Symposia

CO1 Auditorium
• Fundamental Neuroscience: Synaptic activity and dendritic integration
  Organized by Ralf Schneeggenburger and Egbert Welker
  Olexiy Kochubey, Lausanne
  “Synaptotagmin regulates Ca2+ evoked and spontaneous transmitter release by different mechanisms”
  Anita Luthi, Lausanne
  “The NMDA receptor subunit NR2A renders hippocampal synapses sensitive to sleep loss”
  Camille Bellone, Geneva
  “In utero cocaine exposure: effects on synaptic maturation”
  Thomas Oertner, Basel
  “How spine synapses measure milliseconds”

(continued on next page)
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medical technology
Parallel symposia (continued)

CO2 Auditorium
15:00-16:30
(see EPFL map)

• Systems Neuroscience: *Imaging the brain in action*
  Organized by Carmen Sandi and Carl Peterson
  Rainer Friedrich, Basel
  “Optical imaging and manipulation of olfactory computations in the zebrafish brain”
  David Margolis, Zurich
  “Repeated functional imaging in mouse barrel cortex: stability and plasticity of sensory representations”
  Carl Petersen, Lausanne
  “Imaging sensorimotor integration”
  Alan Carleton, Geneva
  “Imaging in the gustatory cortex”

CO3 Auditorium
15:00-16:30
(see EPFL map)

• Cognitive Neuroscience: *Learning and plasticity across the lifespan*
  Organized by Micah Murray and Christoph Michel
  Dr. Martin Meyer, Zurich
  “Absolute pitch and its implications for language”
  Prof. Daniel Brandeis, Zürich
  “Plasticity in reading acquisition”
  Dr. Narly Golestani, Geneva
  “Brain structural and functional bases of language learning and expertise”
  Ms. Elisa Tartaglia, Lausanne
  “Human perceptual learning by mental imagery”

SG1 Auditorium
15:00-16:00
(see EPFL map)

• Clinical Neuroscience: *Vigilance and sleepiness: from bench to bedside*
  Organized by Raphaël Heinzer
  Prof. Adriano Fontana, Zürich
  “Cytokines, circadian clock genes and sickness behavior syndrome”
  Prof. Mehdi Tafti, Lausanne
  “Update on stimulant medication”
  PD Dr. Christian Baumann, Zürich
  “What is the best way to test vigilance - implications for driving”

16:30-17:10
Bing Prize Laureates
SG1 Auditorium

Prof. Matthew E. Larkum
Physiology Institute, University of Bern
"The pyramidal neuron as an associative unit - an organizing principle for cerebral cortex"
(Laudation by Prof. Hans-R. Lüscher)

PD Dr. Thomas Nyffeler
Neurology Clinic, Bern University Hospital
"Theta burst stimulation induces improvement of visual neglect"
(Laudation by Prof. Christian W. Hess)

17:10-17:30
Volker-Henn best poster awards (10’)
SG1 Auditorium

17:30
Aperitif sponsored by the Swiss Academy of Medical Sciences
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**Poster Categories**

A. Development of the Nervous System

B. Molecular and Cellular Mechanisms: Cell-Cell Interaction

C. Molecular and Cellular Mechanisms: Signaling

D. Molecular and Cellular Mechanisms: Learning and Memory

E. Neural Excitability Synapses: Functional Aspects

F. Brain Metabolism and Homeostasis

G. Cognitive and Behavioral Neuroscience

H. System Neuroscience and Neuroinformatics

I. Brain Imaging

J. Disorders of the Nervous System: Basic Mechanisms

K. Clinical Neuroscience

*Note that posters with an asterisk and highlighted in blue will also be presented during Friday’s poster session.*
A. Development of the Nervous System

A1 Nicole H. Wilson
Investigating the role of Glypican in commissural axon guidance using cell type-specific, traceable RNAi

A2 Adeline Jabès
Quantitative analysis of postnatal neurogenesis and neuron number in the macaque monkey dentate gyrus.

A3 Simon G. Sprecher
Plasticity of terminally differentiated neurons by switching rhodopsin expression

A4 Salomé Kurth
Sleep EEG topography from early childhood to late adolescence

A5 Chareyron LJ
Comparative study of the rat and monkey amygdala

A6 Gabrielle POUCHELON
Molecular Controls over the area-specific development of thalamocortical connectivity

A7 Laura Frangeul
Molecular Controls over the Plasticity of Topographic Sensory Maps in the Neocortex

A8 Vera Niederkofler
Nectin-like molecules/SynCAMs are required for post-crossing commissural axon guidance

A9 Leila Tarokh
Developmental Changes in Coherence as Measured by the Sleep EEG

A11 Luca Bartesaghi
Role of the transcriptional factor Sox4 in Schwann cell development and myelination

A12 Quairiaux C
Functional postnatal development of large-scale sensorimotor cortical networks in the rat brain

A13* Nadja Olini
A longitudinal study of sleep slow wave activity in juvenile rats

A14 Riccio, O
Effect of serotonin (5-HT) on pyramidal neuron migration in the embryonic cortex

A15 Peggy Mittaud
Critical period for structural plasticity of CA1 pyramidal neurons regulated by serotonin 1A receptor activation: involvement of NR2B-containing NMDA receptor

A16 J. Ackermann
Identification of signalling pathways downstream of 5-HT1a receptor modulating dendritic growth of CA1 hippocampal pyramidal neurons.

A17 Désirée von Alpen
Transcriptional activity of NR2E3 (PNR)

B. Molecular and Cellular Mechanisms: Cell-Cell Interaction

B1 Venceslas Duveau
Role of GABA receptors in regulating adult hippocampal neurogenesis. Tonic and phasic inhibition distinctly regulate migration and differentiation of newborn dentate gyrus granule cells

B2 Kinter J.
Altered axon-glia interaction in charcot-marie-tooth 1A polyneuropathy

B3 Schmid D.
Does the myelin and lymphocyte protein MAL play a functional role in intracellular Schwann cell signaling?

B4 Martial Mbefo Kamdem
Phosphorylation of synucleins by members of the polo-like kinase family

B5 Harrisberger F.
The functional role of Septin 6 and Septin 11 in myelinogenesis

B6 Thomas Lazzati
The functional role of the raft proteins MAL and PMP22 in the initiation of peripheral myelination

B7* PETIT J-M.
TRANSCRIPTIONAL REGULATION OF CONNEXINS FOLLOWING SHORT-TERM SLEEP DEPRIVATION
### C. Molecular and Cellular Mechanisms: Signaling

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<td>Light-controlled induction of immediate early gene expression using a slow channelrhodopsin mutant</td>
<td>Philipp Schoenenberger</td>
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<td>C2</td>
<td>Characterizing the role of collybistin in gephyrin postsynaptic clustering in neurons.</td>
<td>Shiva K Tyagarajan</td>
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<td>C3</td>
<td>SUMO pathway regulates GABAergic synapses by acting on gephyrin</td>
<td>Ghosh H</td>
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<td>C4</td>
<td>The role of microvillar cells as a linker between degenerating sensory neurons and stem cells</td>
<td>Sandra Pfister</td>
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<td>C5</td>
<td>Sustained activation of glutamate receptors triggers degradation of GABA(B) receptors</td>
<td>Patrick Maier</td>
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<td>C6</td>
<td>Brain derived neurotrophic factor (BDNF) enhances the expression of the neuronal monocarboxylate transporter MCT2 by a translational mechanism in cultured cortical neurons</td>
<td>Camille Robinet</td>
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<td>C7</td>
<td>The relative contribution of ASICs and TRPV1 to pH sensing in dorsal root ganglion neurons is temperature-dependent</td>
<td>Maxime Blanchard</td>
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<td>C8</td>
<td>Differential gene expression in two spinal cord regions with distinct growth-inhibitory properties</td>
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<td>C9</td>
<td>5-HT1A receptors regulate NMDA receptor subunit composition at glutamatergic synapses of hippocampal CA1 pyramidal neurons</td>
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<td>Aurélien Boillat</td>
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<td>C11</td>
<td>Intrathalamic excitatory synapses express predominantly NR2B-containing NMDA receptors</td>
<td>Simone Astori</td>
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<td>C12</td>
<td>A combined computational and functional approach identifies new residues involved in pH-dependent gating of ASIC1a</td>
<td>Luz Angélica Liechti</td>
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<td>C13</td>
<td>Vasopressin receptor signaling in facial motoneurons of the rat</td>
<td>Wrobel LJ</td>
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<td>C14</td>
<td>Role of Homer 1 proteins in the calcium signalling pathway(s) underlying exo-endocytosis processes of glutamatergic SLMVs in astrocytes</td>
<td>Cali C.</td>
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### D. Molecular and Cellular Mechanisms: Learning and Memory

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<td>D1</td>
<td>Regional analysis of gene expression following spatial learning</td>
<td>Parafita, J</td>
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<td>D2</td>
<td>N-cadherin mediates plasticity-induced long-term spine stabilization</td>
<td>Mathias De Roo</td>
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<td>D3</td>
<td>Emotional experiences modulate the expression of the cell adhesion molecule nectin-1 in specific brain regions</td>
<td>Martina Fantin</td>
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### E. Neural Excitability Synapses: Functional Aspects

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<td>Molecular organization of GABAA receptor subtypes in the spinal cord dorsal horn</td>
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<td>E2</td>
<td>Lack of vesicular resting pool at CA3-CA1 Schaffer collateral boutons</td>
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<td>DNA-binding activity of circadian transcription factors in relation to sleep pressure</td>
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<td>F2*</td>
<td>Valérie Mongrain</td>
<td>The acute effects of light and time-of-day on recovery sleep</td>
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<td>F3*</td>
<td>Wimmer R.D.</td>
<td>Strengthening sleep through boosting SK2 channel expression</td>
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<td>F4</td>
<td>Wyss M.T.</td>
<td>The brain and lactate ¿ A fruitful or a harmful relationship?</td>
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<td>Nicolas Aznavour</td>
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<td>Alessia Bersagliere</td>
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<td>F10*</td>
<td>Maxime Baud</td>
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<td>F12*</td>
<td>Antoine U Viola</td>
<td>PERIOD3 polymorphism predicts sleep structure and EEG power density spectra in older people</td>
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### G. Cognitive and Behavioral Neuroscience

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<td>G2</td>
<td>Buchmann A.</td>
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<td>Luethi, M.</td>
<td>Trail Making Performance after Theta Burst rTMS Over the rDLPFC and the MFC: An Eye Movement Study</td>
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<td>G6</td>
<td>hamadjida</td>
<td>Influence of anti-Nogo-A antibody treatment in the reorganization of callosal connectivity of the motor cortical areas following unilateral lesion of primary motor cortex (M1) in monkeys</td>
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<td>G7</td>
<td>Melanie Genetti</td>
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<td>G8</td>
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<td>G12</td>
<td>Claudia Valentine Lietti</td>
<td>Brain responses to high-energy food images are more resistant to repetition-induced modulations</td>
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<td>G13</td>
<td>Bilge Sayim</td>
<td>Global organization not local inhibition determines contextual modulation</td>
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Early processing stages during lexical decision show evidence of contralateral hemispheric activation in temporoparietal areas.

Right parietal brain activity also precedes the perceptual alternation during binocular rivalry.

Is the ventral hippocampus devoid of any contribution to water maze reference memory learning?

Stroop-related cerebral activity is modulated by time of day and chronotype.

The sleep-EEG: An individual trait and marker for intellectual ability in healthy children?

Dynamics of spectral EEG correlates of dream recall: Is NREM sleep a paradox for dreaming?

Interference with gesture production by transient inhibition over left ventral premotor cortex: A Theta Burst Stimulation study.

Motor awareness of spatial navigation early disturbed in schizophrenia.

Facial configurations and features involve different hemispheres.


...for they know not what they do. A sleepwalking-analogue in awake, healthy subjects.

Time-of-day and chronotype effects on task-related BOLD activity are modulated by task complexity.

The development of spatial relational memory in children.

Evening exposure to polychromatic white and blue-enriched light: Effects on the sleep and wake EEG in healthy older adults.


Spatial relational memory is impaired in a patient following right temporal lobectomy.

Experience-dependent brain structural plasticity in simultaneous language interpreters.

Somatosensory cortex activity reflects changes in bodily self-consciousness: an evoked potential study.

Cerebellar engagement in the network for visual processing of body motion.

Social Interaction Revealed by Motion: cortical MEG activity and sex differences.

SHAPE ANALYSIS OF NAKED AND DRESSED FEMALE BODIES: AN ERP STUDY.

Stress does not influence consolidation of a visual perceptual learning task.

Social effects on circadian behavior in ants.

High anxiety trait correlates with low fear extinction and low activity-regulated gene expression in the medial prefrontal cortex.

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