ZNZ Zentrum für Neurowissenschaften Zürich
Neuroscience Center Zurich

University of Zurich[UZH]

ETH
Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich

ZNZ SYMPOSIUM 2013

13 September 2013

08.30 – 18.30

ETH Main Building

Rämistrasse 101

8092 Zürich

POSTER ABSTRACTS

DEVELOPMENT AND REGENERATION

Group Leader: SEBASTIAN JESSBERGER

1 **Metabolic control of neural stem cell activity:** M. Knobloch, S. Braun, M. Bowers, M. Hruzova, T. Wegleiter, M. Vidmar, S. Jessberger

2 **Mechanisms underlying asymmetric neural stem cell division:** D. Moore, L. Ghosh, G. Pilz, R. Machado, S. Jessberger

Group Leader: OLIVIER RAINETEAU

3 **β-Catenin signaling regulates postnatal dorsal forebrain identity and lineages:** K. Azim, B. Fischer, A. Hurtado-Chong, N. Gakhar-Koppole, K. Draganova, L. Sommer, A. Butt, O. Raineteau

Group Leader: LUKAS SOMMER

4 **Multipotency or commitment of neural crest stem cells - a monoclonal fate imaging in vivo:** A. Baggiolini, S. Tavares Varum, N. John, A. Joyner, M. Goetz, H. Clevers, L. Sommer

5 **Addressing the role of Yin Yang 1 during mammalian cortex development:** L. Zurkirchen, S. Giger, K. Draganova, S. Varum Tavares, L. Sommer

Group Leader: ESTHER STOECKLI

6 **More than one Wnt signaling pathway is required for axon guidance:** E. Avilés, E.T. Stoeckli

7 Sonic hedgehog regulates its own receptor on post-crossing commissural axons in a Glypican1-dependent manner: N.H. Wilson, E.T. Stoeckli

SYNAPTIC TRANSMISSION AND PLASTICITY

Group Leader: DIETMAR BENKE

8 Neuronal activity controls cell surface expression of $GABA_B$ receptors via endoplasmic reticulum associated protein degradation: K. Zemoura, M. Schenkel, H.C. Johannssen, M.A. Acuña, G.E. Yévenes, H.U. Zeilhofer

Group Leader: URS GERBER

9 Physiological roles of group II metabotropic glutamate receptors in the CA1 region: N. Rosenberg, U. Gerber, J. Ster

Group Leader: ERICH SEIFRITZ

10 The impact of a single dose of ketamine on the healthy organism: what can we learn from a multimodal approach? M. Lehmann, M. Scheidegger, A. Fuchs, M. Walter, H. Böker, A. Henning, E. Seifritz, S. Grimm

MOLECULAR AND CELLULAR NEUROSCIENCE

Group Leader: STEVEN BROWN

11 Day length reorganizes the SCN neuronal network: A. Azzi, J.A. Evans, T. Leise, R. Dallmann, A.J. Davidson, S. A. Brown

12 The role of NOPS proteins in regulating inhibitory synapse structure and function: D. Mircsof, M. Znidaric, C. Lafourcade, J.-M. Fritschy*, S. A. Brown*, S. Tyagarajan* (*equal contribution)

Group Leader: JEAN-MARC FRITSCHY

13 Post-translational modification by SUMO regulates gephyrin clustering and GABAergic transmission: L. Auguadri, S. Battaglia, Z. Thirouin, C. De Groot, H. Wildner, G. Bosshard, J.M. Fritschy, S.K.Tyagarajan

Group Leader: EDNA GRÜNBLATT

14 Polyunsaturated fatty acids and the combination of iron, zink and vitamin-B5 on neuronal cell line growth: J.Bartl, S. Walitza, E. Grünblatt

15 Effect of the serotonin 2A (HTR2A) receptor agonist DOI on the tropomyosin-related kinase (Trk) A activity in cell culture models: Z. Marinova, S. Walitza, E. Grünblatt

Group Leader: UWE KONIETZKO

16 Turnover of amyloid precursor protein family members determines their nuclear signaling capability: M.T. Gersbacher, Z.V. Goodger, D. Bundschuh, R.M. Nitsch, U. Konietzko

Group Leader: ISABELLE MANSUY

17 Regulation of microRNAs by protein phosphatase 1 in memory formation: B.T. Woldemichael, A. Jawaid, I.M. Mansuy

18 DNA hydroxymethylation: a novel epigenetic mark important for memory: E.A. Kremer, I.M. Mansuy

19 Analyses of sub-regional functions of the adult mouse hippocampus in memory formation by proteomic profiling: L.M. von Ziegler, I.M. Mansuy

Group Leader: OLIVIER RAINETEAU

20 Disruption of bHLH transcriptional networks by mutated E proteins induces glioma cell death: S. Beyeler, S. Joly, F.-J.Obermair, M. Fries, R. Mehmood, G. Tabatabai, O. Raineteau

Group Leader: SHIVA TYAGARAJAN

(ZNZ Associate, Institute of Pharmacology and Toxicology, UZH)

21 Molecular mechanism of BDNF-induced changes at GABAergic synapses: Z.S. Thirouin[1], G. Raminder[2], S. Früh[1], A. McKinney[2], S. Tyagarajan[1]

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2 Department of Pharmacology and Therapeutics, McGill University, Montreal, Canada

Group Leader: BRUNO WEBER

22 Estimation of glucose levels of single cells in vivo: R. Gutierrez[1,3], M. Wyss[1], P. Mächler[1], S. Lenchacher[2], P.J. Magistretti[2], F. Barros[3], B. Weber[1]

1 Institute of Pharmacology and Toxicology, University of Zurich, Switzerland
2 Brain Mind Institute, EPFL, Lausanne, Switzerland;
3 CECS, Valdivia, Chile

23 Astrocyte calcium signalling *in vivo* during mouse whisker stimulation: J. Stobart, B. Weber

ENDOCRINE REGULATION

Group Leader: TOBIAS SUTER

24 The absence of TNF exacerbates spontaneous autoimmunity in MOG-specific TCR-transgenic (2D2) mice: N. Schweizer, C. Tiberi, E. Rushing, H. Welzl, M. Wojtal, J. Tracy, T. Suter

SENSORY SYSTEMS

Group Leader: ARMIN CURT

25 Distinct supra-spinal and spinal effects of pain relief: A sensory evoked potential study: C.R. Jutzeler, A. Curt, J.L. Kramer

Group Leader: KYNAN ENG

26 Usability assessment of low-cost vibration motors for presenting vibrotactile feedback in sensory and motor rehabilitation: M. Bannwart, K. Eng, P. Pyk, D. Kiper, R. Gassert, Y. Kim

Group Leader: ARKO GHOSH

27 Tactile processing from the forehead: S. Hänzi, G. Stefanics, A. Ghosh

Group Leader: CHRISTIAN GRIMM

28 Role of hypoxia mediated gene – Stanniocalcin2 in the retina: D. Ail, C. Grimm

Group Leader: FRITJOF HELMCHEN

29 Impact of response adaptation on stimulus perception: sensory stimulation versus optogenetic activation of primary somatosensory cortex: S. Musall, W. von der Behrens, J. Mayrhofer, B. Weber, F. Helmchen and F. Haiss

Group Leader: ALEXANDER HUBER

30 Contribution of the incudo-malleolar joint to middle-ear sound transmission: R. Gerig[1], J.H. Sim[1], C. Röösli[1], A. Eiber[2], S. Ihrle[2], A.M. Huber[1]

1 University Hospital Zurich
2 University of Stuttgart

Group Leader: SHIH-CHII LIU

31 **A 240x180 10mW 12us latency sparse-output vision sensor for mobile applications:** C. Brandli, R. Berner, M. Yang, S.-C. Liu and T. Delbruck

32 **Sensory fusion of event-driven sensors using an event-driven deep belief network:** P. O'Connor, D. Neil, T. Delbruck, M. Pfeiffer, S.-C. Liu

Group Leader: KEVAN MARTIN

33 **Quantifying the local circuit of macaque cortex:** J.C. Anderson, K.A.C. Martin, I. Spühler

34 **On recruitment in cat visual cortex:** A.J. Keller, N. Maçarico Costa, F. Helmchen, B.M. Kampa, K.A.C. Martin

35 **Mapping the matrix of mouse auditory cortex:** M. Perrella, N. Maçarico Costa, K.A.C. Martin

36 **Who talks to the auditory cortex? – A quantitative analysis of the projections to area 41 of the mouse:** F. Sägesser, N. Maçarico Costa, K.A.C. Martin

Group Leader: HANS STASSEN

37 **Affective state and voice:** S. Braun, C. Botella, R. Bridler, F. Chmetz, J. P. Delfino, D. Herzig, V.J. Kluckner, C. Mohr, I. Moragrega, Y. Schrag, E. Seifritz, C. Soler, H.H. Stassen

38 **Monitoring the effects of chronic stress on general health through a set of psycho-physiological parameters:** D. Majoe, S. Braun, J.P. Delfino, P. Lott, E. Seifritz, H. H. Stassen

MOTOR SYSTEMS

Group Leader: ARMIN CURT

39 **Supraspinal and spinal neural control of walking in human incomplete spinal cord injury**: L. Awai, M. Bolliger, G. Courtine, A. Curt

Group Leader: VOLKER DIETZ

40 **Neural coupling of cooperative hand movements in stroke patients**: M. Schrafl, V. Dietz

Group Leader: ROGER GASSERT

41 **Delineating the whole brain bold response to passive movement kinematics:** J. Duenas, J. Sulzer, P. Stämpfli, M.C. Hepp-Reymond, S. Kollias, E. Seifritz, R. Gassert

Group Leader: SPYROS KOLLIAS

42 **Lower limb motor control as assessed by clustered-sparse temporal acquisition fMRI**: L. Jaeger, L. Marchal-Crespo, P. Wolf, L. Michels, R. Riener, S. Kollias

Group Leader: ANDREAS LUFT

43 **Investigating characteristics of skilled motor learning in rodents using the ETH Pattus:** O. Lambercy, M. Schubring-Giese, B. Vigaru, J. Hosp, R. Gassert and A.R. Luft

Group Leader: ANDREAS MEYER-HEIM

44 **Robotic assisted gait training after neuroorthopedic interventions for children with cerebral palsy: benefits, feasibility and clinical implementation:** S. Boettger, H.J. van Hedel, S. Dierauer, T. Schuler, A. Meyer-Heim

Group Leader: JOHANNES SARNTHEIM

45 Anticipatory grip force adaptation is related to oscillatory local field potentials in the subthalamic nucleus of Parkinson's patients: L.L. Imbach, C.R. Baumann, H. Baumann-Vogel, J. Hermsdörfer, O. Sürücü, J. Sarnthein

Group Leader: DOMINIK STRAUMANN

46 Zebrafish *bel* mutant as a model for INS: Pharmacologic interactions with the ocular motor system: M. Afthinos, G. Bertolini, D. Straumann, M.Y. Huang

SLEEP AND SLEEP DISORDERS

Group Leader: PETER ACHERMANN

47 Longitudinal analysis of the dissipation and build-up of sleep pressure from mid to late adolescence: L. Tarokh, M.A. Carskadon, T. Rusterholz, P. Achermann

48 ICA-based artefact correction of sleep EEG recordings during arterial spin labelling MRI measurements: L. Tüshaus, T. Koenig, M. Kottlow, P. Achermann

Group Leader: CLAUDIO BASSETTI
(former ZNZ Member, now Center of Experimental Neurology, University Hospital Bern)

49 Delayed repeated treatment with baclofen promotes neuronal plasticity and functional recovery after stroke in rats: A. Hodor, S. Palchykova, B. Gao and C.L. Bassetti

Group Leader: CHRISTIAN BAUMANN

50 Behavioural abnormalities and sleep-wake disturbances in a rat model of mild and severe diffuse closed traumatic brain injury: effect of sleep modulation on trauma-induced cognitive impairment: M.M. Morawska, D. Noain, E. Symeonidou, N. Neumark, S.R. Schreglmann, F. Büchele, Y. Gavrilov, M. Penner, L.L. Imbach, C.R. Baumann

51 Hypersomnia following traumatic brain injury is associated with a loss of histaminergic neurons: D. Noain, L.L. Imbach, P.O. Valko, E. Werth, Y. Gavrilow, S.R. Schreglmann, M. Penner, M. Morawska, M. Yamamoto, K. Finn, H. Reddy, J. Haybäck, S. Weis, T. Li, A. Maric, J. Stover, L. Mica, T.E. Scammell, C.R. Baumann

Group Leader: RETO HUBER

52 Sleep after stroke in children: investigating the course of recovery: A.-L. Mouthon, H.J. van Hedel, A. Meyer-Heim, R. Huber

53 Approximate entropy analysis of wake and sleep EEG data in adults and children: G.M.H. Lee, S. Fattinger, A.-L. Mouthon, R. Huber

Group Leader: HANS-PETER LANDOLT

54 Cerebral mGLuR5 availability and FMRP expression regulate homeostatic markers of sleep need in healthy men: S.C. Holst, K. Hefti, J. Sovago, A. Buck, S.M. Ametamey, M. Scheidegger, R. Dürr, A. Baumer, B. Gomez-Mancilla, E. Seifritz, H.-P. Landolt

55 Genetic variation in the dopamine transporter gene DAT1: evidence for functional effects from an integrative human study on sleep-wake regulation: A. Valomon[1,2], S.C. Holst[1,2], V. Bachmann[1,2], J. Zürcher[4], W. Berger[2,4], C. Schmidt[6], A.U. Viola[6], C. Cajochen[6], and Hans-Peter Landolt [1,2,3,5]

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4 Institute of Medical Genetics, UZH
5 Clinical Research Priority Program “Sleep and Health”, UZH
6 Center for Chronobiology, UPK Basel

NEURAL BASIS OF BEHAVIOR

Group Leader: IRMGARD AMREIN

56 Impact of social structure and subterranean live style on adult hippocampal neurogenesis in long-lived mole-rats: I. Amrein, A. Becker, S. Engler, S.H. Huang, J. Müller, H.-P. Lipp, M. Oosthuizen

Group Leader: DOMINIK BACH

57 Human approach avoidance conflict involves the anterior hippocampus: D. Bach

Group Leader: KYNAN ENG

58 Neural correlates of adaptation to visual feedback scaling of finger movements: J. Brand, R. Bakker, L. Michels, M.C. Hepp-Reymond, M. Morari, D. Kiper, K. Eng

Group Leader: RICHARD HAHNLOSER

59 Syllable-specific rules in the microstructure of birdsong: A. E. Stepien, A. Canopoli, V.Y. Wang, A. Vyssotski, R.H.R. Hahnloser

Group Leader: WOLFGANG LANGHANS

60 Synergistic neuropathalogical interactions between prenatal immune activation and stress in puberty: S. Giovanoli, U. Meyer

61 Peripubertal high fat diet (HFD) exposure impairs central information processing: M. Labouesse, W. Langhans, U. Meyer

Group Leader: ANDREAS LUFT

62 Characterization of VTA input to primary motor cortex during motor learning: S. Leemburg, A.R.Luft

Group Leader: ISABELLE MANSUY

63 Implication of sperm non-coding RNAs in the transgenerational effects of early traumatic stress in mice: K. Gapp[1]*, J. Bohacek[1], P. Pelczar[2], A.M. Brunner[1], J. Prados[3], L. Farinelli[3] and I.M. Mansuy[1]

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3 FASTERIS SA, Plan-les-Ouates, Switzerland

Group Leader: VALERIO MANTE

(ZNZ Associate, Institute of Neuroinformatics, UZH and ETH)

64 Selective integration of sensory evidence by recurrent dynamics in prefrontal cortex: V. Mante, D. Sussillo, K.V. Shenoy, W.T. Newsome

Group Leader: CHRISTOPHER PRYCE

65 Mouse studies of the roles of dopamine in depression psychopathology: modulation of reward and punishment processing: G. Bergamini, K. Joerg, D. Azzinnari, H. Sigrist, B. Ferger, E. Seifritz, C. Pryce

66 Mouse studies of the cytokine hypothesis of depression and its relevance to novel antidepressant treatments: F. Cathomas, F. Klaus, D. Azzinnari, H. Sigrist, J-C. Paterna, A. Müller, E. Seifritz, A. Fontana, R. Fuertig, A. Ceci, B. Hengerer, C. Pryce

Group Leader: BJÖRN RASCH

67 Increased motivation counteracts depletion of self-control: M. Luethi[1], J. Binder[2], M. Friese[3], P. Boesiger[4], R. Luechinger[4], B. Rasch[1]

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Group Leader: CHRISTIAN RUFF

68 Increasing honesty with brain stimulation: G. Ugazio, A. Cohn, M. Marechal, C.C. Ruff

69 Common and distinct neural mechanisms of perceptual and value-based choice in the human brain: M. Grueschow, R. Polania, T.A. Hare, C.C. Ruff

Group Leader: DAVID WOLFER

70 Effect of zero gravity on the EEG of hippocampus lesioned and control C57BL/6J mice: S. Masneuf, A. Cherninskyi, O. Ullrich, H.-P. Lipp, D.P. Wolfer, G. Colacicco

COGNITIVE NEUROSCIENCE AND NEUROPSYCHOLOGY

Group Leader: DANIEL BRANDEIS

71 Shared and task-specific brain mechanisms underlying different response inhibition tasks: A simultaneous EEG-fMRI study: A. Schläpfer[1], Katya Rubia[2], D. Brandeis [1, 3, 4]

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Group Leader: TODD HARE

72 Neurobiological effects of stress on self-control behaviour: S.U. Maier, A.B. Makwana, T.A. Hare

Group Leader: LUTZ JÄNCKE

73 Pre-attentive tone processing in subjects with absolute pitch: L. Rogenmoser, S. Elmer, L. Jäncke

Group Leader: HENNRIC JOKEIT

74 Unilateral mesial temporal epilepsy impairs remote brain activation and social cognition: G. Toller[1], S.D. Broicher[1], T. Grunwald[1], D. Huber[2], H.J. Huppertz[1], G. Krämer[1], M. Kurthen[1], H. Jokeit[1]

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Group Leader: DIETRICH LEHMANN

75 EEG spectral power affected by meditation: a longitudinal case study: P. Milz, P.L. Faber, D. Lehmann

Group Leader: MARTIN MEYER

76 Neural basis of sentence-level rhyme detection in spoken language – two fMRI studies: M. Hurschler, F. Liem, L. Jäncke, M. Meyer

Group Leader: BORIS QUEDNOW

77 Smoking but not cocaine use is associated with lower cerebral metabotropic glutamate receptor 5 density in humans: L.M. Hulka, V. Treyer, M. Scheidegger, K.H. Preller, M. Vonmoos, M.R. Baumgartner, A. Johayem, S. M. Ametamey, A. Buck, E. Seifritz, B. B. Quednow

78 Cognitive impairment in cocaine users is drug-induced but partially reversible: evidence from a longitudinal study: M. Vonmoos, L.M. Hulka, K.H. Preller, F. Minder, M.R. Baumgartner, B.B. Quednow

AGING AND DISORDERS OF THE NERVOUS SYSTEM

Group Leader: ARMIN CURT

79 Enhancing the Graded Redefined Assessment of Strength, Sensibility and Prehension (GRASSP) with the addition of Inertial Measurement Unit (IMU) data: M. Brogioli, W.L. Popp, D. Bergman, U. Albisser, K. Leuenberger, R. Gassert, A. Curt, M.L. Starkey

Group Leader: JOHANNES HÄBERLE

80 The molecular mechanism and pathology of clinical variability in one of urea cycle disorders (argininosuccinic aciduria): L.Hu[1,2], C. Balmer[1,2], A. Pandey[3], V. Wettstein[1,2], S. Eggimann[4], D. Möslinger[5], J.-M. Nuoffer[4,6], J. Häberle[1,2]

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4 Institute of Clinical Chemistry, University of Bern
5 Department for Paediatrics and Adolescent Medicine, Medical University Vienna, Austria 6 University Children's Hospital, Bern

Group Leader: CHRISTOPH HOCK

81 Early PiB signal as an estimate for brain perfusion is reduced in mild cognitive impairment: A.F. Gietl, G. Warnock, L. Mu, A. Saake, F. Riese, A. Kälin, S. Schreiner, E. Gruber, S.E. Leh, P.G. Unschuld, D. Summermatter, G. von Schulthess, S. Kollias, R. Schibli, R.M. Nitsch, C. Burger, A. Buck, C. Hock

82 Computation neuroanatomy: methods and applications to model brain function and dysfunction: A.M. Kälin, C. Hock, L. Michels, F. Riese, S. Kollias, A.F. Gietl, P.G. Unschuld, S.E. Leh

Group Leader: IRENE KNUESEL

83 The airbag problem – A potential culprit behind Alzheimer`s disease research: D. Krstic, I. Knuesel

84 The effect of immune challenges on neurodegeneration and regeneration of locus coeruleus neurons: relevance for AD pathogenesis: T. Notter, J.-M. Fritschy, I. Knuesel

Group Leader: UWE KONIETZKO

85 Regulation of neuronal function by the interplay of Notch and APP nuclear signaling: S. Grinschgl, A. Trutzel, C. Tackenberg, R.M. Nitsch, U. Konietzko

Group Leader: DIETRICH LEHMANN

86 Source localization of electrical activity during euthymia in bipolar disorder: comparison with controls.: M. A. Painold[1,2], E.Z. Reininghaus[1], P. Milz[2], P.L. Faber[2], N. Lackner[1], S. Bengesser[1], M. Letmaier[1], A.K. Holl[1], D. Lehmann[2], H.-P. Kapfhammer[1]

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Group Leader: ANDREAS LUFT

87 Fronto- executive dysfunction in stroke survivors correlates with the performance in a motor-cognitive dual task paradigm: J. Schneider, B. Hertler, M. Kälin, J. Cerny, P. Brugger, A.R. Luft, C. Globas

Group Leader: ROGER M. NITSCH

88 Characterization of amyloid-β oligomers: J.H. Birnbaum, R.M. Nitsch, C. Tackenberg

89 **p66^{Shc} deletion reverses cognitive deficits in an AD mouse model:** R. Derungs, C. Späni, F. Wirth, T. Welt, R.M. Nitsch, L. Kulic

90 **Role of the adaptive immune system in the pathogenesis of Alzheimer's disease:** C. Späni, T. Suter, M.T. Ferretti, R. Derungs, F. Wirth, T. Welt, C. Hock, R.M. Nitsch, L. Kulic

91 **A role for AnkG in Alzheimer's disease:** E. Varela, V. Udayar, M.T. Ferretti, L. Rajendran, R.M. Nitsch

92 **Fighting the battle against familial and sporadic forms of amyotrophic lateral sclerosis with human-derived conformational-specific SOD1 antibodies:** F. Wirth, M. Maier, F. Montrasio, J. McAfoose, S. Imobersteg, M. Krueger, A. Jeske, D. Preisig, J. Grimm, R.M. Nitsch, T. Welt

Group Leader: PATRICK ROTH

93 **Integrin inhibition modulates the viability of murine glioma cells:** M. Silginer, M. Weller, U. Ziegler, P. Roth

Group Leader: JOHANNES SARNTHEIN

94 **Human intracranial High Frequency Oscillations (HFOs) detected by automatic time-frequency analysis:** S. Burnos, P. Hilfiker, O. Sürücü, F. Scholkmann, N. Krayenbühl, T. Grunwald, J. Sarnthein

Group Leader: GHAZALEH TABATABAI

95 **Molecular mechanisms mediating the escape from anti-VEGF therapy in glioblastoma**: S. Krishnan, M. Weller, G. Tabatabai

96 **Co-inhibition of VEGF and TGF-β signaling pathways in experimental glioma models**: E. Seyed Sadr, M. Weller, G. Tabatabai

Group Leader: BEAT THÖNY

97 Treatment studies of the *Th-ki* mouse: a novel model for brain catecholamine deficiency and infantile Parkinsonism: G. Korner, D. Noain, T. Scherer, M. Ying, C.R. Baumann, A. Martinez, B. Thöny

Group Leader: PAUL UNSCHULD
(ZNZ Associate, Clinic for Geriatric Psychiatry, University Psychiatry Hospital Zurich)

98 7 Tesla magnetic resonance imaging (MRSI) of Aβ associated metabolic brain change in cognitively normal elderly adults: S. Schreiner, T. Kirchner, A.F. Gietl, S. Steininger, M. Wyss, E. Gruber, A. Buck, S. Leh, R.M. Nitsch, K. Prüssmann, C. Hock, A. Henning, P.G. Unschuld

99 7 Tesla BOLD fMRI and PiB PET for investigating effects of individual Aβ load on cortico-cerebellar coupling in cognitively normal elderly adults: S. Steininger, A.F. Gietl, S. Schreiner, M. Wyss, E. Gruber, A. Buck, S. Leh, R.M. Nitsch, K. Prüssmann, C. Hock, P. G. Unschuld

Group Leader: HUUB VAN HEDEL

100 Measuring everyday life motor activity in children with neuro-motor disorders: R. Labruyère, C. Strohrmann, C.N. Gerber, H. J. van Hedel

Group Leader: DAVID WOLFER

101 Beneficial and adverse consequences of increased brain plasticity: the interplay between the serotoninergic system and quality of the environment: I. Branchi, E. Vannoni, A.-K. Fritz, D.P. Wolfer

COMPUTATION AND MODELING

Group Leader: IRMGARD AMREIN

102 Correspondence analysis of principal cell populations in the mammalian hippocampus: L. Slomianka, S.E. Lazic, T. Drenth, N. Cavegn, D. Menges, M. Phalanndwa, C.T. Chimimba, I. Amrein

Group Leader: ARMIN CURT

103 Stratification and prediction in heterogeneous neurological disorders: can we do better?: L. Tanadini, T. Hothorn, J. Steeves, A. Curt

Group Leader: ARKO GHOSH

104 Sensory learning of premotor representations links independent levels of control: T. Moraitis, M. Cook, A. Ghosh

Group Leader: GIACOMO INDIVERI

105 Neural computation and attractor dynamics on neuromorphic micro-electronic substrates: F. Corradi, H.M. Elsayed, M. Osswald, G. Indiveri

106 Cortically inspired recurrent neural networks for solving constraint satisfaction problems: H. Mostafa Elsayed, L.K. Müller, G. Indiveri

Group Leader: VARTAN KURTCUOGLU

107 Dominant fluid mechanic cue for neuronal guidance in the subventricular zone: Ependymal cilia beating vs. ventricular and choroid plexus pulsations: D. de Zélicourt, B. Siyahhan, V. Kurtcuoglu

Group Leader: KLAAS STEPHAN

108 Hierarchical prediction errors in dopaminergic and cholinergic regions during sensory learning: S. Iglesias, C. Mathys, K.H. Brodersen, L. Kasper, M. Piccirelli, K.E. Stephan

BIOMEDICAL TECHNOLOGY AND IMAGING

Group Leader: SIMON AMETAMEY

109 Development and evaluation of a novel cannabinoid type 2 receptor tracer for PET imaging: R. Slavik, D. Bieri, S. Čermak, S.D. Krämer, A. Müller, T. Suter, R. Schibli, S.M. Ametamey, L. Mu

Group Leader: ROGER GASSERT

110 A novel algorithm for estimating mobility parameters and for detecting propulsion method in wheelchair users following spinal cord injury: W.L. Popp, M. Brogioli, K. Leuenberger, O. Lambercy, A. Curt, R. Gassert, M.L. Starkey

Group Leader: RICHARD HAHNLOSER

111 A correlative light and electron microscopy approach for reconstructing syringeal motor neuron circuits in a songbird: T. Templier, C.P.H. Elemans, R.H.R. Hahnloser

Group Leader: FRITJOF HELMCHEN

112 Improved *in vivo* detection of single action potentials using ultrasensitive calcium indicators: S. Carta, J.L. Chen, B. Schneider, F. Helmchen

Group Leader: EMANUELA KELLER

113 Cerebral blood flow and oximetry values applying near infrared spectroscopy: transcutaneous and intraparenchymatous measurements in parallel: E. Keller, J. Froehlich, B. Baumann, C. Böcklin, C. Sikorski, M. Oberle, M. Muser

Group Leader: JAN KLOHS

114 Assessment of neutrophil activity after focal cerebral ischemia with imaging: M. Vaas, M. Rudin, J. Klohs

Group Leader: ANDREAS LUFT

115 Allegro - An interactive training robot for the treatment of neuro-muscular disorders: R. Dravid[1], M. Lungarella [1], A.R. Luft [2]

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Group Leader: MARKUS RUDIN

116 Influence of the anesthetic regime on spatio-temporal characteristics of stimulus-evoked fMRI BOLD signals in mice: F. Schlegel, A. Schröter, M. Rudin

Group Leader: BRUNO WEBER

117 Metabolic imaging in the awake mouse: M. Wyss, M. Zünd, J. Mayrhofer, P. Mächler, R. Gutierrez, F. Barros, B. Weber

Group Leader: MARTIN WOLF

118 A fresh look at functional near-infrared spectroscopy (fNIRS) signals – the local correlation approach: C. Egli, F. Scholkmann, M. Wolf

119 How to reduce movement artifacts in near-infrared spectroscopy (NIRS) time series using acceleration data – a new method: A.J. Metz, F. Scholkmann, P. Achermann, M. Wolf

120 Assessing inter-personal brain coupling using functional near-infrared imaging (fNIRI) hyperscanning: a new approach in neuroscience: F. Scholkmann, L. Holper, M. Wolf

ADDITIONAL POSTERS

Group Leader: MARTIN SCHWAB

121 Identification of a Nogo-A-specific receptor restricting axonal growth and synaptic plasticity in the central nervous system: A. Kempf, M. Schwab

122 Sprouting of brainstem-spinal tracts in response to unilateral motor cortex stroke: L.C. Bachmann, N.T. Lindau, P. Felder, M. Schwab

ZNZ GROUP LEADERS (in alphabetic order and with poster numbers)

Achermann P., Institute of Pharmacology and Toxicology, UZH	47,48
Ametamey S., Animal Imaging Center,USZ	109
Amrein I., Institute of anatomy, UZH	56,102
Bach D., University Hospital for Psychiatry Zurich	57
Bassetti C., former ZNZ Member, University Hospital Bern	49
Baumann C., Neurology Clinic, USZ	50,51
Benke D., Institute of Pharmacology and Toxicology, UZH	8
Brandeis D., Department of Child and Adolescent Psychiatry, UZH	71
Brown S., Institute of Pharmacology and Toxicology, UZH	11,12
Curt A., Swiss Paraplegic Center, Balgrist University Hospital ZH	25,39,79,103
Dietz V., Swiss Paraplegic Center, Balgrist University Hospital ZH	40
Eng K., Institute of Neuroinformatics, UZH/ETHZ	26,58
Fritschy J.-M., Institute of Pharmacology and Toxicology, UZH	13
Gassert R., Institute of Robotics and Intelligent Systems, ETHZ	41,110
Gerber U., Brain Research Institute, UZH	9
Ghosh A., Institute of Neuroinformatics, UZH /ETHZ	27,104
Grimm C., Department of Opthalmology, UZH	28
Grünblatt E., Dept. of Child and Adolescent Psychiatry, UZH	14,15
Häberle J., University Children's Hospital Zurich	80
Hahnloser R., Institute of Neuroinformatics, UZH/ETHZ	59,111
Hare T., Department of Economics, UZH	72
Helmchen F., Brain Research Institute, UZH	29,112
Hock C., Division of Psychiatry Research, UZH	81,82
Huber A., Biomechanics of Hearing, Department ENT, USZ	30
Huber R., University Children's Hospital Zurich, Kispi,	52,53
Indiveri G., Institute of Neuroinformatics, UZH/ETHZ	105,106
Jäncke L., Institute of Psychology, UZH	73
Jessberger S., Institute of Cell Biology, ETHZ	1,2
Jokeit H., Department of Neuropsychology, Swiss Epilepsy Center	74
Keller E., Department of Neurosurgery, USZ	113
Klohs J., Institute for Biomedical Engineering, ETHZ	114
Knüsel I., Institute of Pharmacology and Toxicology, UZH	83,84
Kollias S., Institute for Neuroradiology, USZ	42
Konietzko U., Division of Psychiatry Research, UZH	16,85
Kurtcuoglu V., Institute of Physiology, UZH	107
Landolt H.-P., Institute of Pharmacology and Toxicology, UZH	54,55