

CURRICULUM VITAE

Simon Hippenmeyer

Institute of Science and Technology Austria
Am Campus 1
3400 Klosterneuburg
Austria

Tel: +43-2243-9000-5101

E-mail: simon.hippenmeyer@ist.ac.at

www.ist.ac.at/research/research-groups/hippenmeyer-group/

Current Position

07/2012- **Assistant Professor** with tenure track; Developmental Neurobiology; IST Austria, Klosterneuburg, Austria.

Education and Research Experience

2006-2012 **Postdoctoral Fellow** (EMBO, HFSP, SNF); Dept. Biology, Stanford University, USA. (Mentor: Prof. Liqun Luo).
2004-2006 **Postdoctoral Associate**; Biozentrum, Dept. Cell Biology, University of Basel and FMI, Basel, Switzerland. (Mentor: Prof. Silvia Arber).
2000-2004 **PhD in Neurobiology** (*summa cum laude*); Biozentrum, Dept. Cell Biology, University of Basel and FMI, Basel, Switzerland. '*Molecular Mechanisms of Neuronal Circuit Assembly in the Vertebrate Spinal Cord*' (Supervision: Prof. Silvia Arber).
1995-2000 **Diploma** (Molecular Biology; Major: Biochemistry); Biozentrum, Dept. Biochemistry, University of Basel, Switzerland. (Supervision: Prof. Howard Riezman).

Selected Honors, Prizes and Awards

2016 ERC Consolidator Grant (EU Horizon 2020)
2014 Golden Chalk Award for best lecturer and teaching excellence, IST Austria
2014 HFSP Program Grant
2013 Marie Curie Career Integration Grant (EU FP7)
2009-2011 SNSF Fellowship for Advanced Researchers
2007-2009 HFSP Long-Term Fellowship
2006-2007 EMBO Long-Term Fellowship
2005 Faculty of Natural Sciences Prize for best PhD thesis, University of Basel.
2005 Edmond H. Fischer Prize, Friedrich Miescher Institute, Basel, Switzerland

Major External Third Party Funding

2017-2022	ERC Consolidator Grant , Horizon 2020, PI, EUR 2'000'000
2015-2018	NÖ Forschung & Bildung n[f+b] , Life Science Call 2013, PI, EUR 245'000
2014-2017	Human Frontiers Science Program (HFSP) Program Grant, Co-PI (with Songhai Shi, Benjamin Simons and Kun Huang), USD 380'000/1'200'000
2013-2017	Marie Curie Career Integration Grant (CIG) , FP7, PI, EUR 100'000

Teaching Activities at IST Austria Graduate School

2016/7	Developmental Neuroscience and Brain Diseases , 6 ECTS (with G. Novarino, 12/23 classes, Instructor overall score 4.92, scale 1-5 best)
2015/6	Developmental Neuroscience and Brain Diseases , 6 ECTS (with G. Novarino, 16/24 classes, Instructor overall score 4.73, scale 1-5 best) NeuroCore Module 'Principles of Neuronal Circuit Assembly' , 6ECTS (with P. Jonas, G. Novarino and J. Csicsvari, 6/24 classes) IST Scientists Career Development Program , Trainer (with C. Lampert and D. Klammer) in hands on workshop session 'Applying for Faculty Positions'.
2014/5	Developmental Neuroscience and Brain Diseases , 6 ECTS (with G. Novarino, 16/23 classes, Instructor overall score 4.88, scale 1-5 best) Shapes and Patterns Core Course , guest lecture, 6 ECTS
2013/4	Principles of Neuronal Circuit Assembly , 3 ECTS (13/13 classes, Instructor overall score 4.59, scale 1-5 best; recognized by <i>Golden Chalk Award</i>) Introduction to Neuroscience I , 3 ECTS (with P. Jonas, J. Csicsvari, R. Shegemoto, G. Novarino) Graduate Course on Interneurons , guest lecture, at Karolinska Institutet, Stockholm CUSO Staromics PhD-Program Workshop , guest lecture, at University of Fribourg
2012/3	Introduction to Neuroscience I , 3 ECTS (with J. Csicsvari, G. Tkacik, A. Schlögl)

Supervision of Laboratory Trainees, Graduate Students, Postdocs, and Technicians

Current group

2017	Lena Schwarz (ISTern summer student, supported by fellowship, BSc student enrolled in VetMedUni Vienna)
Since 2017	Olivia Slepecka (MSc student, enrolled in University of Vienna)
Since 2016	Nicole Amberg (Postdoc; PhD, University of Vienna)
Since 2016	Florian Pauler (Bioinformatics expert, PhD, University of Vienna)
Since 2015	Andi Harley Hansen (PhD student, MSc, supported by ÖAW DOC fellowship)
Since 2015	Robert Beattie (Postdoc; PhD, University of Sheffield)
Since 2014	Johanna Sonntag (Technician, MSc, currently on maternity leave)
Since 2013	Carmen Streicher (Laboratory Manager and Technician, MSc)
Since 2013	Susanne Laukoter (PhD student, MSc)
Since 2013	Ximena Contreras (PhD student, BSc)

Institutional Responsibilities and Internal Service at IST Austria

Since 2014 Head of Scientific Service Unit *PCF (Preclinical Facility)*
Since 2014 Member, Postdoc Mentoring Program
Since 2012 Member, Graduate Student Selection Committee
Since 2012 Member, Faculty Search Committee
2017 Member, Staff Scientist Search Committee (Image Analysis)
2014 Member, IST Graduate School Task Force
2013 Member, Internal Awards Committee
2013 Member, ISTernship Selection Committee
2012-2015 Member, ISTFELLOW Selection Committee

Professional Service to the International Scientific Community

External advisory committees

Since 2015 Advisory committee for the Vienna Doctoral School CoBeNe.

Peer review

Journals *Science, Neuron, Nature Neuroscience, Nature Communications, Nature Methods, eLife, Developmental Cell, Current Opinion in Neurobiology, Development, BMC Biology, Scientific Reports, PLoS One, Frontiers in Cellular Neuroscience, Int. J. Dev. Neuroscience, Neural Development, Neuroscience, Molecular Brain, JoVE, Journal of Neuroscience, etc.*

Grants *HFSP Program Grants, Alexander von Humboldt Foundation (Germany), Swiss National Science Foundation (Switzerland) ATIP-AVENIR (France), ANR (France), F.R.S.-FNRS (Belgium), FWO (Belgium), KU Leuven (Belgium), Croucher Foundation (Hong Kong), etc.*

Conferences *ISSCR (International Society for Stem Cell Research), abstract reviewer for 2016 ISSCR Annual Meeting*

Conference and symposia organization

2017 **Host and co-organizer**, *Molecular Mechanisms of Neural Circuit Assembly (AXON2017)* at IST Austria with A. Chedotal, U. Drescher, L. Erskine, S. Guthrie, R. Hindges, R. Klein, and Rob Meijers – www.ist.ac.at/AXON2017
Session chair at 19th International Neuroscience Winter Conference, Sölden, Austria

2016 **Session chair** at 18th International Neuroscience Winter Conference, Sölden, Austria

2015 **Host and co-organizer**, *Axon Guidance, Circuit Development and Regeneration (AXON2015)* at IST Austria with A. Chedotal, U. Drescher, L. Erskine, S. Guthrie, R. Hindges, and R. Klein – www.ist.ac.at/AXON2015
Session chair at VBC Recess, Schloss Hernstein, Austria

2013 **Host and co-organizer**, *Neuroscience Vienna Network Meeting* at IST Austria (with G. Tkacik)

Intellectual Property and Technology Transfer

- 2015 **US Patent 9125385** (13/293'890) - *Site-directed Integration of Transgenes in Mammals*
- 2014 **US Patent Application** (14/539'909) - *Site-Specific Integration of Transgenes into Human Cells*

Invited Research Seminars & International Conference Presentations (since 2012)

- 2018 **BSCDB Meeting** – *Neural Stem Cells and Cortex Development*, Liege, Belgium
ISDN Annual Meeting, Nara, Japan
LS2 – *Life Sciences Switzerland Annual Meeting*, Lausanne, Switzerland
- 2017 **3rd National Congress on Regenerative Medicine**, Moscow, Russia
King's College, Dept. Developmental Neurobiology, London, UK
IV International Symposium – *Frontiers in Neuroscience*, Rio de Janeiro, Brazil
IST Austria Conference - AXON2017, Klosterneuburg, Austria
NeuroFrance 2017 Symposium – *Molecular Control of Neocortical Histogenesis*, Bordeaux, France
19th International Neuroscience Winter Conference, Sölden, Austria
SFB-655 Closing Symposium – *Cells into Tissues*, Dresden, Germany
VBC Recess 2017, Schloss Hernstein, Austria
KU Leuven, VIB Center for Brain & Disease Research, Leuven, Belgium
College de France, Center for Interdisciplinary Research in Biology, Paris, France
- 2016 **University of Zürich**, Brain Research Institute, Zürich, Switzerland
University of California Davis, Institute for Pediatric Regenerative Medicine, Sacramento, USA
Stanford University, Department of Genetics, Palo Alto, USA
45th SfN Annual Meeting Minisymposium – *Neural Stem Cells to Cerebral Cortex*, San Diego, USA
University of California Los Angeles, Brain Research Institute, Los Angeles, USA
University of Göttingen, Institute of Neuroanatomy, Göttingen, Germany
Universitas Miguel Hernandez, Instituto de Neurociencias (CSIC), Alicante, Spain
VIB Conference, *The Brain Mosaic: Cellular Heterogeneity in the CNS*, Leuven, Belgium
Summer School, *Neural Circuit Development and Plasticity*, Utrecht, Netherlands
Gordon Research Conference – *Neural Development: From Stem Cells to Circuits*, Newport, USA
CSHL Conference – *Glia in Health & Disease*, Cold Spring Harbor, USA
National University Singapore (NUS), Centre for Life Sciences (CeLS), Singapore
10th FENS Forum of Neuroscience Workshop, Copenhagen, Denmark
Gordon Research Conference, *Molecular and Cellular Neurobiology*, Hongkong, China
EMBO Workshop – *Mechanisms of Neuronal Remodelling*, Seeon, Germany
18th International Neuroscience Winter Conference, Sölden, Austria
- 2015 **University of Geneva**, Department of Fundamental Neurosciences, Geneva, Switzerland
45th SfN Annual Meeting - Developmental Neurobiology Social, Chicago, USA
University of California San Diego, Department of Neurobiology, San Diego, USA
BSCDB Meeting – *Neural Stem Cells and Cortex Development*, Liege, Belgium
University of Liege, *GIGA Seminar*, Liege, Belgium
EMBO Workshop – *Cortical Development in Health and Disease*, Rehovot, Israel

- 2014 **17th International Neuroscience Winter Conference**, Sölden, Austria
Gordon Research Conference – Glial Biology, Ventura, USA
7th Guangzhou International Conference – Stem Cell and Regenerative Medicine, Guangzhou, China
Innsbruck Medical University, SPIN Seminar, Innsbruck, Austria
Chinese Academy of Sciences (CAS), Beijing, China
Gordon Research Conference – Neural Development: From Stem Cells to Circuits, Newport, USA
University of Massachusetts Medical School, Dept. of Neurobiology Worcester, USA
CSHL Conference – Glia in Health & Disease, Cold Spring Harbor, USA
Gordon Research Conference – Molecular and Cellular Neurobiology, Hongkong, China
University of Bern, Institute of Cell Biology, Bern, Switzerland
Helmholtz Zentrum München, Institute of Stem Cell Research, Munich, Germany
EMBO Workshop – Mechanisms of Neuronal Remodelling, Ein Gedi, Israel
University of Vienna, Dept. of Cognitive Biology, *COSB Colloquium*, Vienna, Austria
VBC Recess 2014, Schloss Hernstein, Austria
2013 **University of California Los Angeles**, Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research, Los Angeles, USA
BSCDB Annual Meeting – Experimental Models of Human Disease, Liege, Belgium
University of Liege, GIGA Seminar, Liege, Belgium
Karolinska Institutet Conferences at Nobel Forum – Interneuron Development, Stockholm, Sweden
CUSO Staromics Workshop - Systems Biology of the Brain Seminar, Switzerland
Imaging in Life Sciences Workshop V, Vienna, Austria
CeMM – IST Austria Conference, Klosterneuburg, Austria
Max Planck Institute (CBG), Dresden, Germany
CeMM (Center for Molecular Medicine), Vienna, Austria
VBC Recess 2013, Schloss Hernstein, Austria
Keystone Symposia – Neurogenesis (J7), Santa Fe, USA
Memorial Sloan-Kettering Cancer Center (MSKCC), New York, NY, USA
2012 **University of Bordeaux, Bordeaux Neurosciences Seminar**, Bordeaux, France
University of Zürich, IMLS Seminar, Zürich, Switzerland
8th FENS Forum of Neuroscience Symposium, Barcelona, Spain
Oregon Health & Science University (OHSU), Portland, OR, USA
CSH Asia Conference – Epigenetics, Chromatin & Transcription, Suzhou, China

Selected Media Coverage Featuring Our Science

Die Presse , May 6, 2017	<i>‘Dirigent und Solist in der Gehirnentwicklung’</i>
NOe ORF , May 5, 2017	<i>‘Wie Fehlbildungen im Gehirn entstehen’</i>
Der Standard , May 4, 2017	<i>‘Gen Lgl1 spielt entscheidende Rolle bei Entwicklung von Gehirnzellen’</i>
Science Daily , May 3, 2017	<i>‘How neurons and glia are created in the developing brain’</i>
Stem Cells Daily , May 3, 2017	<i>‘Exactly how neurons and glia cells are created in the developing mind’</i>
Wiener Zeitung , May 3, 2017	<i>‘Dirigent und Solist bei der Entwicklung von Gehirnzellen’</i>
Der Standard , Jan. 18, 2015	<i>‘Das Denken ist noch eine Black Box’</i>
Der Standard , Nov. 6, 2014	<i>‘Forscher beobachten Entwicklungsprozess von Gehirnzellen’</i>
Die Presse , Oct. 30, 2014	<i>‘Gehirnzellen erkennen, wie es den Nachbarn geht’</i>

PUBLICATION LIST

PubMed: <http://www.ncbi.nlm.nih.gov/pubmed/?term=Hippenmeyer+S>
Google Scholar: <http://scholar.google.at/citations?user=DQKripgAAAAJ&hl=de>

Original Peer-Reviewed Research Articles

Beattie, R., Postiglione, MP., Burnett, LE., Laukoter, S., Streicher, C., Pauler, FM., Xiao, G., Klezovitch, O., Vasioukhin, V. Ghashghaei HT & **Hippenmeyer, S.** (2017). Mosaic Analysis with Double Markers Reveals Distinct Sequential Functions of *Lgl1* in Neural Stem Cells. **Neuron**, 94(3):517-533.e3.

Highlighted in two previews: Akhtar et al., 2017 Neuron 94(3):417-420; and Sokol, 2017 Dev Cell 41(5):453-454.

Riccio, P., Cebrian C., Zong, H., **Hippenmeyer, S.** & Costantini, F. (2016). *Ret* and *Etv4* Promote Directed Movements of Ureteric Bud Tip Progenitor Cells During Branching Morphogenesis. **PLoS Biology**, 14(2):e1002382.

Mayer, C., Jaglin, XH., Cobbs, LV., Bandler, RC., Streicher, C., Cepko, CL., **Hippenmeyer, S.** & Fishell, G. (2015). Clonally Related Forebrain Interneurons Disperse Broadly Across Both Functional Areas and Structural Boundaries. **Neuron**, 87(5):989-998.

Evaluated by F1000. <https://f1000.com/prime/725736366>

Gao, P.*, Postiglione, MP.*, Krieger, TG., Hernandez, L., Wang, C., Han, Z., Streicher, C., Pappasheva, E., Insolera, R., Chugh, K., Kodish, O., Huang, K., Simons, BD., Luo, L., **Hippenmeyer, S.**^{##} & Shi, SH.^{##} (2014). Deterministic Progenitor Behavior and Unitary Production of Neurons in the Neocortex. (*⁺equal contribution, #corresponding senior author). **Cell**, 159(4):775-788.

Joo, W., **Hippenmeyer, S.** & Luo, L. (2014). Dendrite Morphogenesis Depends on Relative Levels of NT-3/TrkC Signaling. **Science**, 346(6209):626-629.

Ali, SR., **Hippenmeyer, S.**, Saadat, LV., Luo, L., Weissman, IL. & Ardehali, R. (2014). Existing Cardiomyocytes Generate Cardiomyocytes after Birth in Mice and at Low Rate. **Proceedings of the National Academy of Sciences of the United States of America**, 111(24):8850-8855.

Zhu, F., Gamboa, M., Farruggio, AP., **Hippenmeyer, S.**, Tasic, B., Schüle, B., Chen-Tsai, Y. & Calos, M. (2014). DICE, an Efficient System for Iterative Genomic Editing in Human Pluripotent Stem Cells. **Nucleic Acids Research**, 42(5):e34.

Hippenmeyer, S.^{*}, Johnson, RL. & Luo, L.^{*} (2013). Mosaic Analysis with Double Markers Reveals Cell Type Specific Paternal Dominance. (*corresponding author). **Cell Reports**, 3: 960-967.

Featured video abstract on YouTube (<http://www.youtube.com/watch?v=jLxjnQ05mbY>).

Liang, H., Xiao, G., Yin, H., **Hippenmeyer, S.**, Horowitz, JM. & Ghashghaei, HT. (2013). Neural Development is Dependent on the Function of Specificity Protein 2 in Cell Cycle Progression. **Development**, 140: 552-561.

Liang, H., **Hippenmeyer, S.**, & Ghashghaei, HT. (2012). A *Nestin-Cre* Transgenic Mouse is Insufficient for Recombination in Early Neural Progenitors. **Biology Open**, 1(12): 1200-3.

Featured cover story (<http://bio.biologists.org/content/1/12.cover-expansion>).

Tasic, B.*, Miyamichi, K.*, **Hippenmeyer, S.***, Dani, VS., Zeng, H., Joo, W., Zong, H., Chen-Tsai, Y. & Luo, L. (2012). Extensions of MADM (Mosaic Analysis with Double Markers) in mice. (*equal contribution). **PLoS ONE**, 7(3): e33332.

Liu, C., Sage, JC.*, Miller, MR.*, Verhaak, RGW.*, **Hippenmeyer, S.**, Vogel, H., Foreman, O., Bronson, RT., Nishiyama, A., Luo, L. & Zong, H. (2011). Mosaic Analysis with Double Markers Reveals Tumor Cell of Origin in Glioma. (*equal contribution). **Cell**, 146 (2): 209-21.

Evaluated by Faculty of 1000: <http://f1000.com/13339991>.

Tasic, B., **Hippenmeyer, S.**, Wang, C., Zong, H., Chen-Tsai, Y. & Luo, L. (2011). Site-Specific Integrase-Mediated Transgenesis in Mice via Pronuclear Injection. **Proceedings of the National Academy of Sciences of the United States of America** 108 (19): 7902-7.

Evaluated by Faculty of 1000: <http://f1000.com/10361956>.

Hippenmeyer, S.*, Youn, YH., Moon, HM., Miyamichi, K., Zong, H., Wynshaw-Boris, A. & Luo, L.* (2010). Genetic Mosaic Dissection of *Lis1* and *Ndel1* in Neuronal Migration. (*corresponding author). **Neuron** 68 (4): 695-709.

Evaluated by Faculty of 1000: <http://f1000.com/6538956>, highly accessed, ranking in the top 2% of all evaluated articles according to F1000.

Hippenmeyer, S.*, Huber, RM.*, Ladle, DR., Murphy, K. & Arber S. (2007). ETS Transcription Factor *Erm* Controls Subsynaptic Gene Expression in Skeletal Muscles. (*equal contribution). **Neuron** 55(5): 726-40.

Evaluated by Faculty of 1000: <http://f1000.com/1092820>.

Hippenmeyer, S., Vrieseling, V., Sigrist, M., Portmann, T., Laengle, C., Ladle, DR. & Arber, S. (2005). A Developmental Switch in the Response of DRG Neurons to ETS Transcription Factor Signaling. **PLoS Biology** 3(5): e159.

Highly cited paper, placed in the top 1% of its academic field, according to ISI web of Science, January 2016.

Rodal, AA.*, Sokolova, O.*, Robins, DB., Daugherty, KM., **Hippenmeyer, S.**, Riezman, H., Grigorieff, N. & Goode, BL. (2005). Conformational Changes in the Arp2/3 Complex Leading to Actin Nucleation. (*equal contribution). **Nature Structural & Molecular Biology** 12(1): 26-31.

Featured Cover story with accompanying editorial comment.

Hippenmeyer, S., Shneider, NA., Birchmeier, C., Burden, SJ., Jessell, TM. & Arber, S. (2002). A Role for *Neuregulin1* Signaling in Muscle Spindle Differentiation. **Neuron** 36(6): 1035-49.

Peer Reviewed Review Articles

Hansen, AH.*, Düllberg, C.*, Mieck, C.*, Loose, M. & **Hippenmeyer, S.** (2017). Cell Polarity in Cerebral Cortex Development – Cellular Architecture Shaped by Biochemical Networks. (*equal contribution). **Frontiers in Cellular Neuroscience**, 11(176):1-16.

Dwyer, ND., Chen, B., Chou, SJ., **Hippenmeyer, S.**, Nguyen, L. & Ghashghaei, HT. (2016) Neural Stem Cells to Cerebral Cortex: Emerging Mechanisms Regulating Progenitor Behavior and Productivity. **Journal of Neuroscience**, 36(45):11394-11401. *Invited SfN Annual Meeting minireview accompanying minisymposium.*

Postiglione, MP. & **Hippenmeyer, S.** (2014). Monitoring Neurogenesis in Cerebral Cortex – an Update. *Future Neurology*, 9(3):323-340.

Hippenmeyer, S. (2013). Dissection of Gene Function at Clonal Level using Mosaic Analysis with Double Markers. *Frontiers in Biology*, 8(6): 557-568.
Featured cover story (<http://link.springer.com/journal/11515/8/6/page/1>).

Hippenmeyer, S.*, Kramer, I.* & Arber, S. (2004) Control of Neuronal Phenotype: What Targets Tell the Cell Bodies. (*equal contribution). *Trends in Neurosciences* 27(8): 482-8.

Chen, HH., **Hippenmeyer, S.**, Arber, S. & Frank, E. (2003). Development of the Monosynaptic Stretch Reflex Circuit. *Current Opinion in Neurobiology* 13(1): 96-102.

Books and Editorships

Nguyen, L. & **Hippenmeyer, S.** (Eds.) (2014). Cellular and Molecular Control of Neuronal Migration. *Advances in Experimental Medicine and Biology*, Vol. 800; ISBN 978-94-007-7686-9. Springer Science+Business Media.

Book Chapters and Other Peer-Reviewed Publications

Hippenmeyer, S. (2014). Molecular Pathways Controlling the Sequential Steps of Cortical Neuron Migration. *Book chapter for 'Cellular and Molecular Control of Neuronal Migration' in Advances in Experimental Medicine and Biology* (Editors: L. Nguyen and S. Hippenmeyer), Vol. 800:1-24. Springer Science+Business Media.

Hippenmeyer, S. & Luo L. (2011). Collection of 14 representative images generated with 'MADM' (Mosaic Analysis with Double Markers) technology. *Biology Image Library*, BioMed Central Ltd (Part of Springer Science+Business Media).

Hippenmeyer, S. & Arber, S. (2008). Collection of 23 images and illustrations on 'Neuronal Circuit Assembly in the Vertebrate Spinal Cord'. *Biology Image Library*, BioMed Central Ltd (Part of Springer Science+Business Media).

Patents

US Patent 9125385 (13/293'890) - *Site-directed Integration of Transgenes in Mammals* (2015)

US Patent Application (14/539'909) - *Site-Specific Integration of Transgenes into Human Cells* (2014)