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- Born October 16, 1968 in Geneva, Switzerland (Nationality Swiss).
- 1975 – 87: School education and Matura-Certificate in a Mathematical-Scientific highschool (MNG) in Basel.
- 1987: Intensive English language course at the University of Ann Arbor, Michigan (U. S. A.) and practical work in the Biotechnology Department of Ciba Geigy (Basel) in the laboratory of Dr. N. Hardman.
- 1987 – 1991: Biology II study at the Biozentrum of the University of Basel with graduation in Cell Biology.
- 1989, summer: practical work in the laboratory of Prof. S. Brenner, Molecular Genetics Unit (MRC) in Cambridge, GB.
- 1990 – 1991: Experimental diploma work in the laboratory of Dr. P. Caroni at the Friedrich Miescher Institute in Basel: "s-Cyclophilin - its intracellular location and its targeting determinants."
- January 1992 – December 1995: Graduate student in the laboratory of Dr. P. Caroni at the Friedrich Miescher Institute in Basel: "Activity-sensitive signaling at the neuromuscular junction."

- April 1996 – April 2000: Postdoctoral work in the laboratory of Prof. T.M. Jessell, Columbia University, HHMI, New York.
- April 2000 – November 2004: Assistant Professor Tenure Track for Neurobiology/Cell Biology at the Biozentrum/Friedrich Miescher Institute (Basel, Switzerland).
- December 2004 – December 2008: Associate Professor for Neurobiology/Cell Biology at the Biozentrum & Senior Group Leader at the Friedrich Miescher Institute (Basel, Switzerland).
- December 2008 – : Full Professor for Neurobiology/Cell Biology at the Biozentrum & Senior Group Leader at the Friedrich Miescher Institute (Basel, Switzerland).

Fellowships:

- January 1992 – December 1994: Swiss Foundation for Research on Muscle Diseases.
- April 1996 – October 1996: European Molecular Biology Organization (EMBO) long-term fellowship.
- October 1996 – September 1998: Human Frontier Science Program (HFSP) long-term fellowship.
- October 1998 – April 2000: Swiss National Science Foundation fellowship.

Awards:

- September 1996: E. Fisher prize for the best thesis of the year at the Friedrich Miescher Institute, Basel, Switzerland.
- November 1997: Fakultätspreis der Philosophisch-Naturwissenschaftlichen Fakultät der Universität Basel (Prize for the best thesis of the year awarded by the faculty, Basel, Switzerland).
- December 1997: Pfizer Forschungs-Preis 1998, for the work “MLP-deficient mice exhibit a disruption of cardiac cytoarchitectural organization, dilated cardiomyopathy, and heart failure”.
- December 1999: Human Frontier Science Program (HFSP) tenth anniversary award for young investigators.
- April 2001: EMBO Young Investigator Award 2000.
- Nationaler Latsispreis 2003: Ceremony in Bern, January 15, 2004
- European Eppendorf Young Investigator Award 2003

- May 2004: Swiss Academy of Medical Sciences – Member (Einzelmitglied der Akademie)
- April 2005: EMBO Member
- 2005: Schellenberg Prize for Research on cellular and molecular processes involved in spinal cord development, plasticity and regeneration.
- 2008: Friedrich Miescher Award, presented at USGEB 2008 (Feb 7)
- 2010 – 2015: ERC Advanced Grant

Invited Talks at International Meetings:

- September 1999: Varenna Axon Guidance Meeting.
- July 2001: 1st EMBO Young Investigator Meeting.
- September 2001: London, MRC Center for Developmental Neurobiology, Inaugural Conference “The Developing Brain”.
- January 2002: Swiss Society for Neuroscience Meeting.
- February 2002: Monte Verita, Ascona „Organizing the Brain: Genes, Neurons and Circuits.“ Co-organized with P. Caroni, A. Matus, Y.A. Barde, D. Monard, U. Mueller.
- February 2002: 8th Verbier Neural Workshop 2002.
- September 2002: Cold Spring Harbor Meeting „Axon Guidance and Neural Plasticity“
- December 2002: Gif sur-Yvette, France: Ladislav Tauc Conference in Neurobiology.
- June 2003: Gordon Research Conference „Neurotrophic Factors“, Salve Regina.
- July 2003: Turin Meeting (EC funded) „Brain, plasticity and learning based therapy“
- July/August 2003: Boston, USA: Society for Developmental Biology 62nd Annual Meeting jointly with the International Society of Developmental Biologists
- September 2003: Varenna, Italy: EMBO Workshop on “Assembly of Neural Circuits”
- September/October 2003: Monte Verità, Ascona: FMI Conference “Formation and Function of Neuronal Circuits”, Co-organized with P. Caroni, C. Gilbert, A. Matus, D. Monard, R. Morris.
- October 2003: SFB Symposium, University of Freiburg, Germany “Signaling Systems: Shaping Cells into Organs”
- November 2003: Oohito, Japan: Swiss/Japanese Meeting on Developmental Biology
- March 2004: Karolinska Institute, Stockholm: “Neurotrophic factors in development and disease”
- March 2004: Glasgow: Symposium on “Genetic and molecular approaches to investigate spinal cord circuitry”; organized by The Physiological Society.
- May 2004: ZMBH Forum 2004, Heidelberg: Mammalian Physiology: Lessons from the genetically altered mouse.
- October 2004: Joint meeting of Novartis Research Foundation funded Institutes (FMI, GNF and NITD) in Boston.
- October 2004: Neurobiology Symposium, Chapel Hill.

- October 2004: Society for Neuroscience Meeting, San Diego: Participation in Symposium "Functional Organization of Mammalian Spinal Motor Systems" (organizer: Robert Brownstone).
- November 2004: SFB Meeting, Frankfurt "Molecular and cellular basis of neuronal organization".
- March 2005: CEDB Conference at Nobel Forum, Karolinska Institute, Stockholm: "The Developing Nervous System".
- April 2005: 16th Scientific Meeting of the Society of Developmental Biology, Muenster, Germany.
- June 2005: Fondation des Treilles meeting: "Development and regeneration of neural connections" (organizers: Alain Chedotal and Marc Tessier-Lavigne).
- September 2005: Monte Verità, Ascona: EMBO Workshop/FMI Conference "Assembly and Function of Neuronal Circuits", Co-organized with P. Caroni, A. Luethi, C. Krull, B. Dickson, T. Bonhoeffer.
- February 2006 Ringberg Castel Meeting, Tegernsee, Germany – MPI-Neurobiology
- August 2006: Gordon Conference on Neural Development, Salve Regina, Rhode Island, USA
- September 2006: "European Drosophila Neurobiology Meeting", Leuven, Belgium.
- September 2006: "Wenner-Gren Symposium" Stockholm, Sweden.
- October 2006: EMBO new members meeting, Sheffield, GB.
- March 2007: USGEB Meeting, Basel, member of organizing committee
- May 2007: 3rd Annual Giessbach Meeting, Giessbach, Switzerland
- June 2007: Gordon Research Conference on "Neurotrophic Factors", Newport, USA
- September 2007: Monte Verità, Ascona: EMBO Conference "The Assembly and Function of Neuronal Circuits", Co-organizer with T. Bonhoeffer, P. Caroni, B. Dickson, T. Jessell, C. Krull, A. Luethi.
- September 2007: Conference J.P. Changeux, Institute Pasteur, Paris, France
- October 2007: 20th IGB Meeting – Generating Neural Diversity in the Brain, Capri, Italy
- March 2008: 6th Annual CDB Conference: Turning Neurons into a Nervous System, Kobe, Japan
- May 2008: 60th Anniversary – MPI Experimental Medicine Symposium: "Experimental Neuroscience – Molecules, Networks and Diseases", Goettingen, Germany
- June 2008: Gordon Research Conference on "Molecular and Cellular Neurobiology", Hong Kong University of Science, Hong Kong
- July 2008: Organizer of Workshop at 6th FENS (Forum of European Neuroscience) Meeting in Geneva, Switzerland
- September 2008: Cold Spring Harbor Meeting – Axon Guidance and Plasticity, CSH, NY, USA: Chairperson
- November 2008: Society for Neuroscience 2008, Washington, USA, participation in Symposium as speaker and co-chair.

- January 2009: Winter School on "Structure and Function of Neural Circuits", Obergurgl, Austria.
- May 2009: JFRC Conference on "Constructing Neural Circuits"; Janelia Farm, HHMI.
- May 2009: Gordon Research Conference on "Dendrites: Molecules, Structure & Function", Lucca, Italy
- August 2009: EMBO workshop on "Developmental Systems", Arolla, Switzerland
- October 2009: Monte Verità, Ascona: EMBO Conference "The Assembly and Function of Neuronal Circuits", Co-organizer with T. Bonhoeffer, P. Caroni, R. Friedrich, T. Jessell, L. Luo, E. Moser.
- February 2010: the 3rd International Workshop on Cell communication in Health and Disease: "Bridging the Gap", Centre for Brain Research, Vienna, Austria
- April 2010: Keystone Symposium on Synapses: Formation, Function and Misfunction; Snowbird Resort, Snowbird, Utah.
- August 2010: Gordon Conference on Neural Development, Salve Regina, Rhode Island, USA.
- September 2010: EMBO | EMBL Symposium: Neuronal Circuits; Heidelberg, Germany
- September 2010: CSH Meeting on Axon Guidance, Synapse Plasticity and Regeneration, Co-chair.
- November 2010: Special Lecture at the Society for Neuroscience 2010 Meeting in San Diego.
- January 2011: EMBO Global Exchange Program – member of EMBO delegation visiting Indian research institutions including talks (TIFR Mumbai, IIS Bangalore, NCBS Bangalore)
- March 2011: Keynote lecture at Annual Meeting of Swiss Society for Neuroscience (SSN) meeting
- March 2011: International Neuroscience Winter Conference, Soelden, Austria
- June 2011: Lunenfeld International Symposium, Toronto, Canada.
- June 2011: Gordon Conference on Neurotrophic Factors, Salve Regina, Rhode Island, USA.
- September 2011: 40 years Biozentrum Anniversary Symposium
- September 2011: Inaugural Champalimaud Neuroscience Symposium
- September 2011: Monte Verità, Ascona: EMBO Conference "The Assembly and Function of Neuronal Circuits", Co-organizer with T. Bonhoeffer, C. Dulac, R. Friedrich, T. Jessell, A. Luethi, E. Moser.
- October 2011: Mildred Trotter Lecture, Washington University, St. Louis, USA
- October/November 2011: HHMI Janelia Farm Conference on "The neural basis of motor control". Co-organizer with A. Hantmann and K. Pearson
- December 2011: Rockefeller University, New York, Symposium "Renshaw cell renewed: rules and roles of neuronal microcircuitry"
- Apr/May 2012: HHMI Janelia Farm Conference on "Constructing Neural Circuits". Keynote talk.
- May 2012: Madison, Wisconsin. "Cellular and network functions in the spinal cord". Keynote lecture.

- July 2012: FENS forum 2012 (Barcelona): member of program committee.
- August 2012: Gordon Conference on Neural Development, Salve Regina, Rhode Island, USA.
- Autumn 2013: Monte Verità, Ascona: Conference "The Assembly and Function of Neuronal Circuits", main organizer.

Grants & Research Networks:

- April 2001 – April 2004: Swiss National Science Foundation Grant
- April 2004 – April 2006: Swiss National Science Foundation Grant Extension
- April 2006 – April 2009: Swiss National Science Foundation Grant
- April 2009 – April 2012: Swiss National Science Foundation Grant Extension
- Human Frontier Science Program Grant Network: "Functional analysis of genetically defined interneurons in the ventral spinal cord
(<http://www.motorcontrol.med.dal.ca/>).
- 2004 – 2009: Member of "Frontiers in Genetics" NCCR (Network National Center of Competence), Swiss National Science Foundation selected and funded network, headed by Denis Duboule, Geneva.
- 2008 – 2010: EU Framework 7 Grant on "Spinal locomotor circuits: organization and repair after injury" – coordinated by Abdel El Manira, Karolinska, Stockholm
- 2010 – 2015: ERC Advanced Grant, 5 year grant, total of 2.5 Mio Euros

Permanent Editorial and Reviewing Activities:

- Member of Faculty of 1000 (F1000 – Neurodevelopment; 2000-2007).
- Journal of Clinical Investigation (consulting editor; 2002-2003)
- Developmental Neurobiology (member of the editorial board; 2003-2010)
- European Journal of Neuroscience (Receiving editor – section developmental neurobiology; 2003-2008)
- Current Opinion in Neurobiology (member of the editorial board; 2005-)
- Neural Development (member of the editorial board; 2006-)
- Trends in Neurosciences (member of the editorial board; 2012-)
- Current Opinion in Neurobiology: section editor for Issue on Neuronal and glial cell biology, published in October 2004 (jointly with Rachel Wong).
- European Science Foundation (ESF) Reviewer Board 2006/2007
- Deutsche Forschungsgemeinschaft (DFG) proposal reviewing board 2006 and 2007, Excellence Initiative

- ERC Advanced Grant Evaluation Panel „Neurosciences and neural disorders“ for years 2008/2010/2012.
- ERC Advanced Grant Evaluation Panel „Neurosciences and neural disorders“ for years 2010 – Deputy Chair.
- EMBO Course Committee member (2010 – 2013)
- Perl/UNC Neuroscience Prize selection committee, Chapel Hill, North Carolina, US (2008 – 2011)
- Scientific Advisory Board University of Lausanne (DBCM), Chair of committee 2011
- Member of FENS forum 2012 (Barcelona) program committee (2010-2012)
- Chair of FENS forum 2014 (Milano) program committee (2012-2014)
- Current Opinion in Neurobiology: section editor for Issue on Development, published in 2011 (jointly with Graeme Davis, UCSF).
- *Ad hoc* reviewing for: Cell, Nature, Science, Neuron, Nature Neuroscience, Genes & Development, PLoS Biology, Development, PNAS, Journal of Neuroscience, Glia, J Anatomy, J Comp Neurol, Dev Dynamics, Dev Biology, Mechanisms of Development, MCB, MCN, TINS, Nature Review Neuroscience

PUBLICATIONS

- 1 Arber, S., Krause, K. H., and Caroni, P. (1992). s-Cyclophilin is retained intracellularly via a unique COOH-terminal sequence and colocalizes with the calcium storage protein calreticulin. *J. Cell Biol.* **116**, 113-125.
- 2 Arber, S., Halder, G., and Caroni, P. (1994). Muscle LIM protein, a novel essential regulator of myogenesis, promotes myogenic differentiation. *Cell* **79**, 221-231.
- 3 Arber, S., and Caroni, P. (1995). Thrombospondin-4, an extracellular matrix protein expressed in the developing and adult nervous system promotes neurite outgrowth. *J. Cell Biol.* **131**, 1083-1094.
- 4 Aigner, L., Arber, S., Kapfhammer, J.P., Laux, T., Schneider, C., Botteri, F., Brenner, H.R., and Caroni, P. (1995). Overexpression of the neural growth-associated protein GAP-43 induces nerve sprouting in the adult nervous system of transgenic mice. *Cell* **83**, 269-278.
- 5 Arber, S., and Caroni, P. (1996). Specificity of single LIM motifs in targeting and LIM/LIM interactions in situ. *Genes Dev.* **10**, 289-300.
- 6 Arber, S., Hunter, J.J., Ross, J. Jr., Hongo, M., Sansig, G., Borg, J., Perriard, J.C., Chien, K.R., and Caroni, P. (1997). MLP-deficient mice exhibit a disruption of cardiac cytoarchitectural organization, dilated cardiomyopathy, and heart failure. *Cell* **88**, 393-403.
- 7 Baumeister, A., Arber, S., and Caroni, P. (1997). Accumulation of muscle ankyrin protein transcript reveals local activation of primary myotube endcompartments during muscle morphogenesis. *J. Cell Biol.* **139**, 1231-1242.
- 8 Arber, S., Barbayannis, F.A., Hanser, H., Stanyon, C.A., Bernard, O., and Caroni, P. (1998). Regulation of actin dynamics through phosphorylation of cofilin by LIM-kinase. *Nature* **393**, 805-809.
- 9 Lin, J., Saito, T., Anderson, D., Lance-Jones, C., Jessell, T.M., and Arber S. (1998). Functionally-related motor neuron pool and muscle sensory afferent subtypes defined by coordinate *ETS* gene expression. *Cell* **95**, 393-407.

- 10 Arber, S., Han, B., Mendelsohn, M., Smith, M., Jessell, T.M., and Sockanathan, S. (1999). Requirement for the homeobox gene *Hb9* in the consolidation of motor neuron identity. *Neuron* **23**, 659-74.
- 11 Li, H., Arber, S., Jessell, T.M., and Edlund H. (1999). Selective agenesis of the dorsal pancreas in mice lacking homeobox gene *Hlxb9*. *Nature Genetics* **23**, 67-70.
- 12 Arber, S., Ladle, D., Lin, J., Frank, E., and Jessell, T.M. (2000). ETS gene *Er81* controls the formation of functional connections between group Ia sensory afferents and motor neurons. *Cell* **101**, 485-498.
- 13 Yang, X., Arber, S., William, C., Li, L., Tanabe, Y., Jessell, T.M., Birchmeier, C., and Burden, S.J. (2001). Patterning of muscle acetylcholine receptor gene expression in the absence of motor innervation. *Neuron* **30**, 399-410.
- 14 Arber, S., Burden, S. J., and Harris, A. J. (2002). Patterning of skeletal muscle. *Curr Opin Neurobiol* **12**, 100-3.
- 15 Pun, S., Sigrist, M., Santos, A. F., Ruegg, M. A., Sanes, J. R., Jessell, T. M., Arber, S., and Caroni, P. (2002). An intrinsic distinction in neuromuscular junction assembly and maintenance in different skeletal muscles. *Neuron* **34**, 357-70.
- 16 Livet, J., Sigrist, M., Stroebel, S., De Paola, V., Price, S.R., Henderson, C.E., Jessell, T.M., and Arber, S. (2002). ETS gene *Pea3* controls the central position and terminal arborization of specific motor neuron pools. *Neuron* **35**, 877-892.
- 17 Haase, G., Dessaud, E., Garces, A., de Bovis, B., Birling M.C., Filippi P., Schmalbruch H., Arber S., and deLapeyriere O. (2002). GDNF acts through PEA3 to regulate cell body positioning and muscle innervation of specific motor neuron pools. *Neuron* **35**, 893-905.
- 18 Hippenmeyer, S., Shneider, N.A., Birchmeier, C., Burden, S.J., Jessell, T.M. and Arber S. (2002). A role for *Neuregulin1* signaling in muscle spindle differentiation. *Neuron* **36**, 1035-49.
- 19 Chen, H.H., Hippenmeyer, S., Arber, S., and Frank, E. (2003). Development of the monosynaptic stretch reflex circuit. *Curr Opin Neurobiol* **13**, 96-102.

- 20 De Paola, V., Arber, S., and Caroni, P. (2003). AMPA receptors regulate dynamic equilibrium of presynaptic terminals in mature hippocampal networks. *Nat Neurosci* 6, 491-500.
- 21 Patel, T.D., Kramer, I., Kucera, J., Niederkofler, V., Jessell, T.M., Arber, S., and Snider, W.D. (2003). Peripheral NT3 signaling is required for ETS protein expression and central patterning of proprioceptive sensory afferents. *Neuron* 38, 403-16.
- 22 Helmbacher, F., Dessaud, E., Arber, S., deLapeyriere, O., Henderson, C.E., Klein, R., Maina, F. (2003). Met signalling is required for recruitment of motor neurons to PEA3-positive motor pools. *Neuron* 39, 767-77.
- 23 Niederkofler, V., Salie, R., Sigrist, M., and Arber, S. (2004). *RGM* gene function is required for neural tube closure but not retinal topography in the mouse visual system. *J. Neurosci* 24, 808-18.
- 24 Arber, S. (2004). Subplate neurons: Bridging the gap to function in the cortex. *Trends Neurosci*, 27, 111-3.
- 25 Hippenmeyer, S., Kramer, I., and Arber, S. (2004). Control of neuronal phenotype: What targets tell the cell bodies. *Trends Neurosci*, 27, 482-88.
- 26 Arber, S., and Wong, R. (2004). Neuronal and glial cell biology (Editorial). *Curr Opin Neurobiol* 14, 519-521.
- 27 Salie, R., Niederkofler, V., and Arber, S. (2005). Patterning molecules: Multitasking in the nervous system. *Neuron* 45, 189-192.
- 28 Hippenmeyer, S., Vrieseling, E., Sigrist, M., Portmann, T., Laengle, C., Ladle, D. R., and Arber, S. (2005). A developmental switch in the response of DRG neurons to ETS transcription factor signaling. *PLoS Biol.* 2005 Apr 26;3(5):e159 [Epub ahead of print]
- 29 Bielle, F., Griveau A., Narboux-Nême, N., Vigneau, S., Sigrist, M., Arber, S., Wassef, M., and Pierani, A. (2005). Multiple origins of Cajal-Retzius cells at the borders of the developing pallium. *Nat Neurosci* 8, 1002-1012.

- 30 Niederkofler, V., Salie, R., and Arber, S. (2005). Hemojuvelin is essential for dietary iron-sensing and its mutation leads to severe iron overload. *J Clin Invest* 115, 2180-2186.
- 31 Chen, C., Ouyang, W., Grigura, V., Zhou, Q., Carnes, K., Lim, H., Zhao, G. Q., Arber, S., Kurpios, N., Murphy, T. L., *et al.* (2005). ERM is required for transcriptional control of the spermatogonial stem cell niche. *Nature* 436, 1030-1034.
- 32 Kramer, I., Sigrist, M., de Nooij, J. C., Taniuchi, I., Jessell, T. M., and Arber, S. (2006). A role for Runx transcription factor signaling in dorsal root ganglion sensory neuron diversification. *Neuron* 49, 379-393.
- 33 Raineteau, O., Hugel, S., Ozen, I., Rietschin, L., Sigrist, M., Arber, S., and Gaehwiler, B.H. (2006). Conditional labeling of newborn granule cells to visualize their integration into established circuits in hippocampal slice cultures. *MCN* 32, 344-355.
- 34 Vrieseling, E., and Arber, S. (2006). Target-induced transcriptional control of dendritic patterning and connectivity in motor neurons by the ETS gene *Pea3*. *Cell*, 127, 1439-1452.
- 35 Ksiazek, I., Burkhardt, C., Lin, S., Seddik, R., Maj, M., Bezakova, G., Jucker, M., Arber, S., Caroni, P., Sanes, J.R., Bettler, B., and Ruegg, M.A. (2007). Synapse loss in cortex of agrin-deficient mice after genetic rescue of perinatal death. *J. Neurosci.* 27, 7183-7195.
- 36 Hippenmeyer, S., Huber, R.M., Ladle, D.R., Murphy, K., and Arber, S. (2007). ETS transcription factor *Erm* controls subsynaptic gene expression in skeletal muscles. *Neuron*, 55, 726-740.
- 37 Ladle, D.R., Pecho-Vrieseling, E., and Arber, S. (2007). Assembly of motor circuits in the spinal cord: driven to function by genetic and experience-dependent mechanisms. *Neuron*, 56, 270-283.
- 38 Belle, M.D., Pattison, E.F., Cheunsuang, O., Stewart, A., Kramer, I., Sigrist, M., Arber, S., and Morris, R. (2007). Characterization of a *thy1.2* GFP transgenic mouse reveals a tissue-specific organization of the spinal dorsal horn. *Genesis*, 45, 679-688.

- 39 Dalla Torre di Sanguinetto, S.A., Dasen, J.S., and Arber, S. (2008). Transcriptional mechanisms controlling motor neuron diversity and connectivity. *Curr Opin Neurobiol*, *18*, 36-43.
- 40 Arber, S. (2008). FoxP1: conducting the Hox symphony in spinal motor neurons. *Nat Neurosci*, *11*, 1122-1124.
- 41 Stepien, A.E., and Arber, S. (2008). Probing the locomotor conundrum: Descending the 'V' interneuron ladder. *Neuron*, *60*, 1-4.
- 42 Pecho-Vrieseling, E., Sigrist, M., Yoshida, Y., Jessell, T.M., and Arber, S. (2009). Specificity of sensory-motor connections encoded by Sema3e-PlexinD1 recognition. *Nature*, *459*, 842-846.
- 43 Friese, A., *Kaltschmidt, J.A., *Ladle, D.R., Sigrist, M., Jessell, T.M., and Arber, S. (2009). Gamma and alpha motor neurons distinguished by expression of transcription factor Err3. *PNAS*, *106*, 13588-93. * equal contribution
- 44 Lu, B.C., Cebrian, C., Chi, X., Kuure, S., Kuo, R., Bates, C.M., Arber, S., Hassell, J., MacNeil, L., Hoshi, M., Jain, S., Asai, N., Takahashi, M., Schmidt-Ott, K.M., Barasch, J., D'Agati, V., and Costantini, F. (2009). Etv4 and Etv5 are required downstream of GDNF and Ret for kidney branching morphogenesis. *Nature Genetics*, *41*, 1295-1302.
- 45 Zhu, P., Narita, Y., Bundschuh, S.T., Fajardo, O., Zhang-Schärer, Y.P., Chattopadhyaya, B., Boulldoires, E.A., Stepien, A.E., Deisseroth, K., Arber, S., Sprengel, R., Fijli, F.M., and Friedrich, R.W. (2009). Optogenetic dissection of neuronal circuits in zebrafish using viral gene transfer and the Tet system. *Frontiers in Neural Circuits*, *3*, Article 21, 1-12.
- 46 Zimmer, C., Lee, J., Griveau, A., Arber, S., Pierani, A., Garel, S., and Guillemot, F. (2010). Role of FGF8 signalling in the specification of rostral Cajal-Retzius cells. *Development*, *137*, 293-302.
- 47 Samad, O.A., Liu, Y., Yang, F.C., Kramer, I., Arber, S., and Ma, Q. (2010). Characterization of two Runx1-dependent nociceptor differentiation programs necessary for inflammatory versus neuropathic pain. *Molecular Pain*, *6*: 45

- 48 Stepien, A.E., Tripodi, M., and Arber, S. (2010). Monosynaptic rabies virus reveals premotor network organization and synaptic specificity of cholinergic partition cells. *Neuron*, *68*, 456-472.
- 49 Xia, Y., Cortez-Retamozo, V., Niederkofler, V., Salie, R., Chen, S., Samad, T.A., Hong, C.C., Arber, S., Vyas, J.M., Weissleder, R., Pittet, M.J. and Lin, H.Y. (2011). Dragon (repulsive guidance molecule b) inhibits IL-6 expression in macrophages. *J Immunol*, *186*, 1369-1376.
- 50 Arber, S., and Davis, G. (2011). Developmental neuroscience. *Curr Opin Neurobiol* *21*, 1-4.
- 51 Tripodi, M., Stepien, A.E., and Arber, S. (2011). Motor antagonism exposed by spatial segregation and timing of neurogenesis. *Nature*, *479*, 61-66.
- 52 Ma, C., Brenner, G., Omura, T., Samad, O., Costigan, M., Inquimbert, P., Niederkofler, V., Salie, R., Sun, C.C., Lin, H., Arber, S., Coppola, G., Woolf, C., and Samad, T. (2011). The BMP co-receptor RGMb promotes while the endogenous BMP antagonist Noggin reduces neurite outgrowth and peripheral nerve regeneration by modulating BMP signaling. *J Neurosci*, *31*, 18391-18400.
- 53 Ashrafi, S., Lalancette-Hebert, M., Friese, A., Sigrist, M., Arber, S., Shneider, N.A., and Kaltschmidt, J.A. (2012). Wnt7a identifies embryonic gamma motor neurons and reveals early postnatal dependence of gamma motor neurons on a muscle spindle-derived signal. *J Neurosci*, *32*, 8725-8731.
- 54 Arber, S. (2012). Motor circuits in action: Specification, connectivity and function. *Neuron*, *74*, 975-989.
- 55 Lee, J., Friese, A., Mielich, M., Sigrist, M., and Arber, S. (2012). Scaling proprioceptor gene transcription by retrograde NT3 signaling. *PLoS ONE*, *in press*.
- 56 Tripodi, M. and Arber, S. (2012). Regulation of motor circuit assembly by spatial and temporal mechanisms. *Curr Opin Neurobiol*, *in press*.