

Publizierte Forschungsergebnisse aus Förderprojekten der Schram-Stiftung 2004-2021

- Abbas E, Hassan MA, Sokpor G, Kiszka K, Pham L, Kerimoglu C, Fischer A, Nguyen HP, Staiger JF, **Tuoc T**. 2021. Conditional Loss of BAF (mSWI/SNF) Scaffolding Subunits Affects Specification and Proliferation of Oligodendrocyte Precursors in Developing Mouse Forebrain. *Frontiers in cell and developmental biology* 9:619538. doi: 10.3389/fcell.2021.619538.
- Agoston Z, Heine P, Brill MS, Grebbin BM, Hau A-C, Kallenborn-Gerhardt W, Schramm J, Götz M, **Schulte D**. 2014. Meis2 is a Pax6 co-factor in neurogenesis and dopaminergic periglomerular fate specification in the adult olfactory bulb. *Development (Cambridge, England)* 141:28–38. doi: 10.1242/dev.097295.
- Bahnassawy L'a, Nicklas S, Palm T, Menzl I, Birzele F, Gillardon F, **Schwamborn JC**. 2013. The parkinson's disease-associated LRRK2 mutation R1441G inhibits neuronal differentiation of neural stem cells. *Stem cells and development* 22:2487–2496. doi: 10.1089/scd.2013.0163.
- Bahnassawy L'a, Perumal TM, Gonzalez-Cano L, Hillje A-L, Taher L, Makalowski W, Suzuki Y, Fuellen G, del Sol A, **Schwamborn JC**. 2015. TRIM32 modulates pluripotency entry and exit by directly regulating Oct4 stability. *Scientific reports* 5:13456. doi: 10.1038/srep13456.
- Bikbaev A, Ciuraszkiewicz-Wojciech A, Heck J, Klatt O, Freund R, Mitlöhner J, Enrile Lacalle S, Sun M, Repetto D, **Frischknecht R**, Ablinger C, Rohlmann A, Missler M, Obermair GJ, Di Biase V, **Heine M**. 2020. Auxiliary $\alpha 2\delta 1$ and $\alpha 2\delta 3$ Subunits of Calcium Channels Drive Excitatory and Inhibitory Neuronal Network Development. *The Journal of neuroscience : the official journal of the Society for Neuroscience* 40:4824–4841. doi: 10.1523/JNEUROSCI.1707-19.2020.
- Bikbaev A, **Frischknecht R**, **Heine M**. 2015. Brain extracellular matrix retains connectivity in neuronal networks. *Scientific reports* 5:14527. doi: 10.1038/srep14527.
- Bi-Lin KW, Seshachalam PV, **Tuoc T**, Stoykova A, Ghosh S, Singh MK. 2021. Critical role of the BAF chromatin remodeling complex during murine neural crest development. *PLoS genetics* 17:e1009446. doi: 10.1371/journal.pgen.1009446.
- Blosa M, Sonntag M, Jäger C, Weigel S, Seeger J, **Frischknecht R**, Seidenbecher CI, Matthews RT, Arendt T, Rübsamen R, Morawski M. 2015. The extracellular matrix molecule brevican is an integral component of the machinery mediating fast synaptic transmission at the calyx of Held. *The Journal of physiology* 593:4341–4360. doi: 10.1113/JP270849.
- Booker SA, Harada H, Elgueta C, Bank J, **Bartos M**, Kulik A, Vida I. 2020. Presynaptic GABAB receptors functionally uncouple somatostatin interneurons from the active hippocampal network. *eLife* 9. doi: 10.7554/eLife.51156.
- Brockhaus J, Schreitmüller M, Repetto D, Klatt O, Reissner C, Elmslie K, **Heine M**, Missler M. 2018. α -Neurexins Together with $\alpha 2\delta$ -1 Auxiliary Subunits Regulate Ca^{2+} Influx through Cav2.1 Channels. *The Journal of neuroscience : the official journal of the Society for Neuroscience* 38:8277–8294. doi: 10.1523/JNEUROSCI.0511-18.2018.
- Castello-Waldow TP, Weston G, Ulivi AF, Chenani A, Loewenstein Y, Chen A, **Attardo A**. 2020. Hippocampal neurons with stable excitatory connectivity become part of neuronal representations. *PLoS biology* 18:e3000928. doi: 10.1371/journal.pbio.3000928.
- Dash-Wagh S, Neumann JR, Veitinger S, Grote-Westrick C, Landgraf P, Pape H-C, **Kreutz MR**, Holst A von, **Wahle P**. 2011. The survival promoting peptide Y-P30 promotes cellular migration. *Molecular and cellular neurosciences* 48:195–204. doi: 10.1016/j.mcn.2011.07.005.
- Del Pino I, Koch D, Schemm R, **Qualmann B**, Betz H, Paarmann I. 2014. Proteomic analysis of glycine receptor β subunit (GlyR β)-interacting proteins: evidence for syndapin I regulating synaptic glycine receptors. *The Journal of biological chemistry* 289:11396–11409. doi: 10.1074/jbc.M113.504860.
- Dharmalingam E, Haeckel A, Pinyol R, Schwintzer L, Koch D, Kessels MM, **Qualmann B**. 2009. F-BAR proteins of the syndapin family shape the plasma membrane and are crucial for neuromorphogenesis. *The Journal of neuroscience : the official journal of the Society for Neuroscience* 29:13315–13327. doi: 10.1523/JNEUROSCI.3973-09.2009.

- Dieterich DC, Karpova A, Mikhaylova M, Zdobnova I, König I, Landwehr M, Kreutz M, Smalla K-H, Richter K, Landgraf P, Reissner C, Boeckers TM, Zuschratter W, Spilker C, Seidenbecher CI, Garner CC, Gundelfinger ED, **Kreutz MR**. 2008. Caldendrin-Jacob: a protein liaison that couples NMDA receptor signalling to the nucleus. *PLoS biology* 6:e34. doi: 10.1371/journal.pbio.0060034.
- Edelmann E, **Lessmann V**. 2011. Dopamine Modulates Spike Timing-Dependent Plasticity and Action Potential Properties in CA1 Pyramidal Neurons of Acute Rat Hippocampal Slices. *Frontiers in synaptic neuroscience* 3:6. doi: 10.3389/fnsyn.2011.00006.
- Edelmann E, **Lessmann V**. 2013. Dopamine regulates intrinsic excitability thereby gating successful induction of spike timing-dependent plasticity in CA1 of the hippocampus. *Frontiers in neuroscience* 7:25. doi: 10.3389/fnins.2013.00025.
- Eickelbeck D, Karapinar R, Jack A, Suess ST, Barzan R, Azimi Z, Surdin T, Grömmke M, Mark MD, Gerwert K, Jancke D, **Wahle P**, Spoida K, Herlitze S. 2019. CaMello-XR enables visualization and optogenetic control of Gq/11 signals and receptor trafficking in GPCR-specific domains. *Communications biology* 2:60. doi: 10.1038/s42003-019-0292-y.
- Elgueta C, **Bartos M**. 2019. Dendritic inhibition differentially regulates excitability of dentate gyrus parvalbumin-expressing interneurons and granule cells. *Nature communications* 10:5561. doi: 10.1038/s41467-019-13533-3.
- Engelhardt M, Hamad MIK, Jack A, Ahmed K, König J, Rennau LM, Jamann N, Räk A, Schönfelder S, Riedel C, Wirth MJ, Patz S, **Wahle P**. 2018. Interneuron synaptopathy in developing rat cortex induced by the pro-inflammatory cytokine LIF. *Experimental neurology* 302:169–180. doi: 10.1016/j.expneurol.2017.12.011.
- Eyre MD, **Bartos M**. 2019. Somatostatin-Expressing Interneurons Form Axonal Projections to the Contralateral Hippocampus. *Frontiers in neural circuits* 13:56. doi: 10.3389/fncir.2019.00056.
- Fainzilber M, Budnik V, Segal RA, **Kreutz MR**. 2011. From synapse to nucleus and back again--communication over distance within neurons. *The Journal of neuroscience : the official journal of the Society for Neuroscience* 31:16045–16048. doi: 10.1523/JNEUROSCI.4006-11.2011.
- Farsi Z, Gowrisankaran S, Kronic M, Rammner B, Woehler A, Lafer EM, Mim C, Jahn R, **Milosevic I**. 2018. Clathrin coat controls synaptic vesicle acidification by blocking vacuolar ATPase activity. *eLife* 7. doi: 10.7554/eLife.32569.
- Finzsch M, Stolt CC, Lommes P, **Wegner M**. 2008. Sox9 and Sox10 influence survival and migration of oligodendrocyte precursors in the spinal cord by regulating PDGF receptor alpha expression. *Development (Cambridge, England)* 135:637–646. doi: 10.1242/dev.010454.
- Fonseca TB, Sánchez-Guerrero Á, **Milosevic I**, Raimundo N. 2019. Mitochondrial fission requires DRP1 but not dynamins. *Nature* 570:E34-E42. doi: 10.1038/s41586-019-1296-y.
- Frischknecht R**, Seidenbecher CI. 2012. Brevican: a key proteoglycan in the perisynaptic extracellular matrix of the brain. *The international journal of biochemistry & cell biology* 44:1051–1054. doi: 10.1016/j.biocel.2012.03.022.
- Fritzsche R, Karra D, Bennett KL, Ang FY, Heraud-Farlow JE, Tolino M, Doyle M, Bauer KE, Thomas S, Planyavsky M, Arn E, Bakosova A, Jungwirth K, Hörmann A, Palfi Z, Sandholzer J, Schwarz M, Macchi P, Colinge J, Superti-Furga G, **Kiebler MA**. 2013. Interactome of two diverse RNA granules links mRNA localization to translational repression in neurons. *Cell reports* 5:1749–1762. doi: 10.1016/j.celrep.2013.11.023.
- Gispert S, Ricciardi F, Kurz A, Azizov M, Hoepken H-H, Becker D, Voos W, Leuner K, Müller WE, Kudin AP, Kunz WS, Zimmermann A, Roeper J, Wenzel D, Jendrach M, García-Areñcibia M, Fernández-Ruiz J, Huber L, **Rohrer H**, Barrera M, Reichert AS, Rüb U, Chen A, Nussbaum RL, Auburger G. 2009. Parkinson phenotype in aged PINK1-deficient mice is accompanied by progressive mitochondrial dysfunction in absence of neurodegeneration. *PLoS one* 4:e5777. doi: 10.1371/journal.pone.0005777.
- Goetze B, Tuebing F, Xie Y, Dorostkar MM, Thomas S, Pehl U, Boehm S, Macchi P, **Kiebler MA**. 2006. The brain-specific double-stranded RNA-binding protein Staufen2 is required for dendritic spine morphogenesis. *The Journal of cell biology* 172:221–231. doi: 10.1083/jcb.200509035.
- Golbs A, Nimmervoll B, Sun J-J, Sava IE, **Luhmann HJ**. 2011. Control of programmed cell death by distinct electrical activity patterns. *Cerebral cortex (New York, N.Y. : 1991)* 21:1192–1202. doi: 10.1093/cercor/bhq200.

- Gottmann K, Mittmann T, **Lessmann V**. 2009. BDNF signaling in the formation, maturation and plasticity of glutamatergic and GABAergic synapses. *Experimental brain research* 199:203–234. doi: 10.1007/s00221-009-1994-z.
- Gowrisankaran S, Houy S, Del Castillo JGP, Steubler V, Gelker M, Kroll J, Pinheiro PS, Schwitters D, Halbsgut N, Pechstein A, van Weering JRT, Maritzen T, **Haucke V**, Raimundo N, Sørensen JB, **Milosevic I**. 2020. Endophilin-A coordinates priming and fusion of neurosecretory vesicles via intersectin. *Nature communications* 11:1266. doi: 10.1038/s41467-020-14993-8.
- Gowrisankaran S, Wang Z, Morgan DG, **Milosevic I**, Mim C. 2020. Cells Control BIN1-Mediated Membrane Tubulation by Altering the Membrane Charge. *Journal of molecular biology* 432:1235–1250. doi: 10.1016/j.jmb.2019.12.001.
- Grabert J, **Wahle P**. 2008. Neuronal activity and TrkB ligands influence Kv3.1b and Kv3.2 expression in developing cortical interneurons. *Neuroscience* 156:618–629. doi: 10.1016/j.neuroscience.2008.08.008.
- Granata A, Koo SJ, **Haucke V**, Schiavo G, Warner TT. 2011. CSN complex controls the stability of selected synaptic proteins via a torsinA-dependent process. *The EMBO journal* 30:181–193. doi: 10.1038/emboj.2010.285.
- Grebbin BM, Hau A-C, Groß A, Anders-Maurer M, Schramm J, Koss M, Wille C, Mittelbronn M, Selleri L, **Schulte D**. 2016. Pbx1 is required for adult subventricular zone neurogenesis. *Development (Cambridge, England)* 143:2281–2291. doi: 10.1242/dev.128033.
- Haeckel A, Ahuja R, Gundelfinger ED, **Qualmann B**, Kessels MM. 2008. The actin-binding protein Abp1 controls dendritic spine morphology and is important for spine head and synapse formation. *The Journal of neuroscience : the official journal of the Society for Neuroscience* 28:10031–10044. doi: 10.1523/JNEUROSCI.0336-08.2008.
- Hainmueller T, **Bartos M**. 2020. Dentate gyrus circuits for encoding, retrieval and discrimination of episodic memories. *Nature reviews. Neuroscience* 21:153–168. doi: 10.1038/s41583-019-0260-z.
- Hamad MIK, Ma-Högemeier Z-L, Riedel C, Conrads C, Veitinger T, Habijan T, Schulz J-N, Krause M, Wirth MJ, Hollmann M, **Wahle P**. 2011. Cell class-specific regulation of neocortical dendrite and spine growth by AMPA receptor splice and editing variants. *Development (Cambridge, England)* 138:4301–4313. doi: 10.1242/dev.071076.
- Hanganu IL, Okabe A, **Lessmann V**, **Luhmann HJ**. 2009. Cellular mechanisms of subplate-driven and cholinergic input-dependent network activity in the neonatal rat somatosensory cortex. *Cerebral cortex (New York, N.Y. : 1991)* 19:89–105. doi: 10.1093/cercor/bhn061.
- Happel MFK, Niekisch H, Castiblanco Rivera LL, Ohl FW, Deliano M, **Frischknecht R**. 2014. Enhanced cognitive flexibility in reversal learning induced by removal of the extracellular matrix in auditory cortex. *Proceedings of the National Academy of Sciences of the United States of America* 111:2800–2805. doi: 10.1073/pnas.1310272111.
- Hau A-C, Grebbin BM, Agoston Z, Anders-Maurer M, Müller T, Groß A, Kolb J, Langer JD, Döring C, **Schulte D**. 2017. MEIS homeodomain proteins facilitate PARP1/ARTD1-mediated eviction of histone H1. *The Journal of cell biology* 216:2715–2729. doi: 10.1083/jcb.201701154.
- Heck J, Parutto P, Ciuraszkiewicz A, Bikbaev A, Freund R, Mitlöhner J, Andres-Alonso M, Fejtova A, Holcman D, **Heine M**. 2019. Transient Confinement of CaV2.1 Ca²⁺-Channel Splice Variants Shapes Synaptic Short-Term Plasticity. *Neuron* 103:66–79.e12. doi: 10.1016/j.neuron.2019.04.030.
- Heine M**, Heck J, Ciuraszkiewicz A, Bikbaev A. 2020. Dynamic compartmentalization of calcium channel signalling in neurons. *Neuropharmacology* 169:107556. doi: 10.1016/j.neuropharm.2019.02.038.
- Heine M**, Holcman D. 2020. Asymmetry Between Pre- and Postsynaptic Transient Nanodomains Shapes Neuronal Communication. *Trends in neurosciences* 43:182–196. doi: 10.1016/j.tins.2020.01.005.
- Hemmer K, Zhang M, van Wüllen T, Sakalem M, Tapia N, Baumuratov A, Kaltschmidt C, Kaltschmidt B, Schöler HR, Zhang W, **Schwamborn JC**. 2014. Induced neural stem cells achieve long-term survival and functional integration in the adult mouse brain. *Stem cell reports* 3:423–431. doi: 10.1016/j.stemcr.2014.06.017.
- Heraud-Farlow JE, Sharangdhar T, Li X, Pfeifer P, Tauber S, Orozco D, Hörmann A, Thomas S, Bakosova A, Farlow AR, Edbauer D, Lipshitz HD, Morris QD, Bilban M, Doyle M, **Kiebler MA**. 2013. Stauf2 regulates neuronal target RNAs. *Cell reports* 5:1511–1518. doi: 10.1016/j.celrep.2013.11.039.

- Hillje A-L, Beckmann E, Pavlou MAS, Jaeger C, Pacheco MP, Sauter T, **Schwamborn JC**, Lewejohann L. 2015. The neural stem cell fate determinant TRIM32 regulates complex behavioral traits. *Frontiers in cellular neuroscience* 9:75. doi: 10.3389/fncel.2015.00075.
- Hillje A-L, Pavlou MAS, Beckmann E, Worlitzer MMA, Bahnassawy L, Lewejohann L, Palm T, **Schwamborn JC**. 2013. TRIM32-dependent transcription in adult neural progenitor cells regulates neuronal differentiation. *Cell death & disease* 4:e976. doi: 10.1038/cddis.2013.487.
- Höfflin F, Jack A, Riedel C, Mack-Bucher J, Roos J, Corcelli C, Schultz C, **Wahle P**, Engelhardt M. 2017. Heterogeneity of the Axon Initial Segment in Interneurons and Pyramidal Cells of Rodent Visual Cortex. *Frontiers in cellular neuroscience* 11:332. doi: 10.3389/fncel.2017.00332.
- Huber L, Ferdin M, Holzmann J, Stubbusch J, **Rohrer H**. 2012. HoxB8 in noradrenergic specification and differentiation of the autonomic nervous system. *Developmental biology* 363:219–233. doi: 10.1016/j.ydbio.2011.12.026.
- Husson SJ, Costa WS, Schmitt C, **Gottschalk A**. 2013. Keeping track of worm trackers. *WormBook : the online review of C. elegans biology* 1–17. doi: 10.1895/wormbook.1.156.1.
- Husson SJ, Costa WS, Wabnig S, Stirman JN, Watson JD, Spencer WC, Akerboom J, Looger LL, Treinin M, Miller DM, Lu H, **Gottschalk A**. 2012. Optogenetic analysis of a nociceptor neuron and network reveals ion channels acting downstream of primary sensors. *Current biology : CB* 22:743–752. doi: 10.1016/j.cub.2012.02.066.
- Husson SJ, Liewald JF, Schultheis C, Stirman JN, Lu H, **Gottschalk A**. 2012. Microbial light-activatable proton pumps as neuronal inhibitors to functionally dissect neuronal networks in *C. elegans*. *PLoS one* 7:e40937. doi: 10.1371/journal.pone.0040937.
- Ivanova D, Dirks A, Montenegro-Venegas C, Schöne C, Altmann WD, Marini C, **Frischknecht R**, Schanze D, Zenker M, Gundelfinger ED, Fejtova A. 2015. Synaptic activity controls localization and function of CtBP1 via binding to Bassoon and Piccolo. *The EMBO journal* 34:1056–1077. doi: 10.15252/embj.201488796.
- Jordan BA, **Kreutz MR**. 2009. Nucleocytoplasmic protein shuttling: the direct route in synapse-to-nucleus signaling. *Trends in neurosciences* 32:392–401. doi: 10.1016/j.tins.2009.04.001.
- Jost B, Grabert J, Patz S, Schmidt M, **Wahle P**. 2006. GABAC receptor subunit mRNA expression in the rat superior colliculus is regulated by calcium channels, neurotrophins, and GABAC receptor activity. *Brain cell biology* 35:251–266. doi: 10.1007/s11068-008-9020-0.
- Kanold PO, **Luhmann HJ**. 2010. The subplate and early cortical circuits. *Annual review of neuroscience* 33:23–48. doi: 10.1146/annurev-neuro-060909-153244.
- Karow M**, Camp JG, Falk S, Gerber T, Pataskar A, Gac-Santel M, Kageyama J, Brazovskaja A, Garding A, Fan W, Riedemann T, Casamassa A, Smiyakin A, Schichor C, Götz M, Tiwari VK, Treutlein B, Berninger B. 2018. Direct pericyte-to-neuron reprogramming via unfolding of a neural stem cell-like program. *Nature neuroscience* 21:932–940. doi: 10.1038/s41593-018-0168-3.
- Karpova A, Mikhaylova M, Bera S, Bär J, Reddy PP, Behnisch T, Rankovic V, Spilker C, Bethge P, Sahin J, Kaushik R, Zuschratter W, Kähne T, Naumann M, Gundelfinger ED, **Kreutz MR**. 2013. Encoding and transducing the synaptic or extrasynaptic origin of NMDA receptor signals to the nucleus. *Cell* 152:1119–1133. doi: 10.1016/j.cell.2013.02.002.
- Keihani S, Kluever V, **Fornasiero EF**. 2021. Brain Long Noncoding RNAs: Multitask Regulators of Neuronal Differentiation and Function. *Molecules (Basel, Switzerland)* 26. doi: 10.3390/molecules26133951.
- Kerimoglu C, Pham L, Tonchev AB, Sakib MS, Xie Y, Sokpor G, Ulmke PA, Kaurani L, Abbas E, Nguyen H, Rosenbusch J, Michurina A, Capece V, Angelova M, Maricic N, Brand-Saberi B, Esgleas M, Albert M, Minkov R, Kovachev E, Teichmann U, Seong RH, Huttner WB, Nguyen HP, Stoykova A, Staiger JF, **Fischer A, Tuoc T**. 2021. H3 acetylation selectively promotes basal progenitor proliferation and neocortex expansion. *Science advances* 7:eabc6792. doi: 10.1126/sciadv.abc6792.
- Kiebler MA**, Bassell GJ. 2006. Neuronal RNA granules: movers and makers. *Neuron* 51:685–690. doi: 10.1016/j.neuron.2006.08.021.

- Klatt O, Repetto D, Brockhaus J, Reissner C, El Khallouqi A, Rohlmann A, **Heine M**, Missler M. 2021. Endogenous β -neurexins on axons and within synapses show regulated dynamic behavior. *Cell reports* 35:109266. doi: 10.1016/j.celrep.2021.109266.
- Kolb J, Anders-Maurer M, Müller T, Hau A-C, Grebbin BM, Kallenborn-Gerhardt W, Behrends C, **Schulte D**. 2018. Arginine Methylation Regulates MEIS2 Nuclear Localization to Promote Neuronal Differentiation of Adult SVZ Progenitors. *Stem cell reports* 10:1184–1192. doi: 10.1016/j.stemcr.2018.03.010.
- Kondratiuk I, Jakhanwal S, Jin J, Sathyanarayanan U, Kroppen B, Pobbati AV, Krisko A, Ashery U, Meinecke M, Jahn R, Fasshauer D, **Milosevic I**. 2020. PI(4,5)P2-dependent regulation of exocytosis by amisyn, the vertebrate-specific competitor of synaptobrevin 2. *Proceedings of the National Academy of Sciences of the United States of America* 117:13468–13479. doi: 10.1073/pnas.1908232117.
- König C, Khalili A, Ganesan, Mathangi Nishu, Amrita, P., Garza AP, Niewalda T, Gerber B, Aso Y, **Yarali A**. 2018. Reinforcement signaling of punishment versus relief in fruit flies. *Learning & Memory* 247–257. doi: 10.1101/lm.047308.
- Kononenko NL, Diril MK, Puchkov D, Kintscher M, Koo SJ, Pfuhl G, Winter Y, Wienisch M, Klingauf J, Breustedt J, Schmitz D, Maritzen T, **Haucke V**. 2013. Compromised fidelity of endocytic synaptic vesicle protein sorting in the absence of stonin 2. *Proceedings of the National Academy of Sciences of the United States of America* 110:E526–35. doi: 10.1073/pnas.1218432110.
- Kononenko NL, Puchkov D, Classen GA, Walter AM, Pechstein A, Sawade L, Kaempfer N, Trimbuch T, Lorenz D, Rosenmund C, Maritzen T, **Haucke V**. 2014. Clathrin/AP-2 mediate synaptic vesicle reformation from endosome-like vacuoles but are not essential for membrane retrieval at central synapses. *Neuron* 82:981–988. doi: 10.1016/j.neuron.2014.05.007.
- Krauss M, **Haucke V**. 2010. Adaptin' endosomes for synaptic vesicle recycling, learning and memory. *The EMBO journal* 29:1313–1315. doi: 10.1038/emboj.2010.47.
- Krick N, Ryglewski S, Pichler A, Bikbaev A, Götz T, Kobler O, **Heine M**, Thomas U, Duch C. 2021. Separation of presynaptic Cav2 and Cav1 channel function in synaptic vesicle exo- and endocytosis by the membrane anchored Ca²⁺ pump PMCA. *Proceedings of the National Academy of Sciences of the United States of America* 118. doi: 10.1073/pnas.2106621118.
- Kuczewski N, Porcher C, Ferrand N, Fiorentino H, Pellegrino C, Kolarow R, **Lessmann V**, Medina I, Gaiarsa J-L. 2008. Backpropagating action potentials trigger dendritic release of BDNF during spontaneous network activity. *The Journal of neuroscience : the official journal of the Society for Neuroscience* 28:7013–7023. doi: 10.1523/JNEUROSCI.1673-08.2008.
- Kuczewski N, Porcher C, **Lessmann V**, Medina I, Gaiarsa J-L. 2008. Back-propagating action potential: A key contributor in activity-dependent dendritic release of BDNF. *Communicative & integrative biology* 1:153–155. doi: 10.4161/cib.1.2.7058.
- Kuczewski N, Porcher C, **Lessmann V**, Medina I, Gaiarsa J-L. 2009. Activity-dependent dendritic release of BDNF and biological consequences. *Molecular neurobiology* 39:37–49. doi: 10.1007/s12035-009-8050-7.
- Kulkarni A, Ertekin D, Lee C-H, **Hummel T**. 2016. Birth order dependent growth cone segregation determines synaptic layer identity in the Drosophila visual system. *eLife*. doi: 10.7554/eLife.13715.001.
- Lafenêtre P, Leske O, Ma-Högemeie Z, Haghikia A, Bichler Z, **Wahle P**, Heumann R. 2010. Exercise can rescue recognition memory impairment in a model with reduced adult hippocampal neurogenesis. *Frontiers in behavioral neuroscience* 3:34. doi: 10.3389/neuro.08.034.2009.
- Landgraf P, **Wahle P**, Pape H-C, Gundelfinger ED, **Kreutz MR**. 2008. The survival-promoting peptide Y-P30 enhances binding of pleiotrophin to syndecan-2 and -3 and supports its neurotogenic activity. *The Journal of biological chemistry* 283:25036–25045. doi: 10.1074/jbc.M800963200.
- Lessmann V**, Brigadski T. 2009. Mechanisms, locations, and kinetics of synaptic BDNF secretion: an update. *Neuroscience research* 65:11–22. doi: 10.1016/j.neures.2009.06.004.
- Lessmann V**, Stroh-Kaffei S, Steinbrecher V, Edelmann E, Brigadski T, Kilb W, Luhmann HJ. 2011. The expression mechanism of the residual LTP in the CA1 region of BDNF k.o. mice is insensitive to NO synthase inhibition. *Brain research* 1391:14–23. doi: 10.1016/j.brainres.2011.03.061.

- Liu Y, Cui L, Schwarz MK, Dong Y, **Schlüter OM**. 2017. Adrenergic Gate Release for Spike Timing-Dependent Synaptic Potentiation. *Neuron* 93:394–408. doi: 10.1016/j.neuron.2016.12.039.
- Lubbers BR, Matos MR, Horn A, Visser E, van der Loo RC, Gouwenberg Y, Meerhoff GF, **Frischknecht R**, Seidenbecher CI, Smit AB, Spijker S, van den Oever MC. 2016. The Extracellular Matrix Protein Brevican Limits Time-Dependent Enhancement of Cocaine Conditioned Place Preference. *Neuropsychopharmacology : official publication of the American College of Neuropsychopharmacology* 41:1907–1916. doi: 10.1038/npp.2015.361.
- Luck R, Karakatsani A, Shah B, Schermann G, Adler H, Kupke J, Tisch N, Jeong H-W, Back MK, Hetsch F, D'Errico A, Palma M de, Wiedtke E, Grimm D, Acker-Palmer A, Engelhardt J von, Adams RH, Augustin HG, **Ruiz de Almodóvar C**. 2021. The angiopoietin-Tie2 pathway regulates Purkinje cell dendritic morphogenesis in a cell-autonomous manner. *Cell reports* 36:109522. doi: 10.1016/j.celrep.2021.109522.
- Luck R, Urban S, Karakatsani A, Harde E, Sambandan S, Nicholson L, Haverkamp S, Mann R, Martin-Villalba A, Schuman EM, Acker-Palmer A, **Ruiz de Almodóvar C**. 2019. VEGF/VEGFR2 signaling regulates hippocampal axon branching during development. *eLife* 8. doi: 10.7554/eLife.49818.
- Luhmann HJ**, Kilb W, Hanganu-Opatz IL. 2009. Subplate cells: amplifiers of neuronal activity in the developing cerebral cortex. *Frontiers in neuroanatomy* 3:19. doi: 10.3389/neuro.05.019.2009.
- Mao X, Sokpor G, Staiger J, Nguyen HP, **Tuoc T**. 2021. Mapping of domain-mediated protein-protein interaction by SPOT peptide assay. *STAR protocols* 2:100503. doi: 10.1016/j.xpro.2021.100503.
- Maritzen T, Koo SJ, **Haucke V**. 2012. Turning CALM into excitement: AP180 and CALM in endocytosis and disease. *Biology of the cell* 104:588–602. doi: 10.1111/boc.201200008.
- Mikhaylova M, Bera S, Kobler O, **Frischknecht R, Kreutz MR**. 2016. A Dendritic Golgi Satellite between ERGIC and Retromer. *Cell reports* 14:189–199. doi: 10.1016/j.celrep.2015.12.024.
- Murdoch JD, Rostovsky CM, Gowrisankaran S, Arora AS, Soukup S-F, Vidal R, Capece V, Freytag S, **Fischer A**, Verstreken P, Bonn S, Raimundo N, **Milosevic I**. 2016. Endophilin-A Deficiency Induces the Foxo3a-Fbxo32 Network in the Brain and Causes Dysregulation of Autophagy and the Ubiquitin-Proteasome System. *Cell reports* 17:1071–1086. doi: 10.1016/j.celrep.2016.09.058.
- Narayanan R, Pham L, Kerimoglu C, Watanabe T, Castro Hernandez R, Sokpor G, Ulmke PA, Kiszka KA, Tonchev AB, Rosenbusch J, Seong RH, Teichmann U, Frahm J, Fischer A, Bonn S, Stoykova A, Staiger JF, **Tuoc T**. 2018. Chromatin Remodeling BAF155 Subunit Regulates the Genesis of Basal Progenitors in Developing Cortex. *iScience* 4:109–126. doi: 10.1016/j.isci.2018.05.014.
- Nguyen H, Kerimoglu C, Pirouz M, Pham L, Kiszka KA, Sokpor G, Sakib MS, Rosenbusch J, Teichmann U, Seong RH, Stoykova A, Fischer A, Staiger JF, **Tuoc T**. 2018. Epigenetic Regulation by BAF Complexes Limits Neural Stem Cell Proliferation by Suppressing Wnt Signaling in Late Embryonic Development. *Stem cell reports* 10:1734–1750. doi: 10.1016/j.stemcr.2018.04.014.
- Nicklas S, Okawa S, Hillje A-L, González-Cano L, del Sol A, **Schwamborn JC**. 2015. The RNA helicase DDX6 regulates cell-fate specification in neural stem cells via miRNAs. *Nucleic acids research* 43:2638–2654. doi: 10.1093/nar/gkv138.
- Nishi R, Stubbusch J, Hulce JJ, Hruska M, Pappas A, Bravo M-C, Huber LP, Bakondi B, Soltys J, **Rohrer H**. 2010. The cortistatin gene PSS2 rather than the somatostatin gene PSS1 is strongly expressed in developing avian autonomic neurons. *The Journal of comparative neurology* 518:839–850. doi: 10.1002/cne.22245.
- Nolze A, Schneider J, Keil R, Lederer M, Hüttelmaier S, Kessels MM, **Qualmann B**, Hatzfeld M. 2013. FMRP regulates actin filament organization via the armadillo protein p0071. *RNA (New York, N.Y.)* 19:1483–1496. doi: 10.1261/rna.037945.112.
- Panayotis N, Karpova A, **Kreutz MR**, Fainzilber M. 2015. Macromolecular transport in synapse to nucleus communication. *Trends in neurosciences* 38:108–116. doi: 10.1016/j.tins.2014.12.001.
- Patz S, Colovic C, Wawro S, Lafenetre P, Leske O, Heumann R, Schönfelder S, Tomaschewski J, Räk A, **Wahle P**. 2009. Interneuronal growth and expression of interneuronal markers in visual cortex of mice with transgenic activation of Ras. *Experimental brain research* 199:265–278. doi: 10.1007/s00221-008-1688-y.

- Pavlou MAS, Colombo N, Fuertes-Alvarez S, Nicklas S, Cano LG, Marín MC, Goncalves J, **Schwamborn JC**. 2017. Expression of the Parkinson's Disease-Associated Gene Alpha-Synuclein is Regulated by the Neuronal Cell Fate Determinant TRIM32. *Molecular neurobiology* 54:4257–4270. doi: 10.1007/s12035-016-9989-9.
- Peleg S, Sananbenesi F, Zovoilis A, Burkhardt S, Bahari-Javan S, Agis-Balboa RC, Cota P, Wittnam JL, Gogol-Doering A, Opitz L, Salinas-Riester G, Dettenhofer M, Kang H, Farinelli L, Chen W, **Fischer A**. 2010. Altered histone acetylation is associated with age-dependent memory impairment in mice. *Science (New York, N.Y.)* 328:753–756. doi: 10.1126/science.1186088.
- Pringsheim M, Mitter D, Schröder S, Warthemann R, Plümacher K, Kluger G, Baethmann M, Bast T, Braun S, Büttel H-M, Conover E, Courage C, Datta AN, Eger A, Grebe TA, Hasse-Wittmer A, Heruth M, Höft K, Kaindl AM, Karch S, Kautzky T, Korenke GC, Kruse B, Lutz RE, Omran H, Patzer S, Philippi H, Ramsey K, Rating T, Rieß A, Schimmel M, Westman R, Zech F-M, Zirn B, Ulmke PA, Sokpor G, **Tuoc T**, Leha A, Staudt M, Brockmann K. 2019. Structural brain anomalies in patients with FOXG1 syndrome and in Foxg1 +/- mice. *Annals of clinical and translational neurology* 6:655–668. doi: 10.1002/acn3.735.
- Reiff T, Huber L, Kramer M, Delattre O, Janoueix-Lerosey I, **Rohrer H**. 2011. Midkine and Alk signaling in sympathetic neuron proliferation and neuroblastoma predisposition. *Development (Cambridge, England)* 138:4699–4708. doi: 10.1242/dev.072157.
- Reiff T, Tsarovina K, Majdazari A, Schmidt M, Del Pino I, **Rohrer H**. 2010. Neuroblastoma phox2b variants stimulate proliferation and dedifferentiation of immature sympathetic neurons. *The Journal of neuroscience : the official journal of the Society for Neuroscience* 30:905–915. doi: 10.1523/JNEUROSCI.5368-09.2010.
- Rohrer H**. 2011. Transcriptional control of differentiation and neurogenesis in autonomic ganglia. *The European journal of neuroscience* 34:1563–1573. doi: 10.1111/j.1460-9568.2011.07860.x.
- Rüdiger R, Binder E, Tsarovina K, Schmidt M, Reiff T, Stubbusch J, **Rohrer H**. 2009. In vivo role for CREB signaling in the noradrenergic differentiation of sympathetic neurons. *Molecular and cellular neurosciences* 42:142–151. doi: 10.1016/j.mcn.2009.06.007.
- Sakib MS, Sokpor G, Nguyen HP, **Fischer A**, **Tuoc T**. 2021. Intranuclear immunostaining-based FACS protocol from embryonic cortical tissue. *STAR protocols* 2:100318. doi: 10.1016/j.xpro.2021.100318.
- Sakry D, Neitz A, Singh J, **Frischknecht R**, Marongiu D, Binamé F, Perera SS, Endres K, Lutz B, Radyushkin K, Trotter J, Mittmann T. 2014. Oligodendrocyte precursor cells modulate the neuronal network by activity-dependent ectodomain cleavage of glial NG2. *PLoS biology* 12:e1001993. doi: 10.1371/journal.pbio.1001993.
- Savanthrapadian S, Meyer T, Elgueta C, Booker SA, Vida I, **Bartos M**. 2014. Synaptic properties of SOM- and CCK-expressing cells in dentate gyrus interneuron networks. *The Journal of neuroscience : the official journal of the Society for Neuroscience* 34:8197–8209. doi: 10.1523/JNEUROSCI.5433-13.2014.
- Schildt S, Endres T, **Lessmann V**, Edelmann E. 2013. Acute and chronic interference with BDNF/TrkB-signaling impair LTP selectively at mossy fiber synapses in the CA3 region of mouse hippocampus. *Neuropharmacology* 71:247–254. doi: 10.1016/j.neuropharm.2013.03.041.
- Schmidt M, Huber L, Majdazari A, Schütz G, Williams T, **Rohrer H**. 2011. The transcription factors AP-2 β and AP-2 α are required for survival of sympathetic progenitors and differentiated sympathetic neurons. *Developmental biology* 355:89–100. doi: 10.1016/j.ydbio.2011.04.011.
- Schmidt M, Lin S, Pape M, Ernsberger U, Stanke M, Kobayashi K, Howard MJ, **Rohrer H**. 2009. The bHLH transcription factor Hand2 is essential for the maintenance of noradrenergic properties in differentiated sympathetic neurons. *Developmental biology* 329:191–200. doi: 10.1016/j.ydbio.2009.02.020.
- Schmitt C, Schultheis C, Pokala N, Husson SJ, Liewald JF, Bargmann CI, **Gottschalk A**. 2012. Specific expression of channelrhodopsin-2 in single neurons of *Caenorhabditis elegans*. *PloS one* 7:e43164. doi: 10.1371/journal.pone.0043164.
- Schneider K, Seemann E, Liebmann L, Ahuja R, Koch D, Westermann M, Hübner CA, Kessels MM, **Qualmann B**. 2014. ProSAP1 and membrane nanodomain-associated syndapin I promote postsynapse formation and function. *The Journal of cell biology* 205:197–215. doi: 10.1083/jcb.201307088.
- Schratt GM, Tuebing F, Nigh EA, Kane CG, Sabatini ME, **Kiebler M**, Greenberg ME. 2006. A brain-specific microRNA regulates dendritic spine development. *Nature* 439:283–289. doi: 10.1038/nature04367.

- Schwintzer L, Koch N, Ahuja R, Grimm J, Kessels MM, **Qualmann B**. 2011. The functions of the actin nucleator Cobl in cellular morphogenesis critically depend on syndapin I. *The EMBO journal* 30:3147–3159. doi: 10.1038/emboj.2011.207.
- Sokpor G, Abbas E, Rosenbusch J, Staiger JF, **Tuoc T**. 2018. Transcriptional and Epigenetic Control of Mammalian Olfactory Epithelium Development. *Molecular neurobiology* 55:8306–8327. doi: 10.1007/s12035-018-0987-y.
- Sokpor G, Castro-Hernandez R, Rosenbusch J, Staiger JF, **Tuoc T**. 2018. ATP-Dependent Chromatin Remodeling During Cortical Neurogenesis. *Frontiers in neuroscience* 12:226. doi: 10.3389/fnins.2018.00226.
- Sokpor G, Kerimoglu C, Nguyen H, Pham L, Rosenbusch J, Wagener R, Nguyen HP, Fischer A, Staiger JF, **Tuoc T**. 2021. Loss of BAF Complex in Developing Cortex Perturbs Radial Neuronal Migration in a WNT Signaling-Dependent Manner. *Frontiers in molecular neuroscience* 14:687581. doi: 10.3389/fnmol.2021.687581.
- Sokpor G, Rosenbusch J, Kunwar AJ, Rickmann M, **Tuoc T**, Rizzoli SO, Tarabykin V, Mollard GF von, Kriegelstein K, Staiger JF. 2021. Ablation of Vti1a/1b Triggers Neural Progenitor Pool Depletion and Cortical Layer 5 Malformation in Late-embryonic Mouse Cortex. *Neuroscience* 463:303–316. doi: 10.1016/j.neuroscience.2021.03.021.
- Sokpor G, Xie Y, Nguyen HP, **Tuoc T**. 2021. Emerging Role of m6 A Methylome in Brain Development: Implications for Neurological Disorders and Potential Treatment. *Frontiers in cell and developmental biology* 9:656849. doi: 10.3389/fcell.2021.656849.
- Sokpor G, Xie Y, Rosenbusch J, **Tuoc T**. 2017. Chromatin Remodeling BAF (SWI/SNF) Complexes in Neural Development and Disorders. *Frontiers in molecular neuroscience* 10:243. doi: 10.3389/fnmol.2017.00243.
- Spilker C, Nullmeier S, Grochowska KM, Schumacher A, Butnaru I, Macharadze T, Gomes GM, Yuanxiang P, Bayraktar G, Rodenstein C, Geiseler C, Kolodziej A, Lopez-Rojas J, Montag D, Angenstein F, Bär J, D'Hanis W, Roskoden T, Mikhaylova M, Budinger E, Ohl FW, Stork O, Zenclussen AC, Karpova A, Schwegler H, **Kreutz MR**. 2016. A Jacob/Nsmf Gene Knockout Results in Hippocampal Dysplasia and Impaired BDNF Signaling in Dendritogenesis. *PLoS genetics* 12:e1005907. doi: 10.1371/journal.pgen.1005907.
- Stan A, Pielarski KN, Brigadski T, Wittenmayer N, Fedorchenko O, Gohla A, **Lessmann V**, Dresbach T, Gottmann K. 2010. Essential cooperation of N-cadherin and neuroligin-1 in the transsynaptic control of vesicle accumulation. *Proceedings of the National Academy of Sciences of the United States of America* 107:11116–11121. doi: 10.1073/pnas.0914233107.
- Stern S, Debre E, Stritt C, Berger J, Posern G, **Knöll B**. 2009. A nuclear actin function regulates neuronal motility by serum response factor-dependent gene transcription. *The Journal of neuroscience : the official journal of the Society for Neuroscience* 29:4512–4518. doi: 10.1523/JNEUROSCI.0333-09.2009.
- Stilling RM, Rönicke R, Benito E, Urbanke H, Capece V, Burkhardt S, Bahari-Javan S, Barth J, Sananbenesi F, Schütz AL, Dyczkowski J, Martinez-Hernandez A, Kerimoglu C, Dent SYR, Bonn S, Reymann KG, **Fischer A**. 2014. K-Lysine acetyltransferase 2a regulates a hippocampal gene expression network linked to memory formation. *The EMBO journal* 33:1912–1927. doi: 10.15252/embj.201487870.
- Stirman JN, Crane MM, Husson SJ, **Gottschalk A**, Lu H. 2012. A multispectral optical illumination system with precise spatiotemporal control for the manipulation of optogenetic reagents. *Nature protocols* 7:207–220. doi: 10.1038/nprot.2011.433.
- Stolt CC, Schlierf A, Lommès P, Hillgärtner S, Werner T, Kosian T, Sock E, Kessar N, Richardson WD, Lefebvre V, **Wegner M**. 2006. SoxD proteins influence multiple stages of oligodendrocyte development and modulate SoxE protein function. *Developmental cell* 11:697–709. doi: 10.1016/j.devcel.2006.08.011.
- Stolt CC, Schmitt S, Lommès P, Sock E, **Wegner M**. 2005. Impact of transcription factor Sox8 on oligodendrocyte specification in the mouse embryonic spinal cord. *Developmental biology* 281:309–317. doi: 10.1016/j.ydbio.2005.03.010.
- Stritt C, **Knöll B**. 2010. Serum response factor regulates hippocampal lamination and dendrite development and is connected with reelin signaling. *Molecular and cellular biology* 30:1828–1837. doi: 10.1128/MCB.01434-09.
- Stritt C, Stern S, Harting K, Manke T, Sinske D, Schwarz H, Vingron M, Nordheim A, **Knöll B**. 2009. Paracrine control of oligodendrocyte differentiation by SRF-directed neuronal gene expression. *Nature neuroscience* 12:418–427. doi: 10.1038/nn.2280.

- Stubbusch J, Majdazari A, Schmidt M, Schütz G, Deller T, **Rohrer H**. 2011. Generation of the tamoxifen-inducible DBH-Cre transgenic mouse line DBH-CT. *Genesis (New York, N.Y. : 2000)* 49:935–941. doi: 10.1002/dvg.20773.
- Sun J-J, Kilb W, **Luhmann HJ**. 2010. Self-organization of repetitive spike patterns in developing neuronal networks in vitro. *The European journal of neuroscience* 32:1289–1299. doi: 10.1111/j.1460-9568.2010.07383.x.
- Ulivi AF, Castello-Waldow TP, Weston G, Yan L, Yasuda R, Chen A, **Attardo A**. 2019. Longitudinal Two-Photon Imaging of Dorsal Hippocampal CA1 in Live Mice. *Journal of visualized experiments : JoVE*. doi: 10.3791/59598.
- Ulmke PA, Sakib MS, Ditte P, Sokpor G, Kerimoglu C, Pham L, Xie Y, Mao X, Rosenbusch J, Teichmann U, Nguyen HP, **Fischer A**, Eichele G, Staiger JF, **Tuoc T**. 2021. Molecular Profiling Reveals Involvement of ESCO2 in Intermediate Progenitor Cell Maintenance in the Developing Mouse Cortex. *Stem cell reports* 16:968–984. doi: 10.1016/j.stemcr.2021.03.008.
- Ulmke PA, Xie Y, Sokpor G, Pham L, Shomroni O, Berulava T, Rosenbusch J, Basu U, **Fischer A**, Nguyen HP, Staiger JF, **Tuoc T**. 2021. Post-transcriptional regulation by the exosome complex is required for cell survival and forebrain development via repression of P53 signaling. *Development (Cambridge, England)* 148. doi: 10.1242/dev.188276.
- Valenzuela JC, Heise C, Franken G, Singh J, Schweitzer B, Seidenbecher CI, **Frischknecht R**. 2014. Hyaluronan-based extracellular matrix under conditions of homeostatic plasticity. *Philosophical transactions of the Royal Society of London. Series B, Biological sciences* 369:20130606. doi: 10.1098/rstb.2013.0606.
- van Loo KMJ, Rummel CK, Pitsch J, Müller JA, Bikbaev AF, Martinez-Chavez E, Blaess S, Dietrich D, **Heine M**, Becker AJ, Schoch S. 2019. Calcium Channel Subunit $\alpha 2\delta 4$ Is Regulated by Early Growth Response 1 and Facilitates Epileptogenesis. *The Journal of neuroscience : the official journal of the Society for Neuroscience* 39:3175–3187. doi: 10.1523/JNEUROSCI.1731-18.2019.
- Wang X, Hu B, Zieba A, Neumann NG, Kasper-Sonnenberg M, Honsbein A, Hultqvist G, Conze T, Witt W, Limbach C, Geitmann M, Danielson H, Kolarow R, Niemann G, **Lessmann V**, Kilimann MW. 2009. A protein interaction node at the neurotransmitter release site: domains of Aczonin/Piccolo, Bassoon, CAST, and rim converge on the N-terminal domain of Munc13-1. *The Journal of neuroscience : the official journal of the Society for Neuroscience* 29:12584–12596. doi: 10.1523/JNEUROSCI.1255-09.2009.
- Worlitzer MMA, **Schwamborn JC**. 2014. The Notch co-repressor protein NKAP is highly expressed in adult mouse subventricular zone neural progenitor cells. *Neuroscience* 266:138–149. doi: 10.1016/j.neuroscience.2014.02.019.
- Wu C, Ba Q, Lu D, Li W, Salovska B, Hou P, Mueller T, Rosenberger G, Gao E, Di Y, Zhou H, **Fornasiero EF**, Liu Y. 2021. Global and Site-Specific Effect of Phosphorylation on Protein Turnover. *Developmental cell* 56:111–124.e6. doi: 10.1016/j.devcel.2020.10.025.
- Xia X, **Lessmann V**, Martin TFJ. 2009. Imaging of evoked dense-core-vesicle exocytosis in hippocampal neurons reveals long latencies and kiss-and-run fusion events. *Journal of cell science* 122:75–82. doi: 10.1242/jcs.034603.
- Xie Y, Castro-Hernández R, Sokpor G, Pham L, Narayanan R, Rosenbusch J, Staiger JF, **Tuoc T**. 2019. RBM15 Modulates the Function of Chromatin Remodeling Factor BAF155 Through RNA Methylation in Developing Cortex. *Molecular neurobiology* 56:7305–7320. doi: 10.1007/s12035-019-1595-1.
- Xie Y, Vessey JP, Konecna A, Dahm R, Macchi P, **Kiebler MA**. 2007. The GTP-binding protein Septin 7 is critical for dendrite branching and dendritic-spine morphology. *Current biology : CB* 17:1746–1751. doi: 10.1016/j.cub.2007.08.042.
- Yang J-W, Hanganu-Opatz IL, Sun J-J, **Luhmann HJ**. 2009. Three patterns of oscillatory activity differentially synchronize developing neocortical networks in vivo. *The Journal of neuroscience : the official journal of the Society for Neuroscience* 29:9011–9025. doi: 10.1523/JNEUROSCI.5646-08.2009.
- Yousefi R, Jevdokimenko K, Kluever V, Pacheu-Grau D, **Fornasiero EF**. 2021. Influence of Subcellular Localization and Functional State on Protein Turnover. *Cells* 10. doi: 10.3390/cells10071747.
- Zeitelhofer M, Vessey JP, Xie Y, Tübing F, Thomas S, **Kiebler M**, Dahm R. 2007. High-efficiency transfection of mammalian neurons via nucleofection. *Nature protocols* 2:1692–1704. doi: 10.1038/nprot.2007.226.