List of publications - Dr. Christian Mayer

My name is in bold, the names of the postdocs and PhD students I supervised are in italics.

Publications arising from independent laboratory (since 2018)

- *A. R. Bright*, *Y. Kotlyarenko*, *F. Neuhaus*, D. Rodrigues, *C. Feng*, C. Peters, *I. Vitali*, E. Dönmez, M. H. Myoga, *E. Dvoretskova*, and **C. Mayer**. "NFIB influences progenitor competence in maturation of GABAergic neurons in mice". In: **bioRxiv** (2025). DOI: 10.1101/2024.03.18.585524; under revision in Nature Neuroscience

- I. Adameyko, T. Bakken, A. Bhaduri, C. Chhatbar, M. G. Filbin, D. Gate, H. Hochgerner, C. N. Kim, J. Krull, G. La Manno, Q. Li, S. Linnarsson, Q. Ma, **C. Mayer**, V. Menon, P. Nano, M. Prinz, S. Quake, C. A. Walsh, J. Yang, O. A. Bayraktar, O. Gokce, N. Habib, G. Konopka, S. A. Liddelow, and T. J. Nowakowski. "Applying single-cell and single-nucleus genomics to studies of cellular heterogeneity and cell fate transitions in the nervous system". In: **Nat Neurosci** 27.12 (2024), pp. 2278–2291. DOI: 10.1038/s41593-024-01827-9

- *E. Dvoretskova*, *M. C. Ho*, V. Kittke, *F. Neuhaus*, *I. Vitali*, D. D. Lam, I. Delgado, *C. Feng*, M. Torres, J. Winkelmann, and **C. Mayer**. "Spatial enhancer activation influences inhibitory neuron identity during mouse embryonic development". In: **Nat Neurosci** (2024). DOI: 10.1038/s41593-024-01611-9;

- L. Del-Valle-Anton, S. Amin, D. Cimino, *F. Neuhaus*, *E. Dvoretskova*, V. Fernández, Y. K. Babal, C. Garcia-Frigola, A. Prieto-Colomina, R. Murcia-Ramón, Y. Nomura, A. Cárdenas, *C. Feng*, J. A. Moreno-Bravo, M. Götz, **C. Mayer**, and V. Borrell. "Multiple parallel cell lineages in the developing mammalian cerebral cortex". In: **Sci Adv** 10.13 (2024), eadn9998. DOI: 10.1126/sciadv.adn9998

- J. Zhou, *I. Vitali*, S. Roig-Puiggros, A. Javed, D. Jabaudon, **C. Mayer**, and R. Bocchi. "Dual lineage origins of neocortical astrocytes". In: **bioRxiv** (2023). DOI: 10.1101/2023.09.12.557313;

- *R. C. Bandler* and **C. Mayer**. "Deciphering inhibitory neuron development: The paths to diversity". In: **Curr Opin Neurobiol** 79 (2023), p. 102691. DOI: 10.1016/j.conb.2023.102691;

- C. Peters, S. He, F. Fermani, H. Lim, W. Ding, **C. Mayer**, and R. Klein. "Transcriptomics reveals amygdala neuron regulation by fasting and ghrelin thereby promoting feeding". In: **Sci Adv** 9.21 (2023), eadf6521. DOI: 10.1126/sciadv.adf6521

- *R. C. Bandler*, *I. Vitali*, R. N. Delgado, *M. C. Ho*, *E. Dvoretskova*, J. S. Ibarra Molinas, P. W. Frazel, M. Mohammadkhani, R. Machold, S. Maedler, S. A. Liddelow, T. J. Nowakowski, G. Fishell, and **C. Mayer**. "Single-cell delineation of lineage and genetic identity in the mouse brain". In: **Nature** 601 (2022). DOI: 10.1038/s41586-021-04237-0;

- N. Hoermann, T. Schilling, A. H. Ali, E. Serbe, **C. Mayer**, A. Borst, and J. Pujol-Marti. "A combinatorial code of transcription factors specifies subtypes of visual motion-sensing neurons in Drosophila". In: **Development** 147 (2020). DOI: 10.1242/dev.186296

- **C. Mayer** and G. Fishell. "Developing neurons are innately inclined to learn on the job". In: **Nature** 560 (2018). DOI: 10.1038/d41586-018-05737-2

Publications arising from postdoctoral work (2012-2018)

During my postdoctoral work, I specialized in the advancement of cortical interneurons, with funding provided by an EMBO long-term fellowship. I conducted research at the NYU Langone Medical Center, NYU Neuroscience Institute, the New York Genome Center, and the Stanley Center for Psychiatric Research at the Broad Institute of MIT and Harvard.

- **C. Mayer**, C. Hafemeister, *R. C. Bandler*, R. Machold, R. Batista Brito, X. Jaglin, K. Allaway, A. Butler, G. Fishell, and R. Satija. "Developmental diversification of cortical inhibitory interneurons". In: **Nature** 555 (2018). DOI: 10.1038/nature25999

- *R. C. Bandler*, **C. Mayer**, and G. Fishell. "Cortical interneuron specification: the juncture of genes, time and geometry". In: **Curr Opin Neurobiol** 42 (2017). DOI: 10.1016/j.conb.2016.10.003

- **C. Mayer**, *R. C. Bandler*, and G. Fishell. "Lineage Is a Poor Predictor of Interneuron Positioning within the Forebrain". In: **Neuron** 92 (2016). DOI: 10.1016/j.neuron.2016.09.035

- **C. Mayer**, X. H. Jaglin, L. V. Cobbs, *R. C. Bandler*, C. Streicher, C. L. Cepko, S. Hippenmeyer, and G. Fishell. "Clonally Related Forebrain Interneurons Disperse Broadly across Both Functional Areas and Structural Boundaries". In: **Neuron** 87 (2015). DOI: 10.1016/j.neuron.2015.07.011

Publications arising from PhD work (2006-2011)

During my Ph.D., I conducted research on hypothalamic circuits involved in timing the onset of puberty. This investigation took place at the Center for Molecular Neurobiology Hamburg, located at the University Klinikum Hamburg Eppendorf.

- V. Hellier, O. Brock, M. Candlish, E. Desroziers, M. Aoki, **C. Mayer**, R. Piet, A. Herbison, W. H. Colledge, V. Prévot, U. Boehm, and J. Bakker. "Female sexual behavior in mice is controlled by kisspeptin neurons". In: **Nat Commun** 9 (2018). DOI: 10.1038/s41467-017-02797-2

- D. Kumar, M. Candlish, V. Periasamy, N. Avcu, **C. Mayer**, and U. Boehm. "Specialized subpopulations of kisspeptin neurons communicate with GnRH neurons in female mice". In: **Endocrinology** 156 (2015). DOI: 10.1210/en.2014-1671

- R. Aziz, M. Beymer, A. L. Negrón, A. Newshan, G. Yu, B. Rosati, D. McKinnon, M. Fukuda, R. Z. Lin, **C. Mayer**, U. Boehm, and M. Acosta-Martıinez. "Galanin-like peptide (GALP) neurone-specific phosphoinositide 3-kinase signalling regulates GALP mRNA levels in the hypothalamus of males and luteinising hormone levels in both sexes". In: **J Neuroendocrinol** 26 (2014). DOI: 10.1111/jne.12163

- M. Beymer, A. L. Negrón, G. Yu, S. Wu, **C. Mayer**, R. Z. Lin, U. Boehm, and M. Acosta-Martıinez. "Kisspeptin cell-specific PI3K signaling regulates hypothalamic kisspeptin expression and participates in the regulation of female fertility". In: **Am J Physiol Endocrinol Metab** 307 (2014). DOI: 10.1152/ajpendo.00385.2014

- N. Eberhard, **C. Mayer**, R. Santic, R. P. Navio, A. Wagner, H. C. Bauer, G. Sperk, U. Boehm, and B. Kofler. "Distribution of alarin immunoreactivity in the mouse brain". In: **J Mol Neurosci** 46 (2012). DOI: 10.1007/s12031-011-9546-y

- S. de Croft, R. Piet, **C. Mayer**, O. Mai, U. Boehm, and A. E. Herbison. "Spontaneous kisspeptin neuron firing in the adult mouse reveals marked sex and brain region differences but no support for a direct role in negative feedback". In: **Endocrinology** 153 (2012). DOI: 10.1210/en.2012-1616

- **C. Mayer** and U. Boehm. "Female reproductive maturation in the absence of kisspeptin/GPR54 signaling". In: **Nat Neurosci** 14 (2011). DOI: 10.1038/nn.2818

- **C. Mayer**, M. Acosta-Martinez, S. L. Dubois, A. Wolfe, S. Radovick, U. Boehm, and J. E. Levine. "Timing and completion of puberty in female mice depend on estrogen receptor alpha-signaling in kisspeptin neurons". In: **Proc Natl Acad Sci U S A** 107 (2010). DOI: 10.1073/pnas.1012406108