

List of publications

Preprints

- *E. Dvoretzkova*, C. Lynch, A. R. Bright, Y. K. Babal, S. Isaev, P. Kharchenko, I. Adameyko, and **C. Mayer**. “Stoichiometric transcription factor partnerships specify GABAergic neuron subtype identity”. In: **bioRxiv** (2026). DOI: 10.64898/2026.05.25.727662
- P. Oikonomou, L. Calvary, D. Du, J. Polansky, G. Gattoni, C. Lynch, L. Shi, **C. Mayer**, J. McFaline-Figueroa, and N. L. Nerurkar. “An endodermal subpopulation generates neural and mesodermal fates in the posterior chick embryo”. In: **bioRxiv** (May 2026). preprint. DOI: 10.64898/2026.05.20.726401. eprint: 2026.05.20.726401. URL: <https://doi.org/10.64898/2026.05.20.726401>
- A. Deryckere, S. Choudhary, C. Lynch, L. K. V. P. Limperis, P. Affatato, J. Woych, E. Gumnit, A. Ortega Gurrola, R. Satija, **C. Mayer**, and M. A. Tosches. “A conserved logic for the development of cortical layering in tetrapods”. In: **bioRxiv** (2025). DOI: 10.1101/2025.10.01.679862

Peer-Reviewed Publications

- *E. Dvoretzkova* and **C. Mayer**. “GABAergic neuron fate specification and lineage allocation: from development to disorder”. In: **Curr Opin Genet Dev** 100 (June 2026), p. 102504. DOI: 10.1016/j.gde.2026.102504
- N. Bessler, A. K. L. Wezenaar, H. C. R. Ariese, C. Honhoff, N. Dommann, E. J. Wehrens, C. Ruiz Moreno, T. J. M. van den Broek, R. V. U. Collot, D. J. Kloosterman, F. Keramati, M. Roosen, S. de Blank, E. van Vliet, M. Barrera Román, L. C. D. E. Gatti, A. Ertürk, J. Kuball, Z. Sebestyén, M. Kool, S. Patrizi, E. Miele, A. Künkele, M. E. G. Kranendonk, A. M. Cornel, S. Nierkens, **C. Mayer**, H. G. Stunnenberg, A. Alemany, M. Alieva, and A. C. Rios. “De novo H3.3K27M-altered diffuse midline glioma in human brainstem organoids to dissect GD2 CAR T cell function”. In: **Nat Cancer** (Jan. 2026). DOI: 10.1038/s43018-025-01084-0
- A. R. Bright, Y. Kotlyarenko, F. Neuhaus, D. Rodrigues, C. Feng, C. Peters, I. Vitali, E. Dönmez, M. H. Myoga, *E. Dvoretzkova*, and **C. Mayer**. “Temporal control of progenitor competence shapes maturation in GABAergic neuron development in mice”. In: **Nat Neurosci** (2025). DOI: 10.1038/s41593-025-01999-y
- J. Zhou, I. Vitali, S. Roig-Puiggros, A. Javed, I. Cantando, M. Puglisi, P. Bezzi, D. Jabaudon, **C. Mayer**, and R. Bocchi. “Dual lineage origins contribute to neocortical astrocyte diversity”. In: **Nat Commun** 16.1 (2025). DOI: 10.1038/s41467-025-61829-4
- 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** (2024). DOI: 10.1038/s41593-024-01827-9
- *E. Dvoretzkova*, 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. Dvoretzkova*, 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). DOI: 10.1126/sciadv.adn9998
- R. C. Bandler and **C. Mayer**. “Deciphering inhibitory neuron development: The paths to diversity”. In: **Curr Opin Neurobiol** (2023). 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** 21 (2023). DOI: 10.1126/sciadv.adf6521
- R. C. Bandler, I. Vitali, R. N. Delgado, M. C. Ho, *E. Dvoretzkova*, 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** (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** (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
 - S. Domínguez, L. Ma, H. Yu, G. Pouchelon, **C. Mayer**, G. D. Spyropoulos, C. Cea, G. Buzsáki, G. Fishell, D. Khodagholy, and J. N. Gelinas. "A transient postnatal quiescent period precedes emergence of mature cortical dynamics". In: **Elife** (2021). DOI: 10.7554/eLife.69011
 - **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** (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** (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** (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** (2015). DOI: 10.1016/j.neuron.2015.07.011
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 - 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-Martinez. "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** (2014). DOI: 10.1111/jne.12163
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