

Name Simon Johannes Elsässer

Nationality German

Institution: Institute of Biology II

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Position: Alexander-von-Humboldt-Professor

Academic education including academic degrees

Scientific graduation

- 03/2019 – Associate Professor** (Senior Researcher), Faculty Funded Career Position, Karolinska Institutet, Division of Genome Biology, Department of Medical Biochemistry and Biophysics
- 01/2021 – 12/2025 Wallenberg Academy Fellow**
- 03/2019 – 06/2019 College for Life Sciences Fellow** at Wissenschaftskolleg zu Berlin (Berlin Institute for Advanced Study)/Max Planck Institute for Molecular Genetics
- 01/2017 – Lau Fellow** at the Ming Wai Lau Center for Reparative Medicine Hong Kong/Stockholm
- 01/2015 – SciLifeLab Fellow** at Science for Life Laboratory Stockholm, Assistant Professor, Karolinska Institutet, Department of Medical Biochemistry and Biophysics
- 01/2012 – 12/2014** Postdoctoral Fellow with Dr. Jason W Chin, MRC Laboratory of Molecular Biology, Cambridge, UK
- 10/2007 – 12/2011** David Rockefeller Graduate Program, Rockefeller University
- 09/2005 – 06/2006** Harvard Graduate School of Arts and Sciences, Visiting Student, Biophysics Graduate Program, Cambridge, USA
- 10/2002 – 09/2007** Diploma studies in Biochemistry at University of Tübingen

Employment

- 01/2018 – Vertrauensdozent** der Studienstiftung des deutschen Volkes (Mentor of ~20 scholarship recipients in Sweden)
- 11/2017 – F1000** Faculty Member
- 10/2017 – Department Board of Admission for Doctoral Education**
- 01/2016 – 12/2021** Member, **Global Young Academy**
- 07/2015** Panel Speaker, “Decoding Scientific Leadership”, McKinsey Science Breakfast, Lindau Nobel Laureate Meeting 2015
- EMBO Laboratory Management Course (2014), Doctoral Supervision Course (2015), KI Leadership Course (2015), EMBO Leadership Course (2017), Pedagogy Course (2018), HFP Leadership Course (2020)
- Scientific reviewer for Journals including Nature Communications, Nature Chemical Biology, Nucleic Acid Research, FEBS J, Hong Kong Research Council, Human Frontiers Science Foundation, Worldwide Cancer Research, etc

12/2024 – 12/2025 Vinnova DeepTech Acceleration Grant, 1-4 MSEK
01/2024 – 12/2024 Vinnova French-Swedish Biotech Accelerator
06/2022 – 12/2023 **ERC Proof of Concept Grant**, 150 000 EUR
01/2021 – 06/2022 **ERC Proof of Concept Grant**, 150 000 EUR
2020 Founder, **Epigenica AB**, Stockholm, Sweden (www.epigenica.se)

Ten most important publications

1. **RNA transcripts regulate G-quadruplex landscapes through G-loop formation.** Sato K., Lyu J., van den Berg J., Braat D., Cruz V., Navarro C., Schimmel J., Esteban-Jurado C., Alemany M., Dreyer J., Hendrikx A., Mattioli F., van Oudenaarden A., Tijstermann M., Elsässer S.J., Knipscheer P. *Science* **2025**; 388(6752):1225–1231; doi: 10.1126/science.adr0493, pubmed.ncbi.nlm.nih.gov.
2. **Pooled overexpression screen identifies PIPPI as a novel microprotein involved in the ER stress response.** Lafranchi L., Spinner A., Hornisch M., Schlesinger S., Navarro C., Brinkensträhle L., Shao R., Piazza I., Elsässer S.J. *Nucleic Acids Research* **2025**; doi: 10.1101/2024.12.08.6274099, mdc-berlin.de.
3. **A large-scale sORF screen identifies putative microproteins and provides insights into their interaction partners, localisation and function.** Schlesinger S., Dirks C., Navarro C., Lafranchi L., Eirich J., Elsässer S.J. *iScience* **2025**; 28(3):111884; doi: 10.1016/j.isci.2025.111884, luzeenaraja.research.st.
4. **Multiplexed chromatin immunoprecipitation-sequencing for quantitative study of histone modifications and chromatin factors.** Kumar B., Navarro C., Yung P.Y.K., Lyu J., Salazar Mantero A., Katsori A.M., Schwämmle H., Martin M., Elsässer S.J. *Nature Protocols* **2024**; 20(3):779–809; doi: 10.1038/s41596-024-01058-z, pubmed.ncbi.nlm.nih.gov.
5. **Dual stop codon suppression in mammalian cells with genomically integrated genetic code expansion machinery.** Meineke B., Heimgärtner J., Caridha R., Block M., Kimler K.J., Pires M., Landreh M., Elsässer S.J. *Cell Reports Methods* **2023**; 3(11):100626; doi: 10.1016/j.crmeth.2023.100626, pubmed.ncbi.nlm.nih.gov.
6. **Polycomb Repressive Complex 2 shields naïve human pluripotent cells from trophectoderm and mesoderm differentiation.** Kumar B., Navarro C., Winblad N., Schell J.P., Zhao C., Weltner J., Baqué-Vidal L., Salazar Mantero A., Petropoulos S., Lanner F., Elsässer S.J. *Nature Cell Biology* **2022**; 24(6):845–857; doi: 10.1038/s41556-022-00916-w, pubmed.ncbi.nlm.nih.gov.
7. **Genome-wide mapping of G-quadruplex structures with CUT&Tag.** Lyu J., Shao R., Yung P.Y.K., Elsässer S.J. *Nucleic Acids Research* **2021**; 50(3):e13; doi: 10.1093/nar/gkab1073, academic.oup.com.
8. **An embryonic stem cell-specific heterochromatin state promotes core histone exchange in the absence of DNA accessibility.** Navarro C., Lyu J., Katsori A.M., Caridha R., Elsässer S.J. *Nature Communications* **2020**; 11:5095; doi: 10.1038/s41467-020-18863-1, pubmed.ncbi.nlm.nih.gov.
9. **Universal single-residue terminal labels for fluorescent live cell imaging of microproteins.** Lafranchi L., Schlesinger D., Kimler K.J., Elsässer S.J. *Journal of the American Chemical Society* **2020**; 142(47):20080–20087; doi: 10.1021/jacs.0c08239, pubmed.ncbi.nlm.nih.gov.
10. **Site-specific incorporation of two noncanonical amino acids for two-color bioorthogonal labeling and chemical-controlled crosslinking of proteins on live mammalian cells.** Meineke B., Heimgärtner J., Eirich J., Landreh M., Elsässer S.J. *Cell Reports* **2020**; 31(12):107811; doi: 10.1016/j.celrep.2020.107811