Curriculum Vitae

Dr. rer. nat. Eric Schoger

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Education

2018-2021	Doctoral Thesis (Dr. rer. nat.), Göttingen Graduate School for Neurosciences, Biophysics and Molecular Biosciences: Molecular Medicine Supervisor: Dr. Laura C. Zelarayán, Institute of Pharmacology & Toxicology, University Medical Center Göttingen, Germany
Since 2022	Studies of Human Medicine at Georg-August University Göttingen, Germany
2017-2018	Visiting Scientist at Dr. Eric N. Olson's Laboratory at UT Southwestern Medical Center, Dallas, USA
2015-2017	M.Sc. Cardiovascular Science at Georg-August University Göttingen, Germany
2012-2015	B.Sc. Molecular Medicine at Georg-August University Göttingen, Germany

Academic Career

Since 2022	Postdoctoral Researcher, Institute of Pharmacology and Toxicology, University Medical Center Göttingen, Germany
August 2022	Visiting Scientist at Cresset Biomolecular Discovery Ltd. (Cambridge, UK) within the Marie Skłodowska-Curie Actions (MSCA) Research and Innovation Staff Exchange (RISE)

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Prizes and Awards

2022	Hans-Jürgen-Bretschneider - Poster Prize of the German Society of Cardiology (DGK)
2022	Lift-Off Start-Up Competition - Life Science Prize with the start-up idea: DirIGEn
2022	ISHR World Meeting 2022 Poster Prize
2022	Postdoc Start-up Grant - German Center for Cardiovascular Research e.V. (DZHK)
2021	Hans-Jürgen-Bretschneider - Abstract Prize of the German Society of Cardiology (DGK)
2021	Paul Dudley White International Scholar - Abstract Prize of the American Heart Association's Basic Cardiovascular Science Scientific Sessions 2021
2020	Paper of the Month - German Center for Cardiovascular Research e.V. (DZHK)
2019	Hans-Jürgen-Bretschneider - Poster Prize of the German Society of Cardiology (DGK)
2019	Presenter Award of the Göttingen Graduate Center for Neurosciences, Biophysics, and Molecular Biosciences (GGNB) - Molecular Medicine Retreat
2018	Young Investigator Award - German Center for Cardiovascular Research e.V. (DZHK)
2018	Visiting Scientist Program - German Center for Cardiovascular Research e.V. (DZHK)
2016	Landesstipendium Niedersachsen - Lower Saxony State Scholarship
2014	Poster Prize - 9th Biomedical Student's Symposium

Professional Activities

Peer reviewer activities	• Biochimica et Biophysica Acta (BBA) - Gene Regulatory Mechanisms • Aging Cell • Front. Bioeng. Biotechnol.
Memberships	• since 2023: Ombudsman M.Sc. Cardiovascular Science, Georg-August University Göttingen • since 2022: Professional Member of the International Society of Heart Research (ISHR) • since 2022: Member of the Young DGK Basic Science Task Force • since 2022: Professional Member of the German Society of Gene Therapy (DG-GT)

- since 2022: Professional Member of the German Society of Cardiology (DGK)
- since 2021: Elected Evaluation Board Member of the German Center for Cardiovascular Research e.V. (DZHK), partner site Göttingen
- since 2021: Professional Member of the European Society of Cardiology (ESC)
- 2019-2022: Deputy student representative of the elected executive board - Multiscale Bioimaging Excellence Cluster (MBExC)
- since 2019: Trainee Member of the American Heart Association (AHA)
- since 2018: German Center for Cardiovascular Research e.V. (DZHK) Young - DZHK Member
- 2015-2017: Student representative M.Sc. Cardiovascular Science, Georg-August University Göttingen

Research Interests

Gene Expression Regulation, Gene Therapy, Translational Research, CRISPR/Cas9 Technology, Cardiac Remodeling, Cardiac Regeneration

Publications

Schoger E*, Bleckwedel F*, Giulia Germena G, Samak M, Rocha C, Tucholla P, Sobitov I, Möbius W, Sitte M, Lenz C, Hinkel R, Varga Z, Giricz Z, Salinas G, Gross J, Zelarayán LC. Single cell transcriptomic revealed extracellular vesicles secretion with a proteostasis signature by cardiomyocytes during pathological remodeling. *Commun. Biol*. 2023 Jan 21;6(1):79. doi: 10.1038/s42003-022-04402-9. PMID: 36681760; PMCID: PMC9867722. *Equal contribution.

Schoger E, Zelarayán LC. Enhancing cardiomyocyte transcription using in vivo CRISPR/Cas9 systems. Book chapter in *Methods in Molecular Biology - Cardiac Gene Therapy: Methods and Protocols* 2nd Edition. 2022;2573:53-61. doi: 10.1007/978-1-0716-2707-5_5. PMID: 36040586.

Schoger E, Lelek S, Panáková D, Zelarayán LC. Tailoring Cardiac Synthetic Transcriptional Modulation Towards Precision Medicine. *Front. Cardiovasc. Med*. 2022 Jan 14;8:783072. doi: 10.3389/fcvm.2021.783072. PMID: 35097003; PMCID: PMC8795974.

Schoger E*, Zimmermann WH, Cyganek L, Zelarayán LC*. Establishment of a second generation homozygous CRISPRa human induced pluripotent stem cell (hiPSC) lines for enhanced levels of endogenous gene activation. *Stem Cell Res*. 2021 Oct;56:102518. doi: 10.1016/j.scr.2021.102518. Epub 2021 Aug 26. PMID: 34481190. *Corresponding authors.

Chen Y, Lüttmann FF, **Schoger E**, Schöler HR, Zelarayán LC, Kim KP, Haigh JJ, Kim J, Braun T. Reversible reprogramming of cardiomyocytes to a fetal state drives adult heart regeneration in mice. *Science*. 2021 Sep 24;373(6562):1537-1540. doi: 10.1126/science.abg5159. Epub 2021 Sep 23. PMID: 34554778.

Schoger E*, Zimmermann WH, Cyganek L, Zelarayán LC*. Establishment of two homozygous CRISPR interference (CRISPRi) knock-in human induced pluripotent stem cell (hiPSC) lines for titratable endogenous gene repression. *Stem Cell Res*. 2021 Aug;55:102473. doi: 10.1016/j.scr.2021.102473. Epub 2021 Jul 27. PMID: 34343828. *Corresponding authors.

Schoger E, Argyriou L, Zimmermann WH, Cyganek L, Zelarayán LC. Generation of homozygous CRISPRa human induced pluripotent stem cell (hiPSC) lines for sustained endogenous gene activation. *Stem Cell Res*. 2020 Oct;48:101944. doi: 10.1016/j.scr.2020.101944. Epub 2020 Aug 14. PMID: 33038615.

Schoger E, Carroll KJ, Iyer LM, McAnally J, Tan W, Liu N, Noack C, Shomroni O, Salinas G, Gross J, Herzog N, Doroudgar S, Bassel-Duby R, Zimmermann WH, Zelarayan LC. CRISPR-Mediated Activation of Endogenous Gene Expression in the Postnatal Heart. *Circ Res*. 2020 Jan 3;126(1):6-24. doi: 10.1161/CIRCRESAHA.118.314522. Epub 2019 Nov 15. PMID: 31730408.

Noack C, Iyer LM, Liaw NY, **Schoger E**, Khadjeh S, Wagner E, Woelfer M, Zafiriou MP, Milting H, Sossalla S, Streckfuss-Boemeke K, Hasenfuß G, Zimmermann WH, Zelarayán LC. KLF15-Wnt-Dependent Cardiac Reprogramming Up-Regulates SHISA3 in the Mammalian Heart. *J Am Coll Cardiol*. 2019 Oct 8;74(14):1804-1819. doi: 10.1016/j.jacc.2019.07.076. PMID: 31582141.

Iyer LM, Nagarajan S, Woelfer M, **Schoger E**, Khadjeh S, Zafiriou MP, Kari V, Herting J, Pang ST, Weber T, Rathjens FS, Fischer TH, Toischer K, Hasenfuss G, Noack C, Johnsen SA, Zelarayán LC. A context-specific cardiac β-catenin and GATA4 interaction influences TCF7L2 occupancy and remodels chromatin driving disease progression in the adult heart. *Nucleic Acids Res*. 2018 Apr 6;46(6):2850-2867. doi: 10.1093/nar/gky049. PMID: 29394407; PMCID: PMC5887416.