

# Ruoqing Feng

Tel: +86-18124682274 | Email: [fengruoqing123@gmail.com](mailto:fengruoqing123@gmail.com) | <https://github.com/Ruoqing-feng>

## EDUCATIONAL BACKGROUND & WORKING EXPERIENCE

---

### German Center for Neurodegenerative Diseases (LMU-GSN)

PhD Student in the lab of Prof. Mikael Simons. 03/2023 – Present

### Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences

Research Assistant in Bioinformatics 06/2022 – 02/2023

### Southern University of Science and Technology

Master of Science in Biology 09/2019 – 06/2022

### Southern University of Science and Technology

Bachelor of Science in Bioinformatics 09/2015 – 06/2019

## PUBLICATIONS

---

**Feng, R.**, Spieth, L., Liu, L., Simons, M., et al. Single-cell spatial transcriptomic profiling defines a pathogenic inflammatory niche in chronic active multiple sclerosis lesions. *Immunity*. 2025 Dec 9;58(12):2989-3005.e10. (first author)

Wu, Z\*, Wang, Z\*, Wang, H\*, **Feng, R\***, Ginhoux, F., Li, H., et al. Spatial-temporal dynamics of human macrophage specification during development. *Cell*. 2022. Volume 186, Issue 20, 4454 - 4471.e19. (co-first author)

Groh, J., **Feng, R.**, Simons, M., et al. Microglia activation orchestrates CXCL10-mediated CD8+ T cell recruitment to promote aging-related white matter degeneration. *Nature Neuroscience*. 2025 Jun;28(6):1160-1173.

Kedia, S., Ji, H., **Feng, R.**, Simons, M., et al. T cell mediated microglia activation triggers myelin pathology in a model of amyloidosis. *Nature Neuroscience*. 2024 Aug;27(8):1468-1474.

Zhao, Y., Sun, J., Li, Y., Li, Z., Xie, Y., **Feng, R.**, Zhao, J., & Hu, Y. (2021). The strand-biased transcription of SARS-CoV-2 and unbalanced inhibition by remdesivir. *IScience*, 24(8), 102857.

## RESEARCH EXPERIENCE

---

### A single cell resolved spatial transcriptomics atlas of human multiple sclerosis lesion

11/2020 – Present

- High-resolution spatial transcriptomics reveals hallmarks of chronic active MS lesions
- CD8+ T cell niches are enriched with lipid-associated, inflamed microglia
- IFN- $\gamma$  promotes the storage of myelin-derived cholesterol in microglia
- Inhibition of cholesterol efflux in microglia drives inflammatory processes in EAE

### A single cell RNA-seq atlas of the human developing immune system

11/2020 – 10/2023

- Created a spatial-temporally resolved scRNA-seq atlas (29w+ cells) of the developing human immune system, with a focused interrogation of macrophages
- Characterized the proangiogenic macrophage subtype, and demonstrated that this subtype promotes angiogenesis, resides in the perivascular space across prenatal organs, and is of yolk-sac origin
- Found microglia was outside the central nervous system, in the fetal epidermis. Microglia colonize the developing epidermis prior to Langerhans cells and then gradually dismiss

## SKILLS

---

NGS data preparation; alignment; counting; differential expression analysis & enrichment analysis, scRNA-seq/scATAC-seq data preparation; single cell clustering (Seurat, scanpy & metacell); annotation; TF analysis; velocity analysis; trajectory analysis (monocle, dynonverse, etc.).