Stanford

Jelle Folkerts

Postdoctoral Scholar, Pathology

Bio

BIO

Dr. Folkerts received his master's degree in Drug Innovation from Utrecht University in the Netherlands, during which he spent a year at the Galli lab at Stanford on a Fulbright Scholarship. During this time, Dr. Folkerts played a key role in developing a technology platform employing functional genomics and high-resolution single-cell confocal imaging, enabling the rapid identification of degranulation regulators in primary human mast cells. Following his time at Stanford, Dr. Folkerts studied the regulatory mechanisms of human mast cell activation under the guidance of Rudi Hendriks and Marcus Maurer, earning his Ph.D. in 2022. He then returned to Stanford as a postdoctoral fellow in the Galli lab, where his current research focuses on the identification of human mast cell degranulation regulators using a whole-genome CRISPR knockout library screen, and the validation of these findings using the recently developed technology platform. It is his long-standing goal to contribute to the design and development of specific and effective therapeutic interventions for mast cell-mediated diseases.

HONORS AND AWARDS

- Rubicon Postdoctoral Fellowship, The Netherlands Organisation for Scientific Research (NWO) (2023-2025)
- Exploratory/Developmental Research Grant Award (R21 - Co-Applicant), NIH (2021)
- Long-term Research Fellowship, The European Academy of Allergy and Clinical Immunology (2020)
- Fulbright Fellowship (NL - USA), Fulbright (2016-2017)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Organising comittee, EMBRN-Meeting (2022 - present)
- Member, European Mast Cell and Basophil Research Network (EMBRN) (2016 - present)

PROFESSIONAL EDUCATION

- Doctor of Philosophy, Erasmus University Rotterdam (2022)
- PhD, Erasmus MC, Rotterdam, NL , Pulmonary Medicine (2022)
- MSc., Utrecht University, Utrecht, NL , Drug Innovation (2017)
- BSc., University of Applied Sciences, Utrecht, NL , Biomolecular Research (2013)

STANFORD ADVISORS

- Stephen Galli, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **Identification of Shared Regulators of IgE- and MRGPRX2-Dependent Degranulation in Human Mast Cells.** *Allergy*
  Folkerts, J., van Tienen, P., de Bruijn, M. J., van IJcken, W. F., Hendriks, R. W., Stadhouders, R., Tam, S. Y., Galli, S. J.
  2026

- **Butyrate Selectively Targets Super-Enhancers and Transcriptional Networks Associated with Human Mast Cell Function.** *European journal of immunology*
  Folkerts, J., de Bruijn, M. J., van IJcken, W. F., Hendriks, R. W., Stadhouders, R.
  2025; 55 (6): e51680

- **EVO756 is a novel MRGPRX2 antagonist that potently inhibits human mast cell degranulation in response to multiple agonists - potential treatment for CSU and beyond**
  Harden, J., Folkerts, J., Tam, S., Frischbutter, S., Babina, M., Hofland, H. E., Patel, J. P., Maurer, M., Galli, S. J.
  ELSEVIER SCIENCE INC.2023: S344

- **Rapid identification of human mast cell degranulation regulators using functional genomics coupled to high-resolution confocal microscopy.** *Nature protocols*
  Folkerts, J. n., Gaudenzio, N. n., Maurer, M. n., Hendriks, R. W., Stadhouders, R. n., Tam, S. Y., Galli, S. J.
  2020

- **Butyrate inhibits human mast cell activation via epigenetic regulation of FcεRI-mediated signaling.** *Allergy*
  Folkerts, J. n., Redegeld, F. n., Folkerts, G. n., Blokhuis, B. n., van den Berg, M. P., de Bruijn, M. J., van IJcken, W. F., Junt, T. n., Tam, S. Y., Galli, S. J., Hendriks, R. W., Stadhouders, R. n., Maurer, et al
  2020

- **Microbiota-dependent and -independent effects of dietary fibre on human health** *BRITISH JOURNAL OF PHARMACOLOGY*
  Cai, Y., Folkerts, J., Folkerts, G., Maurer, M., Braber, S.
  2020; 177 (6): 1363-1381

- **Effect of Dietary Fiber and Metabolites on Mast Cell Activation and Mast Cell-Associated Diseases** *FRONTIERS IN IMMUNOLOGY*
  Folkerts, J., Stadhouders, R., Redegeld, F. A., Tam, S., Hendriks, R. W., Galli, S. J., Maurer, M.
  2018; 9

- **Effect of Dietary Fiber and Metabolites on Mast Cell Activation and Mast Cell-Associated Diseases.** *Frontiers in immunology*
  Folkerts, J., Stadhouders, R., Redegeld, F. A., Tam, S. Y., Hendriks, R. W., Galli, S. J., Maurer, M.
  2018; 9: 1067