Validating the genetic alterations in cutaneous T-cell lymphoma: unraveling the role of SOCS1 and HNRNPK through genetically engineered mouse models

Luo, Y.

List of publications

Luo, Y., de Gruijl, F. R., Vermeer, M. H., & Tensen, C. P. (2024). “Next top” mouse models advancing CTCL research. *Frontiers in cell and developmental biology,* 12, 1372881. https://doi.org/10.3389/fcell.2024.1372881

Luo, Y., Vermeer, M. H., de Gruijl, F. R., Zoutman, W. H., Sluijter, M., van Hall, T., & Tensen, C. P. (2022). In vivo modelling of cutaneous T-cell lymphoma: The role of SOCS1. *Frontiers in oncology,* 12, 1031052. https://doi.org/10.3389/fonc.2022.1031052

Luo, Y., Vermeer, M. H., de Haan, S., Kinderman, P., de Gruijl, F. R., van Hall, T., & Tensen, C. P. (2023). Socs1-knockout in skin-resident CD4+ T cells in a protracted contact-allergic reaction results in an autonomous skin inflammation with features of early-stage mycosis fungoides. *Biochemistry and biophysics reports*, 35, 101535. https://doi.org/10.1016/j.bbrep.2023.101535

Curriculum vitae

Yixin Luo was born on July 3rd, 1990, in Zhengzhou, Henan Province, China. She completed her Bachelor's degree in Clinical Medicine at Zhengzhou University, Zhengzhou City. During her undergraduate studies, she interned at The First Affiliated Hospital of Zhengzhou University, gaining comprehensive clinical and research experience across multiple departments.

In 2014, Yixin pursued her Master of Medicine at Peking Union Medical College and Tsinghua University in Beijing, specializing in dermatology and venereology. Under the supervision of Prof. Dr. Jie Liu, her master's research focused on cutaneous T-cell lymphoma, specifically establishing dermoscopic criteria for the early detection of mycosis fungoides, enhancing diagnostic processes.

In 2017, Yixin began her PhD studies at Leiden University Medical Center in the Netherlands. Guided by Prof. Maarten Vermeer and Dr. Cornelis P. Tensen, her doctoral research explores the pathogenesis of cutaneous T-cell lymphoma using innovative in vivo models. A significant focus of her study is the role of SOCS1 and HNRNPK as initiating factors in the development of CTCL. This research is presented in her thesis titled "Validating the Genetic Alterations in Cutaneous T-cell Lymphoma: Unraveling the Role of SOCS1 and HNRNPK through Genetically Engineered Mouse Models."

Portfolio

PhD Training

Hightlight Courses

- Introduction to Flow Cytometry (Dec 2017)
- Animal Handling Course (May 2018)
- Big Data Analysis on SHARK Cluster (June 2018)
- Next Generation Sequencing Data Analysis (Aug 2019)
- Using R for Data Analysis (Sep 2019)
- eBROK certification (2019 - 2023) & eBROK re-registration (2023 - 2026)

Teaching Experience

- **Supervising 9-Month Master Biomedical Science Internship**
  Julia van der Bie: *HNRNPK* deletion in skin-homing mCD4+ T-cells resembles early-stage Mycosis Fungoides characterized by persistent skin inflammation.
- **Supervising 9-Month University of Applied Science Internships**
  Amelia G Maduro Rodriguez: The role of *SOCS1* deletion in CD4+ T cells of oxazolone-induced dermatitis on transgenic mice.
  Jamie Dawson: Examination of the functional role of Suppressor Of Cytokine Signaling 1 in Mycosis Fungoides.
  Roos Gaarkeuken: The oncogenesis function of *Hnrnpk* deletion in transgenic mice.

Peer Reviews for International Journals

- *Biochemistry and Biophysics Reports*

Symposia and Presentations

- ***EORTC Cutaneous Lymphoma Group Meetings, Athens (Sep 2019)***
  Mycosis fungoides and variants of mycosis fungoides: A retrospective study of 93 patients in a Chinese population at a single center.
- ***Dutch Society for Experimental Dermatology Annual Meetings, Lunteren (Jun 2022)***
  Assessment of *SOCS1* deletion in CD4+ T cells of chronically inflamed mouse skin to develop a pathogenic model of Mycosis Fungoides.
- ***EORTC Cutaneous Lymphoma Group Meetings, Madrid (Sep 2022)***
  In vivo modelling of Cutaneous T-cell lymphoma: The role of *SOCS1*.
- ***Dutch Society for Experimental Dermatology Annual Meetings, Lunteren (Jun 2023)***
  Knockout of JAK/STAT signaling inhibitors in skin-resident CD4+ T cells results in an autonomous skin inflammation, with features of early-stage Mycosis Fungoides.
- ***EORTC Cutaneous Lymphoma Group Meetings, Leiden (Sep 2023)***
  A novel inducible knockout mouse strain to study the impact of one-copy loss of *HNRNPK* in CD4+ T cells as an experimental model of cutaneous lymphoma.
- ***Medical Genetics Center Symposium, Rotterdam (Sep 2023)***
  Genetically engineered mouse models of cutaneous lymphomas: From pathogenesis to therapeutic intervention.

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May our lives continue to shine brightly, free from regret, as the best is still ahead for all of us.