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

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Stellingen

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Validating the Genetic Alterations in Cutaneous T-cell Lymphoma: Unraveling the Role of *SOCS1* and *HNRNPK* through Genetically Engineered Mouse Models

1. Skin-targeted genetically engineered mouse models are essential for dissecting the pathogenesis of cutaneous T-cell lymphoma. (this thesis)
2. A mono-allelic deletion of *SOCS1* in skin-resident CD4+ T cells without additional triggers is not sufficient to lead to early-stage mycosis fungoides, indicating the complexity of genetic factors in disease initiation. (this thesis)
3. Persistent inflammation in skin combined with *SOCS1* mono-allelic loss in CD4+ T cells can lead to conditions mimicking early-stage mycosis fungoides, making it a potential early event in cutaneous T-cell lymphoma. (this thesis)
4. *HNRNPK* deletion in skin-resident CD4+ T cells is an early and critical factor in shaping the microenvironment of cutaneous T-cell lymphoma. (this thesis)
5. Tumor-promoting inflammation and genetic instability and mutation are key hallmarks of cancer. (Hanahan, Cancer Discovery, 2022)
6. In cutaneous T-cell lymphoma, malignant T cells actively shape a pro-tumorigenic inflammatory microenvironment, which undermines anti-tumor immunity and facilitates disease progression. (Krejsgaard et al., Seminars in Immunopathology, 2017)
7. Haploinsufficiency in key regulatory genes plays a critical role in the pathogenesis of cancers by disrupting immune regulation and regulating proliferation and differentiation programs. (Berger et al., Nature, 2011)
8. The inherent heterogeneity of cutaneous T-cell lymphoma, characterized by diverse genetic, epigenetic, and phenotypic variations, significantly complicates the study of its pathogenesis and the development of effective therapies. (Choi et al., Nature Genetics, 2015)
9. The research journey is as valuable as the discovery destination.
10. Balance is not something you find, it's something you create.