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Harnessing zebrafish xenograft models for ocular melanoma treatment discovery

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Curriculum Vitae

Jie Yin was born on 11th November 1993 in Shanxi Province, China. In September 2012, she started her bachelor's study in Traditional Chinese Medicine at Capital Medical University, China. She obtained her bachelor's degree in June 2016. From September 2016, Jie started her master's study in Pharmacology and was jointly trained by the Institute of Chinese Materia Medica and Capital Medical University, China. During her master's internship, under the supervision of Prof. Dr. Xiaoxin Zhu and Dr. Qi Li, she investigated the effect and mechanism of Shenlian extract on inflammatory resolution in atherosclerosis mice models. She obtained her master's degree in June 2019. In September 2019, Jie came to the Netherlands to pursue further academic training as a Ph.D. candidate, which was supported by the Chinese Scholarship Council. She started her studies at the Institute of Biology of Leiden University under the supervision of Prof. Dr. B. Ewa Snaar-Jagalska, Prof. Dr. Martine J. Jager, and Dr Mei Wang. During her PhD research, she focused on establishing the ocular melanoma zebrafish xenograft model. Based on this model, she uncovered the role of lactate secreted by glycolytic conjunctival melanoma cells in attracting macrophages to drive angiogenesis. Besides, she identified that the antitumor effect of glycosylated PPD-ginsenosides on conjunctival melanoma relies on the Glucosylceramidase beta 2 (GBA2) activity from the cancer microenvironment.

List of Publications

1. **Yin J**, Zhao G, Kalirai H, Coupland SE, Jochemsen AG, Forn-Cuní G, Wierenga AP, Jager MJ, Snaar-Jagalska BE, Groenewoud A. Zebrafish Patient-Derived Xenograft Model as a Preclinical Platform for Uveal Melanoma Drug Discovery. *Pharmaceuticals*. 2023 Apr 15;16(4):598.
2. Groenewoud A, **Yin J**, Snaar-Jagalska BE. Ortho-and ectopic zebrafish xenograftment of ocular melanoma to recapitulate primary tumor and experimental metastasis development. *JoVE (Journal of Visualized Experiments)*. 2021 Sep 4(175):e62356.
3. Groenewoud A, **Yin J**, Gelmi MC, Alsafadi S, Nemati F, Decaudin D, Roman-Roman S, Kalirai H, Coupland SE, Jochemsen AG, Jager MJ, Engel FB, Snaar-Jagalska BE. Patient-derived zebrafish xenografts of uveal melanoma reveal ferroptosis as a drug target. *Cell Death Discovery*. 2023 Jun 16;9(1):183.
4. **Yin J**, Forn-Cuní G, Halima H, Hansmann S, Dryjanska K, Jochemsen AG, Groenewoud A, Wang M, Jager MJ, Aerts JM, Schaaf M, Snaar-Jagalska BE. The antitumoral effect of glycosylated PPD-ginsenosides on conjunctival melanoma relies on the Glucosylceramidase beta 2 (GBA2) activity from the cancer microenvironment (Submitted).
5. **Yin J**, Forn-Cuní G, Surendran AM, Pouliopoulou N, Dévédec SL, Chen Q, Snaar-Jagalska BE. Lactate secreted by glycolytic conjunctival melanoma cells attracts and polarizes macrophages to drive angiogenesis in zebrafish xenografts (Submitted).
6. Liu L, Li Q, **Yin J**, Zhao Z, Sun L, Ran Q, Du X, Wang Y, Li Y, Yang Q, Chen Y. ShenLian extract enhances TGF- β functions in the macrophage-SMC unit and stabilizes atherosclerotic plaques. *Frontiers in Pharmacology*. 2021 May 28;12:669730.

