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Harnessing zebrafish xenograft models for ocular melanoma treatment discovery

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Stellingen

Behorende bij het proefschrift

Harnessing zebrafish xenograft models for ocular melanoma treatment discovery

1. The zebrafish models of retro-orbital orthotopic and intravascular ectopic ocular melanoma engraftment faithfully replicate the disease's progression from primary localized tumor growth to the formation of secondary peri-vascular metastases (Chapter 2).
2. The attraction of macrophages driven by lactate and dependent on tumor cell glycolysis plays a crucial role in angiogenesis and offers a potential mechanism for the dissemination of conjunctival melanoma (Chapter 3).
3. *In vitro* cultured Patient-derived uveal melanoma spheroids maintain their melanocytic characteristics. Zebrafish xenografts from these spheroids provide a valuable platform for testing personalized drug therapies (Chapter 4).
4. The inflammatory response triggered by conjunctival melanoma xenografts in zebrafish enhances the expression of Gba2 (Chapter 5).
5. Deglycosylated ginsenosides are promising therapeutic agents against conjunctival melanoma (Chapter 5).
6. Genetic information of ocular melanoma profoundly influences diagnosis and provides valuable insight into prognosis.
7. A comprehensive understanding of tumor glycolysis is fundamental for advancing cancer treatment and prevention through dietary and pharmacological metabolic interventions (Inspired by Bononi *et al.*, *Seminars in Cancer Biology* 86. 2 (2022): 325-333).
8. Therapeutic targeting of the tumor micro environment is a promising strategy in the fight against cancer (Inspired by Bejarano *et al.*, *Cancer Discovery* 11. 4 (2021): 933-959).
9. Clarifying the biodegradation process of ginsenosides facilitates their synthesis or modification, making them promising candidates for cancer treatment.
10. Every day of ordinary life is worth dancing for, and everyone who sees the world as it is and loves it deserves to be called a hero (Inspired by Friedrich Nietzsche and Roman Rolland).
11. Nothing is more visible than the hidden, and nothing is more apparent than the subtle. Hence, one's self-discipline is never more essential than when in solitude (Inspired by *Book of Rites*).

Jie Yin

Leiden, 5th December 2023