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The zebrafish as a model for tissue regeneration and bone remodelling

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STELLINGEN

Ms. Faiza Sharif

The Zebrafish as a Model for Tissue Regeneration and Bone Remodeling

1. Osteoclast-like cells are found much earlier than previously thought in zebrafish development. (This thesis, chapter 2)
2. These cells can be activated by the introduction of cytokines known to induce osteoclastogenesis in younger embryos. (This thesis, chapter 2)
3. Nanoparticles are a promising form of drug delivery in zebrafish embryos. (This thesis, chapter 3)
4. Multinucleated osteoclasts are also present on the scales of adult zebrafish in addition to the other skeletal structures. (This thesis, chapter 4)
5. Stress in early life can have long-lasting effects on wound healing at later stages (This thesis, chapter 5)
6. The zebrafish is a promising model for bone development and regeneration studies
7. “Every species is capable of regeneration, from bacteria to humans”. Carlson, B. M. (2007). *Principles of Regenerative Biology*
8. Handling stress should be taken into account when conducting experiments with animal models because it may have a profound effect on many systems

9. "A fact is a simple statement that everyone believes. It is innocent, unless found guilty. A hypothesis is a novel suggestion that no one wants to believe. It is guilty, until found effective." Teller, E. (1991). *Conversations on the Dark Secrets of Physics*
10. "I have always maintained that no nation can ever be worthy of its existence that cannot take its women along with the men. No struggle can ever succeed without women participating side by side with men. There are two powers in the world; one is the sword and the other is the pen. There is a great competition and rivalry between the two. There is a third power stronger than both, that of the women." From a speech by Quaid-e-Azam Muhammad Ali Jinnah (1940).

