

Microglia in health and disease
Learning from the zebrafish

1. The zebrafish is a good model organism to study basic microglia biology in vivo (this thesis).
2. CRISPR/Cas9-based reverse genetic screening can help in the identification of new genes important for microglia biology (this thesis).
3. CSF1R regulates macrophage/microglia proliferation and survival under homeostatic conditions, but is dispensable for macrophage differentiation (this thesis).
4. Loss of microglia can cause leukoencephalopathy in humans (this thesis).
5. Microglia phenotypes reflect the state of, and changes in, the microenvironment. Therefore, better understanding of these phenotypes can provide valuable insight into the role of the other cell types in degenerative brain disease (this thesis).
6. Major leaps in clinically relevant biological understanding often come from basic biological research.
7. The value of model organisms resides not only in how they are similar to humans, but also in how they differ.
8. Because intercellular interactions between different brain cell types are often at the basis of degenerative brain diseases, research on these diseases should be focused more on intercellular interactions instead of on individual cell types.
9. In the interpretation of transcriptomic studies it is easy to focus on known genes and pathways while ignoring potentially important genes that we know nothing about; This makes these types of studies highly sensitive to confirmation bias.
10. If you make experimental groups big enough, they will probably differ significantly, which does not necessarily mean that those differences are biologically relevant.
11. A proper definition of normal is indispensable for the understanding of abnormal.