



Universiteit  
Leiden  
The Netherlands

## **Cell-autonomous and host-dependent CXCR4 signaling in cancer metastasis : insights from a zebrafish xenograft model**

Tulotta, C.

### **Citation**

Tulotta, C. (2016, June 14). *Cell-autonomous and host-dependent CXCR4 signaling in cancer metastasis : insights from a zebrafish xenograft model*. Retrieved from <https://hdl.handle.net/1887/40160>

Version: Not Applicable (or Unknown)

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/40160>

**Note:** To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <http://hdl.handle.net/1887/40160> holds various files of this Leiden University dissertation.

**Author:** Tulotta, C.

**Title:** Cell-autonomous and host-dependent CXCR4 signaling in cancer metastasis : insights from a zebrafish xenograft model

**Issue Date:** 2016-06-14

# Propositions

Accompanying the PhD thesis:

## Cell-autonomous and host-dependent CXCR4 signaling in cancer metastasis

Insights from a zebrafish xenograft model

1. CXCR4/CXCL12 cross signaling between human and zebrafish confirms the validity of the zebrafish xenograft model for human cancer cells. (*this thesis*)
2. Mechanical and microenvironment-related factors contribute to tumor cell invasion and initiation of the metastatic process. (*this thesis*)
3. CXCR4-targeted therapies should be developed, since the cooperation between tumors and innate immunity is influenced by CXCR4 during metastatic initiation. (*this thesis*)
4. CXCR4 signaling controls migratory and adhesive properties by different mechanisms in neutrophils and macrophages. (*this thesis*)
5. Cancer cells have evolved mechanisms that reprogram the immune defense and make the foe-to-friend switch an important support for survival and progression.
6. Immune cells interplay and conspire to promote cancer.
7. The recent insight that “neutrophils fan cancer’s flames” supports combinatorial use of anti-inflammatory and anti-cancer drugs. [Wculek S.K., Malanchi I., commentary to “The wound inflammatory response exacerbates growth of pre-neoplastic cells and progression to cancer. (EMBO J. 2015)]
8. The driving force for the immune system is the need to recognize danger (P. Matzinger “An Innate sense of danger”, *Annals of the New York Academy of Science*, 2002) and as Machiavelli stated “Never was anything great achieved without danger”.
9. Paradoxically, either boosting or suppressing the immune system can be valuable approaches to limit cancer.
10. “We learn from failure, not from success”. *Science docet* (Adapted from Dr. van Helsing “Dracula” B. Stoker, 1897). Ultimately, “The important thing is to never stop questioning”. *Einstein docet*.