

# Stellingen

Behorend bij het proefschrift

## The diverse role of *Ldb1* in cell differentiation and mouse embryonic development

1. The generation of embryoid bodies from embryonic stem cells is a useful tool to study embryonic development and cell differentiation. **(this thesis)**
2. *Ldb1* is an essential regulator of mouse embryonic development and begins to function at the onset of gastrulation or very soon after. **(this thesis)**
3. *Ldb1* has a dual role in hematopoietic development as a regulator of progenitor cell proliferation and differentiation. **(this thesis)**
4. The deletion of *Ldb1* has a negative impact on the proliferation capacity of *in vitro* differentiated neural stem cells; however their differentiation potential is not affected. **(this thesis)**
5. Flk1+ hemangioblast cells and *in vitro* differentiated Neural Stem Cells express common genes, whose expression pattern is altered when the *Ldb1* gene is deleted. **(this thesis)**
6. The hemangioblast differentiates towards hematopoietic cells via the intermediate step of the formation of hemogenic endothelium. **Lancrin C., et al., Nature, 2009**
7. The knowledge acquired from the investigation of the hemogenic potential of the endothelium in the mouse embryo and the translation of this knowledge to the human system could be of great assistance in generating human HSCs from human ES cells, either by direct cell reprogramming or indirectly through induced pluripotent stem cells. **Momoko Yoshimoto and Mervin C. Yoder, Nature, 2009**
8. A hidden connection is stronger than an obvious one. **Heraclitus of Ephesus**
9. In the long history of humankind (and animal kind, too) those who learned to collaborate and improvise most effectively have prevailed. **Charles Darwin**
10. Imagination is more important than knowledge... **Albert Einstein**
11. Equipped with his five senses, man explores the universe around him and calls the adventure Science. **Edwin Powell Hubble**

Athina Mylona, June 10<sup>th</sup> 2009