

## PROPOSITIONS FOR THIS THESIS

### Smart Reporter Genes for Cellular Molecular Imaging in Tumor Immunology

1. Longitudinal bioluminescence imaging of viral infection using the NanoBiT system in combination with hydrofurimazine, will not only provide novel opportunities for virus biology studies in animal models, but will also enable fast drug screening research. **This thesis**
2. Hikarazine-003 and fluorofurimazine enable higher signal emission than furimazine for bioluminescence imaging. **This thesis**
3. The combination of superior brightness and signal duration, given by fluorofurimazine, enables bioluminescence imaging with NanoLuc luciferase, in superficial and deep tissue over a substantial period of time. **This thesis**
4. Due to their spontaneous oxidation, when performing imaging with furimazine and coelenterazine based analogues, a pre-scan and the proper positioning of animals, are highly recommended in order to obtain accurate experimental results. **This thesis**
5. A reporter gene that supports bioluminescence imaging in addition to nuclear imaging, and is small enough not to alter function, represents a game change in future cell tracking studies. **This thesis**
6. Bioluminescence is a vital tool in preclinical *in vitro* and *in vivo* studies.
7. Targeted molecular imaging is an indispensable tool in diagnosing and managing diseases.
8. Generating specific multi-modality imaging probes will facilitate the translation of molecular-genetic imaging into clinical application for cancer diagnosis and therapy **(Kang, 2008)**
9. Diligence beats brainpower every time.
10. I am not my intellectual achievements.
11. It's not what happens, it's what you do.