Selective autophagy in host defense against mycobacterial infection

Zhang, R.

Curriculum vitae

Rui Zhang was born on the 7th of June 1987 in Hohhot, Inner Mongolia, China. He completed his high school education at the Hohhot 9 high school in June 2006. In September of this year, he started his BSc study in animal medicine at the Inner Mongolia University for the Nationalities. In June 2010, he obtained his BSc degree. In September of the same year, he started his MSc study at the Hua Zhong Agriculture University with a major in preventive veterinary medicine under supervision of Prof. dr. Aizhen Guo. During his MSc study, he performed research on the selection of attenuated vaccine candidates for control of *Mycoplasma bovis* infection. He also investigated the epidemic of *Mycobacterium bovis* infection in cattle and deer in China. In May, 2013, he obtained a China Scholarship Council-Leiden University Joint Scholarship for carrying out a PhD research project in the Netherlands. After acquiring his MSc degree in June 2013**,** he worked from September 2013 to June 2018 as a PhD student in the group of Prof. dr. Annemarie H. Meijer in the Animal Sciences & Health department at the Institute of Biology of Leiden University. During his PhD study, supervised by Dr. Monica Varela, Dr. Michiel van der Vaart and Prof. dr. Annemarie H. Meijer, he used zebrafish embryos as tuberculosis model and investigated the function of selective autophagy in host defense against mycobacterial infection, resulting in the work presented in this thesis. Following his return to China, he obtained a lecturer position at the HuBei University of Technology, where he will continue to perform research in the area of zebrafish disease models.

List of publications

Zhang, R., Varela, M., Vallentgoed, W., Forn-Cuní, G., van der Vaart, M and Meijer, A.H. The selective autophagy receptors Optineurin and p62 are both required for innate host defense against mycobacterial infection. *Submitted*

Zhang, R., Varela M., Torraca, V., van der Vaart, M and Meijer, A.H. Dram1 deficiency leads to increased susceptibility of zebrafish to mycobacterial infection due to activation of pyroptotic cell death in infected macrophages. *Manuscript in preparation*

Zhang, R., Varela, M., Forn-Cuní, G., van der Vaart, M and Meijer, A.H. Deficiency of the autophagy modulator Dram1 affects the transcriptional regulation of metabolic and immune response pathways during mycobacterial infection. *Manuscript in preparation*

Zhang, R., Han, X, Chen, Y., Mustafa, R., Qi, J, Chen, X., Hu, C., Chen, H., Guo, A. Attenuated *Mycoplasma bovis* strains provide protection against virulent infection in calves. Vaccine 32 (2014) 3107–3114