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## Regulation of autophagy-related mechanisms during bacterial infection

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## Curriculum Vitae

Jiajun Xie was born on October 3<sup>rd</sup> 1991 in the city of Maoming, located in the Guangdong province of China. After graduating from No.1 middle school of Dianbai in 2010, he started his Bachelor of Science program at the Science Faculty of Foshan University. In 2014, he obtained his BSc degree in Biotechnology, after which he pursued a Master of Science degree at the Fisheries and Life Science Faculty in Shanghai Ocean University. During this period, he majored in Aquatic Animal Nutrition and Feed Science. Under the supervision of associate professor Dr. Jin Niu, he investigated the anti-oxidative properties of astaxanthin and its effect on the development of golden pompano (*Trachinotus ovatus*). After completing his MSc degree in 2017, he worked as a research assistant in the aquaculture nutrition laboratory of Sun Yat-sen University. He continued to investigate the function of astaxanthin against oxidative stress. In September 2019, he was awarded a scholarship from the China Scholarship Council to carry out his PhD research at the Institute of Biology, Leiden University, the Netherlands, under supervision of Prof. dr. Annemarie H. Meijer and Dr. Marcel J.M. Schaaf. In his PhD project, he studied the activation of autophagy as a host-protective response against intracellular bacterial infections. The findings of his PhD project are presented in this thesis.

## List of publications

### Publications in this thesis

Banducci-Karp A\*, **Xie J\***, Engels SA, Sarantaris C, van Hage P, Varela M, Meijer AH, Van der Vaart M. DRAM1 promotes lysosomal delivery of *Mycobacterium marinum* in macrophages. *Cells*, 2023, 12: 828. \* Authors contributed equally.

Masud S\*, **Xie J\***, Grijmans BJM, van der Kooij S, Zhang r, Prajsnar TK, and Meijer AH. DRAM1 confers resistance to Salmonella infection. *Autophagy reports*, 2023, 2: 2242715. \* Authors contributed equally.

**Xie J.** and Meijer AH. Xenophagy receptors Optn and p62 and autophagy modulator Dram1 independently promote zebrafish host defense against *Mycobacterium marinum*. Submitted.

### Publications not in the thesis

Xie Y, **Xie J**, Meijer AH, Schaaf MJ. Glucocorticoid-induced exacerbation of mycobacterial infection is associated with a reduced phagocytic capacity of macrophages. *Frontiers in Immunology*, 2021, 12: 618569.

Boland R, Heemskerk MT, Forn-Cuní G, Korbee CJ, Walburg KV, Esselink JJ, Carvalho dos Santos C, de Waal AM, van der Hoeven DC, van der Sar E, de Ries AS, **Xie J**, Spaink PH, van der Vaart M, Haks MC, Meijer AH, Ottenhoff THM. Repurposing tamoxifen as potential host-directed therapeutic for tuberculosis. *Mbio*, 2023, 14: e03024-22.

## Acknowledgements

Time has passed quickly. It has been more than four years since I came to Leiden in 2019. It is very exciting but nostalgic to be at the end stage of my PhD. In retrospect, I find pursuing a PhD at Leiden University is a memorable and honorable journey with the help of many people.

First and foremost, I would like to express my sincere gratitude to my supervisor Annemarie for giving me this great opportunity to be a member of her group. It would have been impossible for me to finish without your patience, encouragements and kindness in these four years. Thank you for the insightful input and help me generate the attractive output in my research. Furthermore, I am very grateful that you prioritized the corrections of my thesis so that I can finish as we planned. Marcel, I want to thank you for your valuable advice and your prompt feedback as always. Your encouragements always helped to boost my confidence.

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