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Analysis of the angucycline biosynthetic gene cluster in *Streptomyces* sp. QL37 and implications for lugdunomycin production

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Curriculum Vitae

CURRICULUM VITAE

Hendrikje Ursusla (Helga) van der Heul was born in Schiedam, the Netherlands on the 6th of November 1990. In 2009 she attained her pre-university degree with the “Nature and Health” profile from the Groen van Prinsterer Lyceum in Vlaardingen. In that same year she started the study Biology and Medical Laboratory Research at the Hogeschool Rotterdam, and graduated with a BSc degree, cum laude, in 2012. During this period, she completed her first internship at the department of Microbiology and Infectious Diseases at the Erasmus MC on the detection of beta-lactamases in *Klebsiella pneumoniae*, under the joint supervision of Marianne ten Kate and dr. Wil Goessens. Her second bachelor internship, also at the Erasmus MC, was led by dr. Kees Vink and focused on antigenic variation in *Mycoplasma pneumoniae*.

In 2012 she started the master’s study Molecular and Cellular Biology at Leiden University where she studied the ferritins of *Clostridium difficile* as part of an internship supervised by dr. Wiep Klaas Smits at the Leiden University Medical Center (LUMC). This was followed by an internship at the Institute of Biology (IBL) at Leiden University on the cell division protein SsgB from *Streptomyces coelicolor*, supervised by prof. Gilles van Wezel and dr. Joost Willemse. After receiving her MSc degree in Biology in 2014, she continued to work in the same group as research assistant. In this period, she spent two months at Naicons (Milan, Italy), a biotech company specialised in the discovery of novel bioactive compounds. Her work at the company was supervised by dr. Margherita Sosio.

In 2016 she started her PhD under the supervision of prof. Gilles van Wezel and dr. Somayah Elsayed as co-promotor. She worked on the regulation and biosynthesis of lugdunomycin production in *Streptomyces* sp. QL37, which is presented in this thesis. During her PhD study she participated in several Dutch and international conferences and presented at CHAINS 2018 in Veldhoven and at the Conference of Genetics of Industrial Microorganisms (GIM 2019) in Pisa, Italy. In 2021 she started working as lab manager and researcher in the group of prof. Gilles van Wezel.



Publications

PUBLICATIONS

van der Heul, H.U., Bilyk, B.L., McDowall, K.J., Seipke, R.F., and van Wezel, G.P. (2018) Regulation of antibiotic production in Actinobacteria: New perspectives from the post-genomic era. *Nat Prod Rep* **35**: 575–604.

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