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Exploring the chemical space of post-translationally modified peptides in *Streptomyces* with machine learning

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Curriculum vitae

Alexander Kloosterman was born in Leiden on December 28th, 1990. After finishing high school at the Stedelijk Gymnasium in Leiden in 2009, he started a Bachelor Life Science and Technology, a shared programme between Leiden University and the Technical University of Delft. While in college, Alexander participated in the Honour's College programme in Philosophy in Leiden, and was awarded the Young Talent Encouragement Award in his first year. After joining Marcellus Ubbink's lab for an internship on protein-protein interactions and protein NMR, Alexander obtained his Bachelor's degree in July 2012. Afterwards, he continued his studies by starting a research Master Life Science and Technology in Leiden. During this time, he joined Gilles van Wezel's lab for his first research internship, under the supervision of Kasia Celler, focusing on flotillins in streptomycetes. His second internship took place in Gregory Schneider's lab, under supervision of Hadi Arjmandi Tash, where he studied the biaxial compression of graphene using lipids, before obtaining his Master's on February 2016. In December 2015, he started his PhD study at Leiden University, on the project Syngenopep, in collaboration with the Leiden University Medical Center (LUMC), the University of Groningen (RUG), supported by BaseClear, Dupont and EnzyPep, and funded by the Dutch Research Organization (NWO). Under the joint supervision of Gilles van Wezel and Marnix Medema, he worked on the discovery of leads for novel antimicrobials, specifically focusing on post-translationally modified peptides combining bioinformatics and machine learning with chemical and molecular biological tools. The work on this topic is presented in this thesis. After his PhD, Alexander has started working as a postdoctoral researcher in the lab of Björn Högberg at the Karolinska Institute in Stockholm, Sweden, on the topic of DNA sequencing microscopy.



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