Metagenomics : beyond the horizon of current implementations and methods

Khachatryan, L.

Citation

Khachatryan, L. (2020, April 28). *Metagenomics : beyond the horizon of current implementations and methods*. Retrieved from https://hdl.handle.net/1887/87513

Author: Khachatryan, L.
Title: Metagenomics : beyond the horizon of current implementations and methods
Issue Date: 2020-04-28

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Acknowledgements

I wish to thank my dear husband Louk Rademaker, who was my landmark on the dark path I took to finally finish this thesis. This journey would be sad and boring without you.

My great appreciation goes to my mother Ludmila Khachatryan and my departed father Artavazd Khachatryan, for their unconditional believe in me and constant reminders how miserable my life without PhD title would be. My brothers, Arsen Khachatryan and Levon Khachatryan, thank you for being such great supporters and for providing me with countless dark humour jokes regarding processes slowing down the defence procedure. My large Russian-Armenian family deserves a great appreciation for their genuine trust in my intellectual abilities.

I would like to thank my parents-in-law, Ruth Noorduyn and Jan Rademaker, who would always lend me a hand in case of trouble. My family-in-law (both Rademaker and Noorduyn sides), thank you all for making me feel a true part of such a great and interesting folk.

I would like to thank Chana for being my first and best Dutch friend. Special appreciation goes to Irina for setting a great example and inspiring me both scientifically and personally. I am eternally grateful to Ivo who was covering my back myriad of times (mostly due to my absolutely brilliant knack for finding trouble), and, of course, for the extended number of useful advices and hints. My dear friends Svetlana and Lena (Beletkaia), thank you for all the good time we've spent together during my time as a PhD student. Nadya and Lena (Chernioglo), my friends from the time in University, thank you for sharing my good and bad moments and accommodating me in your home and in your hearts.

I wish to acknowledge the support provided by the fellow colleagues from LUMC. I am particularly grateful to Igor Sidorov and Alexander Gorbalenya, my MS work supervisors, who kept being interested in my scientific career and provided me with an advice and support even after I left their group.

I would like to offer my special thanks to Alessandra Sequeira who kindly allowed me to use her artwork for this thesis cover. It was truly a pleasure to browse through many of her works to find one matching the spirit of my research.

Curriculum vitae

Lusine Khachatryan was born on February 15th 1990 in Jermuk, USSR (currently Armenia). She moved together with her family to Svoboda, Kursk district, Russia in early 1994. She graduated with honours from Svoboda secondary general education school in 2007. Same year she was admitted to Lomonosov Moscow State University (the School of Bioengineering and Bioinformatics). During first three years in University she was working as a bioengineer intern in the Belozersky Institute of Physiochemical Biology (Moscow, Russia) investigating the fragmentation of Potyvirus A coat protein by plant caspase-like protein and learning to create genetically modified plants using *Agrobacterium*-mediated transformation. In a year of 2010 Lusine was one of the 10 students selected for one-month bioinformatics internship in Leiden University Medical Center (Leiden, The Netherlands), after which she decided to continue her scientific career as bioinformatician. She spent one year as an bioinformatics intern in the Institute for Genetics and Selection of Industrial Microorganisms (Moscow, Russia) studying the binding sites of transcriptional factors specific for bidirectional promoters with different tissue expression pattern. Her MS project was dedicated to design and $in-silico$ validation of serotype-specific polymerase chain reaction for human rhino- and enteroviruses and was performed as a collaboration between Lomonosov Moscow State University (Moscow, Russia) and Leiden University Medical Center (Leiden, The Netherlands). She graduated from Lomonosov Moscow State University with honours in 2012, her MS thesis work was specifically acknowledged by the University defence committee. In August 2012 Lusine continued her academic career as a PhD student in the department of Human Genetics in Leiden University Medical Center (Leiden, The Netherlands). Her PhD research was dedicated metagenomics - new and rapidly developing branch of molecular microbiology. Particularly, she developed several approaches and investigated the limits of various already existing methods for metagenomics analysis regarding different types of sequencing data. This work resulted a number of publications and was presented at many national and international conferences. From September 2018 Lusine is hired as a Scientist in R&D facility of Philip Morris International (Neuchatel, Switzerland) where she is working on improving the analysis pipelines for metagenomic and metatranscriptomic data as well as investigating the changes of microflora in health and disease.