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On the origin and function of phenotypic variation in bacteria

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ON THE ORIGIN AND FUNCTION OF
PHENOTYPIC VARIATION IN BACTERIA

The research presented in this thesis was carried out at the Theoretical Research in Evolutionary Life Sciences group (TRÊS) from the Groningen Institute for Evolutionary Life Sciences (GELIFES) of the University of Groningen (The Netherlands). Part of this research was also carried out at the Microbial Systems Ecology group (MSE), which is part of the Department of Environmental Microbiology of Eawag (Switzerland) and the Institute of Biogeochemistry and Pollutant Dynamics from the Department of Environmental Systems Science of ETH Zurich (Switzerland); the Molecular Genetics group (MolGen), which is part of the Groningen Biomolecular Sciences and Biotechnology Institute (GBB) of the University of Groningen; and the Program for Evolutionary Dynamics (PED), which is part of the Organismic and Evolutionary Biology department and the Mathematics department of Harvard University (USA). The printing of this thesis was funded by the University of Groningen and the Faculty of Mathematics and Natural Sciences.

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groningen

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to obtain the degree of PhD at the
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on the authority of the
Rector Magnificus Prof. C. Wijmenga
and in accordance with
the decision by the College of Deans.

This thesis will be defended in public on

Thursday 10 December 2020 at 18.00 hours

by

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To my loving family

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