

Jury Report
Enza Zaden Award for Biology 2020

J.M. (Jana) Riederer MSc, University of Groningen
Evolution of Evolvability

We are delighted to announce today the winner of the Enza Zaden Award for outstanding Master theses in Biology: Jana Riederer.

On the 20th of October 2020, the jury discussed the candidates in a closed meeting, and Jana Riederer was unanimously chosen as the 2020 awardee for the Enza Zaden Award for Biology for her thesis “Evolution of Evolvability”.

Jana used computer modelling to investigate the capability of organisms to rapidly adapt to changing environmental conditions. This is an important topic that connects global changes with healthy aging. Starting from her original hypothesis that higher mortality is selected under rapidly changing environmental conditions, Jana ended up to study more broadly the role that population dynamics plays in the evolution of evolvability. The question that Jana asked was: how does evolvability evolve? In the three parts of her thesis, she addressed this question from different angles. In the first part, she studied how evolvability is achieved through mutation rate; in the second part, she dealt with population turnover, while the third part focused on the impact of episodic selection on evolvability. Both the amount and the quality of the work included in the thesis are truly impressive. Moreover, all three sub-projects provided interesting novel insights and are expected to result in three scientific publications, with Jana being the first author on two of them.

The jury found Jana's project highly original, of high societal relevance, and very well designed and executed.

Jana appears to be an outstanding student and the jury believed that she has the potential to become an excellent scientist. Her skills, creativity, attitude and deep interest in science are praised by her supervisor and testified by her scientific achievements, which are impressive for her career stage.

In summary, the jury is delighted to award the Enza Zaden Award for Biology 2020 to Jana Riederer and wishes her all the best for a bright scientific future.

Prof. dr. R. (Roberta) Croce, Full Professor Biophysics of Photosynthesis/Energy VU University Amsterdam

Prof. dr. J.T. (Hans) Lambers, Emeritus Professor Plant Biology The University of Western Australia, Distinguished Professor China Agricultural University

The jury meeting took place 20 October 2020, was chaired by Dr. W. (Willem) Bijleveld, Director KHMW, and also attended by Prof. dr. A.P. (Ad) IJzerman, Secretary of Natural Sciences KHMW and S. (Saskia) de Boer (minutes).