

University of Groningen

## Biocatalytic Synthesis of Pharmaceutically Relevant Amides and Amino Acids

Mohammad Zainal Abidin, Zainal

DOI:  
[10.33612/diss.178642544](https://doi.org/10.33612/diss.178642544)

**IMPORTANT NOTE:** You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

*Document Version*  
Publisher's PDF, also known as Version of record

*Publication date:*  
2021

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*  
Mohammad Zainal Abidin, Z. (2021). *Biocatalytic Synthesis of Pharmaceutically Relevant Amides and Amino Acids*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen. <https://doi.org/10.33612/diss.178642544>

### Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

### Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

## **About the author**

Mohammad Zainal Abidin was born in Sukoharjo, Indonesia on 28 August 1985. He obtained his bachelor degree in Animal Science, from Universitas Gadjah Mada in August 2007. Following his graduation, he continued as a Master student at the same university, under supervision of Prof. Yuny Erwanto. Upon the completion of his master degree, he worked as a research assistant of Prof. Ambar Pertiwiningrum, focusing his research on the isolation, characterization, and production of



alkaline protease from leather tannery waste. In 2012, he started his career as a lecturer/researcher at Universitas Gadjah Mada, Yogyakarta, Indonesia. He was then pursuing his PhD degree at the Chemical and Pharmaceutical Biology Department, University of Groningen (RuG), The Netherlands (2014 – 2021) under supervision of Prof. dr. G.J. Poelarends and Prof. dr. Wim J. Quax. He worked on the project entitled 'Biocatalytic Synthesis of Pharmaceutically Relevant Amides and Amino Acids', with financial support from Lembaga Pengelola Dana Pendidikan (LPDP), the ministry of finance of the Republic of Indonesia. The results of his PhD research are presented in this thesis. Now, he works on the use of enzymes in animal by-products for pharmaceutical, food, and renewable energy applications.