

Toan Phung

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📄 <https://github.com/noatgnu>

Education

- 2017–Present **Doctor of Philosophy**, *The University of Queensland*, St. Lucia, Queensland, Australia.
- 2014–2016 **Master of Molecular Biology (Advanced)**, *The University of Queensland*, St. Lucia, Queensland, Australia.
- 2009–2014 **Bachelor of Science in Biochemistry**, *The University of Montana*, Missoula, Montana, United States.

Relevant Experiences

Research Project *uPEPperoni: A 5' UTR Short Open Reading Frame searching tool (2016)*

Supervisor Associate Professor Joe Rothnagel

Description A tool for searching of sORF in user's input and similar sORF in other protein sequences within the program database and visualization of their positions using heatmap.

Contribution Revamping code base and bug fixing.
Shifting part of the database from file based to RDBMS.
Integrating and improving functionality.

Research Project *Evolution and constraints of N-glycosylation Sequons (2017–Present)*

Supervisor Associate Professor Benjamin L. Schulz

Description Analysis of N-glycosylation sequons in Homo sapiens glycoprotein homologs, their alignment and phylogenetic relation.

Contribution Programming of automation workflow, logic and analyses

Research Project *SWATHLib, an automated workflow for theoretical ion library generation for glycopeptides (2018)*

Supervisor Associate Professor Benjamin L. Schulz

Description DDA based spectral library together with the complexity from post-translational modifications cannot optimally represent the ions within SWATH data. A workaround for this problem is a tedious process of creating a manually curated ion library. SWATHLib is created to address these problems.

Contribution Writing of the JavaScript front-end using Angular 7 for automated user input collection.
Implementing a Python back-end for processing of user requests and automated modification combination generation.

Extra-Curricular Activities

2019 **COMBINE (Event and Training Coordinator)**, Australia.

2019 **Structural Biology and Biochemistry Theme Group (Committee Member)**, *The University of Queensland*, Australia.

- 2018 **Poster presented at Queensland Mass Spectrometry Symposium 2018**, *Queensland University of Technology*, Australia.
- 2018 **Poster presented at the 14th Annual SCMB Research Students Symposium.**, *The University of Queensland*, Australia.
- 2017 **Poster presented at the 13th Annual SCMB Research Students Symposium.**, *The University of Queensland*, Australia.
- 2017 **Poster presented at Queensland Mass Spectrometry Symposium 2017**, *QIMR Berghofer*, Australia.
- 2015 **Poster presented at the 11th Annual SCMB Research Students Symposium.**, *The University of Queensland*, Australia.
- 2009–2014 **International Student Association (Executive officer and Webmaster)**, *The University of Montana*, United States.

Skills

Programming Languages

Python
JavaScript
TypeScript
Golang
R
L^AT_EX

Data Visualization

D3.js

Languages

English
Vietnamese

Professional Membership

- 2018–Present **Australian Bioinformatics and Computational Biology Society.**

References

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Joe Rothenagel

Associate Professor
Past Chair, Teaching & Learning Committee
(2009–2013)
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