

Quyên V. Vu, PhD

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“Everything happens for a reason”



Employment History

2024 – ···· **Penn State University.** Postdoctoral Scholar at Eberly College of Science - Chemistry - O'Brien Group (Edward O'Brien)

Personal Details

DoB **28 August, 1993.**
PoB **VIETNAM.**
Languages **English, Vietnamese, Python, Julia, C/C++.**
Possessions **A joyful family and a bicycle.**

Education

2018 – 2023 **Ph.D., Institute of Physics, Polish Academy of Sciences** in Physics.
Thesis title: “*Influence of the ribosome on protein ejection and folding*”.
Supervisors: **Prof. Edward P. O'Brien** (Penn State University) and **Prof. Dr. hab. Mai Suan Li**.
2015 – 2017 **M.Sc., Vietnam National University-University of Science** in Physics.
Supervisor: **Prof. Toan T. Nguyen**.
2011 – 2015 **B.Sc., Vietnam National University-University of Science** in Physics.
Talented Program of Physics
Supervisor: **Prof. Toan T. Nguyen**.

Honors and Awards

2024 **The Annual Director's Awards for Best PhD Thesis 2023, Institute of Physics, Polish Academy of Sciences.**
2021 **“Creative Youth” Award of Vietnam Association of Science and Technology in Poland.**
2015 **The second prize “Student - Scientific Researching” Conference of Faculty of Physics, VNU-US.**
PetroVietnam Scholarship.

Research Publications

Journal Articles

1 Lan, P. D., Nissley, D. A., Sitarik, I., **Vu, Q. V.**, Jiang, Y., To, P., Xia, Y., Fried, S. D., Li, M. S., & O'Brien, E. P. (2024). Synonymous Mutations Can Alter Protein Dimerization Through Localized Interface Misfolding Involving Self-entanglements. *Journal of Molecular Biology*, 436(6), 168487.
<https://doi.org/10.1016/j.jmb.2024.168487>

- 2 Halder, R., Nissley, D. A., Sitarik, I., Jiang, Y., Rao, Y., **Vu, Q. V.**, Li, M. S., Pritchard, J., & O'Brien, E. P. (2023). How soluble misfolded proteins bypass chaperones at the molecular level. *Nature Communications*, 14(1), 3689. <https://doi.org/10.1038/s41467-023-38962-z>
- 3 **Vu, Q. V.**, Nissley, D. A., Jiang, Y., O'Brien, E. P., & Li, M. S. (2023). Is Posttranslational Folding More Efficient Than Refolding from a Denatured State: A Computational Study. *The Journal of Physical Chemistry B*, 127(21), 4761–4774. <https://doi.org/10.1021/acs.jpcc.3c01694>
- 4 **Vu, Q. V.**, Sitarik, I., Jiang, Y., Yadav, D., Sharma, P., Fried, S. D., Li, M. S., & O'Brien, E. P. (2022). A Newly Identified Class of Protein Misfolding in All-atom Folding Simulations Consistent with Limited Proteolysis Mass Spectrometry. *bioRxiv*. <https://doi.org/10.1101/2022.07.19.500586>
- 5 Leininger, S. E., Rodriguez, J., **Vu, Q. V.**, Jiang, Y., Li, M. S., Deutsch, C., & O'Brien, E. P. (2021). Ribosome Elongation Kinetics of Consecutively Charged Residues Are Coupled to Electrostatic Force. *Biochemistry*, 60(43), 3223–3235. <https://doi.org/10.1021/acs.biochem.1c00507>
- 6 **Vu, Q. V.**, Jiang, Y., Li, M. S., & O'Brien, E. P. (2021). The driving force for co-translational protein folding is weaker in the ribosome vestibule due to greater water ordering. *Chemical Science*, 12(35), 11851–11857. <https://doi.org/10.1039/d1sc01008e>
- 7 Nissley, D. A., **Vu, Q. V.**, Trovato, F., Ahmed, N., Jiang, Y., Li, M. S., & O'Brien, E. P. (2020). Electrostatic Interactions Govern Extreme Nascent Protein Ejection Times from Ribosomes and Can Delay Ribosome Recycling. *Journal of the American Chemical Society*, 142(13), 6103–6110. <https://doi.org/10.1021/jacs.9b12264>