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"Everything happens for a reason"

Personal Details

Languages — English, Vietnamese, Python, Julia, C/C++.
Assets — A happy family and private bicycle

Education

2018 – 2023 — **Ph.D., Institute of Physics, Polish Academy of Sciences** Theoretical 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.
Supervisors: **Prof. Toan T. Nguyen**.

2011 – 2015 — **B.Sc. Vietnam National University-University of Science** in Physics.
Talented Program of Physics
Supervisors: **Prof. Toan T. Nguyen**.

Honors and Awards

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. 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
2. **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.jpcb.3c01694
3. **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
4. Dang, L. P., Nissley, D. A., Sitarik, I., **Vu, Q. V.**, Jiang, Y., Li, M. S., & O'Brien, E. P. (2021). Synonymous mutations can alter protein dimerization through localized interface misfolding involving self-entanglements. *bioRxiv*, 2021.10.26.465867. https://doi.org/10.1101/2021.10.26.465867

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