

Research Specialist Positions Available. May, 2025.

Shorter Lab, University of Pennsylvania.

(Dis)Solving the problem of aberrant protein states. Neurodegenerative diseases and other protein-misfolding disorders (e.g. amyotrophic lateral sclerosis, frontotemporal dementia, Parkinson's disease, and Alzheimer's disease) represent a longstanding biomedical challenge, and effective therapies remain largely elusive. This failure is due, in part, to the recalcitrant and diverse nature of misfolded protein conformers. Recent work has uncovered that many aggregation-prone proteins can also undergo liquid-liquid phase separation, a process by which macromolecules self-associate to form dense condensates with liquid properties that are compositionally distinct from the bulk cellular milieu. Efforts to combat diseases caused by toxic protein states focus on exploiting or enhancing the proteostasis machinery to prevent and reverse pathological protein conformations. In the Shorter lab, we use a variety of techniques to elucidate and engineer therapeutic agents ranging from protein disaggregases, RNA disaggregases, short RNAs, and small-molecule drugs to combat the diverse aberrant protein states that underlie protein-misfolding disorders. We are seeking two research specialists (technicians) to join the team in 2025.

Responsibilities:

1. To drive a research project (collect, analyze, and interpret data, and present data at group meetings) concerning the therapeutic dissolution of aberrant protein states.
2. To help in the general running of the lab, including: ordering, receiving items, and maintaining lab organization.

Must have excellent communication skills and be highly motivated.

This is an ideal position for a recent graduate in Biochemistry, Biophysics, Biology, Cell Biology, Genetics, Chemistry or related area looking to do 1-2 years of research and gain experience prior to going to medical school or graduate school.

For more details see:

<http://www.med.upenn.edu/shorterlab/index.html>

[Fare, C.M., and J. Shorter[^]. \(2021\). \(Dis\)Solving the problem of aberrant protein states. *Dis. Mod. Mech.* 14\(5\):dmm048983.](#)

Send a cover letter and resume to jshorter@pennmedicine.upenn.edu