

SONYA E. NEAL
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CURRENT POSITION

University of California, San Diego
Assistant Professor
Division of Biological Sciences

San Diego, CA
July 2018-present

PREVIOUS POSITION

University of California, San Diego
Postdoctoral Fellow
Advisor: Randolph Hampton
Identified chaperones and factors required for removal of misfolded membrane proteins in the ER-Associated Degradation (ERAD) pathway

San Diego, CA
2013-2018

EDUCATION

University of California, Los Angeles
Ph.D. Molecular Biology
Dissertation: "Redox characterization of proteins involved in the mitochondrial intermembrane import pathway."
Advisor: Carla Koehler

Los Angeles, CA
2013

University of California, San Diego
BS, Warren Provost Honor, Chemistry and Biochemistry

San Diego, CA
2007

GRANTS AND AWARDS

FOCUS SRP Award
NHBLI, National Institutes of Health

2019-present

Ruth L. Kirschstein Post-Doctoral National Research Service Award
National Institute of General Medical Science, National Institutes of Health

2014-2017

Chancellor's Post-Doctoral Academic Diversity Award
University of California, San Diego

2014

Ruth L. Kirschstein Pre-Doctoral National Research Service Award
National Institute of General Medical Science, National Institutes of Health

2008-2013

Eugene V. Cota Robles Fellowship
University of California, Los Angeles

2007-2008

TEACHING EXPERIENCE

University of California, San Diego

Guest Lecturer, BICD 110 Cell Biology

San Diego, CA
Spring, 2019

University of California, Los Angeles

Teaching Assistant, Introduction to Structure, Enzymes and Metabolism

Los Angeles, CA
Fall 2011

Grading Assistant, Introduction to Structure, Enzymes and Metabolism

Spring 2011

Guest Lecturer, Metabolism and its Regulation

Winter 2011

Teaching Assistant, Metabolism and its Regulation

Winter 2011, Spring 2010

Guest Lecturer, Precollege and Undergraduate Science Education Program

Winter 2008

RELATED PROFESSIONAL EXPERIENCE

Selected participant for NIH-NHLBI-supported FOCUS program

La Jolla, CA
2019

Annual Biomedical Research Conference for Minority Students (ABRCMS) Conference

Indianapolis, MN
2018

Exhibitor and poster presentation judge

Tampa Bay, FL
2016

Society for the Advancement of Chicanos/Hispanics and Native Americans
in Science (SACNAS)

Washington DC
2015

Exhibitor and Poster presentation judge

UC LEADS Symposium

Riverside, CA
2014

Poster presentation judge and participant in Q&A forum for graduate school admission

(Science, Technology, Engineering, and Mathematics Providing Leadership & Enhancing
Diversity in Graduate Education) STEM-PLEDGE

Los Angeles, CA
2011-2013

- Coordinated the “Scientific Excellence through Diversity Seminar” series
- Reached out to successful scientists from diverse backgrounds so they present their work and accomplishments to UCLA undergraduate and graduate students

RESEARCH PRESENTATIONS

S.E. Neal 2019. ERADicating integral membrane substrate by the rhomboid pseudoprotease Dfm1. Invited speaker at ABRCMS, Anaheim, CA.

S.E. Neal 2019. The role of rhomboid pseudoprotease Dfm1 in retrotranslocating integral membrane substrates. Invited speaker at the International Society of Proteolysis meeting, Marianske, Czech Republic

S.E. Neal 2019. Ubiquitin-independent Hrd1 role in ERAD-M retrotranslocation. Invited speaker at the EMBO Conference, Girona, Spain

S.E. Neal and R.Y. Hampton 2017. SUSing out new (and renewed) ERAD retrotranslocation factors with a self-ubiquitinating substrate—Dfm1 is required for ERAD-M retrotranslocation. Invited speaker at the Ubiquitin meeting, Cold Springs Harbor.

S.E. Neal and R.Y. Hampton 2016. Cutting out the middleman: SUSing out new (and renewed) ERAD retrotranslocation factors with a self-ubiquitinating substrate. Invited speaker at the EMBO Conference, Girona, Spain.

S.E. Neal and R.Y. Hampton 2014. Discovering the mechanism and machinery of ERAD-M retrotranslocation. Invited speaker, Buenos Aires, Argentina.

PROFESSIONAL AFFILIATIONS

The International Society of Proteolysis
The American Society for Cell Biology
International Zebrafish Society
Cellular and Molecular Biology Trainee Adjunct
National Science Foundation Alliance for Graduate Education and the Professoriate (AGEP) Fellow
UC Leadership Excellence through Advanced Degrees (LEADS) fellow
Society for Advancement of Chicanos and Native Americans in Science (SACNAS) member
Sigma Xi Honor Research Society member
California Alliance for Minority Participation in Science, Math and Engineering (CAMP) member
American Chemical Society member

PUBLICATIONS

Neal, S.E., Duttke, S, R. Hampton. (2019). Assays for protein retrotranslocation in ERAD. *Methods of Enzymology*. 618.

Neal, S.E., Jaeger, P., Duttke, S., Benner, C., Glass, C., Ideker, T., R. Hampton. (2018). The Dfm1 Derlin is Required for ERAD Retrotranslocation of Integral Membrane Proteins. *Molecular Cell*. 69, 306-320. (Highlighted: Avci, D. and Lemberg, A. (2018) *Molecular Cell*)

Neal, S.E., Dabir, D.V., Boon, C., and Koehler C.M. (2017). Osm1 is an electron acceptor of Erv1 in the Mia40-dependent import pathway. *MBoC*. 28, 2773-2785.

Neal, S.E., Mak, R., Bennett, E.J., and Hampton, R. (2017). A Cdc48 “Retrochaperone” Function Is Required for the Solubility of Retrotranslocated, Integral Membrane Endoplasmic Reticulum-associated Degradation (ERAD-M) Substrates. *J. Biol. Chem*. 292, 3112–3128.

Vashistha, N., **Neal, S.E.**, Singh, A., Carroll, S.M., and Hampton, R.Y. (2016). Direct and essential function for Hrd3 in ER-associated degradation. *Proc. Natl. Acad. Sci*. 113, 5934–5939.

Neal, S.E., Dabir, D. V., Tienson, H.L., Horn, D.M., Glaeser, K., Ogozalek Loo, R.R., Barrientos, A., and Koehler, C.M. (2015). Mia40 Protein Serves as an Electron Sink in the Mia40-Erv1 Import Pathway. *J. Biol. Chem*. 290, 20804–20814.

Tienson, H.L., Dabir, D. V, **Neal, S.E.**, Loo, R., Hasson, S.A., Boontheung, P., Kim, S.-K., Loo, J.A., and Koehler, C.M. (2009). Reconstitution of the mia40-erv1 oxidative folding pathway for the small tim proteins. *Mol. Biol. Cell* 20, 3481–3490.