

**NRC FORM 313**  
(03-2013)  
10 CFR 30, 32, 33,  
34, 35, 36, 39, and 40

**U.S. NUCLEAR REGULATORY COMMISSION**

APPROVED BY OMB: NO. 3150-0120

EXPIRES: 05/31/2015



**APPLICATION FOR MATERIALS  
LICENSE**

Estimated burden per response to comply with this mandatory collection request: 4.3 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Information Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

**INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW. \*AMENDMENTS/RENEWALS THAT INCREASE THE SCOPE OF THE EXISTING LICENSE TO A NEW OR HIGHER FEE CATEGORY WILL REQUIRE A FEE.**

**APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:**

OFFICE OF FEDERAL & STATE MATERIALS AND ENVIRONMENTAL MANAGEMENT PROGRAMS  
DIVISION OF MATERIALS SAFETY AND STATE AGREEMENTS  
U.S. NUCLEAR REGULATORY COMMISSION  
WASHINGTON, DC 20555-0001

Br. 2

**ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:**

**IF YOU ARE LOCATED IN:**

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA,

**SEND APPLICATIONS TO:**

LICENSING ASSISTANCE TEAM  
DIVISION OF NUCLEAR MATERIALS SAFETY  
U.S. NUCLEAR REGULATORY COMMISSION, REGION I  
2100 RENAISSANCE BOULEVARD, SUITE 100  
KING OF PRUSSIA, PA 19406-2713

03010576

**IF YOU ARE LOCATED IN:**

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN,  
SEND APPLICATIONS TO:

MATERIALS LICENSING BRANCH  
U.S. NUCLEAR REGULATORY COMMISSION, REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, IL 60532-4352

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING,

**SEND APPLICATIONS TO:**

NUCLEAR MATERIALS LICENSING BRANCH  
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV  
1600 E. LAMAR BOULEVARD  
ARLINGTON, TX 76011-4511

**PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.**

**1. THIS IS AN APPLICATION FOR (Check appropriate item)**

A. NEW LICENSE

B. AMENDMENT TO LICENSE NUMBER

06-01450-47

C. RENEWAL OF LICENSE NUMBER

**2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code)**

Dept. of Environmental Health & Safety  
3102 Horsebarn Hill Road, Unit 4097  
Storrs, CT 06269-4097

**3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED**

As listed on license.

**4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION**

Amy B. Courchesne, RSO

**BUSINESS TELEPHONE NUMBER**

(860) 486-5399

**BUSINESS CELLULAR TELEPHONE NUMBER**

(860) 234-3515

**BUSINESS EMAIL ADDRESS**

amy.c@uconn.edu

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

**5. RADIOACTIVE MATERIAL**

a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.

**6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.**

**7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.**

**8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.**

**9. FACILITIES AND EQUIPMENT.**

**10. RADIATION SAFETY PROGRAM.**

**11. WASTE MANAGEMENT.**

**12. LICENSE FEES (Fees required only for new applications, with few exceptions\*) (See 10 CFR 170 and Section 170.31)**

FEE CATEGORY

10 CFR 170.11

AMOUNT ENCLOSED \$

EXEMPT

**13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.**

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

**CERTIFYING OFFICER -- TYPED/PRINTED NAME AND TITLE**

Jeffrey Seemann, Ph.D., Vice President for Research

**SIGNATURE**

**DATE**

5/27/15

**FOR NRC USE ONLY**

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			\$		
APPROVED BY				DATE	



May 27, 2015

USNRC Region 1 DNMS  
2100 Renaissance Blvd.  
King of Prussia, PA 19406

License No. 06-01450-47  
Docket No. 03010576

Subject: License Amendment Application

Enclosed please find two copies of an Application for Material License Amendment and supporting documentation to amend *Item 7 (Individuals responsible for Radiation Safety Program and their Training Experience)* of Material License No. 06-01450-47.

The University of Connecticut Radiation Safety Committee recently elected a new Chairperson, Dr. Nathan Alder, following Dr. Carolyn Teschke's resignation due to an off-campus fellowship appointment. Enclosed, please find an updated Radiation Safety Committee membership roster, a summary of Dr. Alder's Radiation Safety Training and Experience and his Curriculum Vitae for your review. Please let us know if you require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeffrey R. Seemann", with a long horizontal stroke extending to the right.

Jeffrey R. Seemann  
Vice President for Research

cc: T. Dominguez

Enclosures (3)

**Attachment 7-1**  
**Radiation Safety Committee**

<b><u>Members</u></b>	<b><u>Department</u></b>	<b><u>Initial Date</u></b>	<b><u>Term Date</u></b>
<i>Nathan Alder, Chair</i> <i>-Associate Professor</i>	<i>Molecular &amp; Cell Biology</i>	<i>11/01/2012</i>	<i>11/30/2015</i>
<i>David Grant, Vice Chair</i> <i>-Associate Professor</i>	<i>Pharmaceutical Sciences</i>	<i>05/01/2002</i>	<i>01/31/2018</i>
<i>Rahul Kanadia</i> <i>-Assistant Professor</i>	<i>Physiology &amp; Neurobiology</i>	<i>03/26/2013</i>	<i>03/26/2016</i>
<i>James Mahoney</i> <i>-Exec. Program Director</i>	<i>CT Transportation Institute</i>	<i>04/30/2015</i>	<i>04/30/2018</i>
<i>Ji-Young Lee</i> <i>-Associate Professor</i>	<i>Nutritional Sciences</i>	<i>04/30/2015</i>	<i>04/30/2018</i>
<i>Rachel O'Neill</i> <i>-Professor</i>	<i>Molecular &amp; Cell Biology</i>	<i>04/30/2015</i>	<i>04/30/2018</i>
<i>Amy Courchesne</i> <i>RSO</i>	<i>Env. Health &amp; Safety</i>	<i>03/2012</i>	
<i>Nancy Wallach</i> <i>-Assistant VP for Research</i>	<i>Office of the VP for Research</i>		<i>Ex. Officio</i>
<i>Terri Dominguez</i> <i>-Interim Director</i>	<i>Env. Health &amp; Safety</i>		<i>Ex. Officio</i>

**Attachment 7-2**  
**Radiation Safety Training and Experience**

**Nathan N. Alder, Ph.D.**

Associate Professor Department of Molecular and Cell Biology  
University of Connecticut  
91 N. Eagleville Road, Unit 3125  
Storrs, CT 06269- 3125  
(860) 486-5154  
nathan.alder@uconn.edu

**Fall 1997-  
Fall 2001**      University of California, Davis      Initial 4 hour class session followed by  
(as a PhD student)      refresher courses

Worked with Tritium ( $^3\text{H}$ ) in the lab of Dr. Steven Theg. In all applications,  $^3\text{H}$ -labeled Leucine was used to radiolabel polypeptides, either during in vitro protein translation or during overexpression in E. coli. Lab stocks were up to ~15 mCi, and each experiment/prep used ~ 0.1 mCi to 5.0 mCi.

**Fall 2001-  
Summer 2008**      Texas A&M University      Initial 4 hour class session followed by  
(as a post-doc)      bi-annual online refresher courses

Worked with [ $^{35}\text{S}$ ]Methionine, [ $^{14}\text{C}$ ]Cystine, and [ $^{14}\text{C}$ ]Lysine in the lab of Dr. Arthur Johnson to either radiolabel proteins during in vitro translation or for use in tRNA aminoacylation reactions. Quantification is as follows:

Type	Lab stock max.	Typical amount per experiment/prep
[ $^{35}\text{S}$ ]Met	10 mCi	50 mCi up to 0.25 mCi
[ $^{14}\text{C}$ ]Cys	0.1 mCi	up to 0.1 mCi
[ $^{14}\text{C}$ ]Lys	0.5 mCi	up to 0.5 mCi

**Nov. 2008-  
present**      University of Connecticut      Initial 4 hour class session and annual in-  
(currently Associate Professor)      person refresher courses

Approved Research Protocol for the use of radionuclides for the following:

[ $^{35}\text{S}$ ]Met	10 mCi
[ $^{14}\text{C}$ ]Cys, [ $^{14}\text{C}$ ]Lys, [ $^{14}\text{C}$ ] Methylated protein markers	1 mCi

**Nov. 2012-  
present**      University of Connecticut Radiation Safety Committee member

**Attachment 7-3  
Curriculum Vitae**

**Nathan N. Alder, Ph.D.**

**Personal Information**

**Citizenship:** [REDACTED]  
**Address:** Department of Molecular and Cell Biology  
University of Connecticut  
91 N. Eagleville Road, Unit 3125  
Storrs, CT 06269-3125  
**Telephone:** (860) 486-5154  
**Fax:** (860) 486-4331  
**E-mail:** nathan.alder@uconn.edu

PERSONAL INFORMATION WAS REMOVED  
BY NRC. NO COPY OF THIS INFORMATION  
WAS RETAINED BY THE NRC.

**Education and Training**

- **Postdoctoral Research Associate,**  
**Texas A&M University Health Science Center** College Station, TX  
Program: Biochemistry / Biophysics  
Postdoctoral Advisor: Arthur E. Johnson, Ph.D.
- **Ph.D., University of California, Davis** Davis, CA  
Program of study: Plant Biology  
Graduate Advisor: Steven M. Theg, Ph.D.  
Dissertation Title: "*Analysis of the Energetics and Kinetics of Protein Transport via the  
 $\Delta$ pH-Dependent/cpTat Pathway in Thylakoids*"  
Ph.D. conferred [REDACTED]
- **B.S., University of Utah** Salt Lake City, UT  
Program of study: Biology  
[REDACTED]

**Professional Experience**

**Research**

- **Associate Professor** April 2014 – Present  
Department of Cell and Molecular Biology  
University of Connecticut
- **Assistant Professor** August 2008 – April 2014  
Department of Cell and Molecular Biology  
University of Connecticut
- **Assistant Research Scientist** June 2006 – August 2008  
Texas A&M University  
Principal Investigator: Arthur E. Johnson, Ph.D.
- **Postdoctoral Research Associate** September 2001 – June 2006  
Texas A&M University  
Principal Investigator: Arthur E. Johnson, Ph.D.
- **Graduate Research Assistant** June 1997 – September 2001  
University of California, Davis  
Principal Investigator: Steven M. Theg, Ph.D.

- **Laboratory Technician** July 1994 – July 1996  
University of Utah  
Principal Investigator: John S. Sperry, Ph.D.

### Professional Experience (Cont.)

#### Teaching

- **Course Instructor** August 2008 – Present  
University of Connecticut, Department of Molecular and Cell Biology  
Biochemistry (MCB 3010/5001);  
Introduction to Translational Research (MCB 3100 Honors);  
Structure and Function of Biological Membranes (MCB 5025);  
Foundations of Structural Biochemistry (MCB 5012)
- **Workshop Co-instructor** “Fluorescence Theory and Applications” May 2003  
Texas A&M Institute of Biosciences and Technology, Houston, TX
- **Teaching Assistant**, Introductory Biochemistry April 2000 – July 2000  
University of California, Davis
- **Teaching Assistant**, Mineral Nutrition of Plants April 1998 – July 1998  
University of California, Davis
- **Teaching Assistant**, Introductory Biology June 1992 – June 1993  
University of Utah

#### Research Grant Funding

- National Institutes of Health R01 (RGM113092A); “Investigation of the December 2014 –  
Subunit and Lipid Interactions of the Mitochondrial Protein Import December 2019  
Machinery”; \$1,487,892 (\$950,000 Direct); PI: Nathan Alder
- Barth Syndrome Foundation Research Grant; “Investigation of Cardiolipin- May 2014 – May 2015  
Dependent Respiratory Complex Activity and Development of Small  
Molecule Lipid Analogs”; \$50,000; PI: Nathan Alder
- National Science Foundation (MCB-1330695); “Functional Dynamics and September 2013 –  
Energy Coupling Mechanisms of Mitochondrial Membrane Proteins”; September 2016  
\$421,426 (\$274,759 Direct); PI: Nathan Alder
- National Science Foundation (MCB-1024908); “Fluorescence-Based July 2010 – July 2014  
Investigation of the Structure and Functional Dynamics of the Mitochondrial  
Protein Import Machinery”; \$788,905 Total costs (\$582,557 Direct);  
PI: Nathan Alder
- American Heart Association; Scientist Development Grant July 2009 – July 2014  
(09SDG2380019); “Fluorescence-Based Study of the Mitochondrial  
Adenine Nucleotide Translocase: A Key Component in Heart Disease”  
\$308,000 Total costs (\$280,000 Direct); PI: Nathan Alder

- UCHC and Storrs/Regional Campus Incentive Grant (UCIG) July 2012 – July 2014  
"Monitoring effects of cancer-associated mutations on conformation dynamics of DNA mismatch repair proteins"; \$100,000 Total costs; PI: Chris Heinen

### Research Grant Funding (Cont.)

- National Institutes of Health National Research Service Award, May 2004 – May 2006  
Postdoctoral Fellowship GM7026
- National Science Foundation Graduate Research Fellowship July 1997 – July 2000

### Publications

#### Original Research

- Lee, K.K., Imaizumi, N., Chamberland, S.R., **Alder, N.N.**, and Boelsterli, U.A. (2015). Targeting mitochondria with methylene blue protects mice against acetaminophen-induced liver injury. *Hepatology* 61: 326-336.
- Hwang, M.S., Schwall, C.T., Pazarentos, E., Datler, C., **Alder, N.N.**, and Grimm, S. (2014). Mitochondrial Ca<sup>2+</sup> influx targets cardiolipin to disintegrate respiratory chain complex II for cell death induction. *Cell Death and Differentiation* 21: 1733-1745.
- Baile, M.G., Sathappa, M., Lu, Y.W., Pryce, E., Whited, K., McCaffery, J.M., Han, X., **Alder, N.N.**, and Claypool, S.M. (2014). Unremodeled and remodeled cardiolipin are functionally indistinguishable in yeast. *Journal of Biological Chemistry* 289: 1768-1778.
- Lee, K.K., Fujimoto, K., Zhang, C., Schwall, C.T., **Alder, N.N.**, Pinkert, C.A., Krueger, W., Rasmussen, T., and Boelsterli, U.A. (2013). Isoniazid-induced cell death is precipitated by underlying mitochondrial complex I dysfunction in mouse hepatocytes. *Free Radical Biology and Medicine* 65: 584-594.
- Malhotra, K., Sathappa, M., Landin, J.S., Johnson, A.E., and **Alder, N.N.** (2013). Structural changes in the mitochondrial Tim23 channel are coupled to the proton-motive force. *Nature Structural and Molecular Biology* 20: 965-972.
- Schwall, C.S. and **Alder, N.N.** (2013). Site-specific fluorescent probe labeling of mitochondrial membrane proteins. *Methods in Molecular Biology* 1033: 103-120.
- Long, A.R., O'Brien, C.C., Malhotra, K., Schwall, C.T., Albert, A.D., Watts, A., and **Alder, N.N.** (2013). A detergent-free strategy for the reconstitution of active enzyme complexes from native biological membranes into nanoscale discs. *BMC Biotechnology* 13(1):41.
- Long, A.R., O'Brien, C.C., and **Alder, N.N.** (2012). The cell-free integration of a polytopic mitochondrial membrane protein into liposomes occurs cotranslationally and in a lipid-dependent manner. *PLoS ONE* 7: e46332 doi: 10.1371/journal.pone.0046332.
- Schwall, C.T., Greenwood, V.L., and **Alder, N.N.** (2012). The stability and activity of respiratory Complex II is cardiolipin-dependent. *Biochimica et Biophysica Acta – Bioenergetics* 1817: 1588-1596.

Ranaghan, M.J., Schwall, C.T., **Alder, N.N.**, and Birge, R.R. (2011). Green proteorhodopsin reconstituted into nanoscale phospholipid bilayers (nanodiscs) as active monomers. *Journal of the American Chemical Society* 133: 18318-18327.

Deshmukh, L., Meller, N., **Alder, N.N.**, Byzova, T., and Vinogradova, O. (2011). Tyrosine phosphorylation as a conformational switch: a case study of integrin  $\beta$ 3 cytoplasmic tail. *Journal of Biological Chemistry* 286: 40943-40953.

Jha, S., Patil, S.M., Gibson, J., Nelson, C.E., **Alder, N.N.**, and Alexandrescu, A.T. (2011). Mechanism of amylin fibrilization enhancement by heparin. *Journal of Biological Chemistry* 286: 22894-22904.

**Alder, N.N.**, Jensen, R.E., and Johnson, A.E. (2008). Fluorescence mapping of mitochondrial TIM23 complex reveals a water-facing, substrate-interacting helix surface. *Cell* 134: 439-450.

**Alder, N.N.**, Sutherland, J., Buhring, A.I., Jensen, R.E., and Johnson A.E. (2008). Quaternary structure of the mitochondrial TIM23 complex reveals dynamic association between Tim23p and other subunits. *Molecular Biology of the Cell* 19: 159-170.

Davis, A.J., **Alder, N.N.**, Jensen, R.E., and Johnson, A.E. (2007). The Tim9p/10p and Tim8p/13p complexes bind to specific sites on Tim23p during mitochondrial protein import. *Molecular Biology of the Cell* 18: 475-486.

**Alder, N.N.**, Shen, Y., Brodsky, J.L., Hendershot, L.M., and Johnson, A.E. (2005). The molecular mechanisms underlying BiP-mediated gating of the Sec61 translocon of the endoplasmic reticulum. *The Journal of Cell Biology* 168: 389-399.

**Alder, N.N.** and Theg, S.M. (2003). Energetics of protein transport across biological membranes: a study of the thylakoid  $\Delta$ pH/cpTat pathway. *Cell* 112: 231-242.

**Alder, N.N.** and Theg, S.M. (2003). Protein transport *via* the cpTat pathway displays cooperativity and is stimulated by transport-incompetent substrate. *FEBS Letters* 540: 96-100.

Donovan, L.A., Grise, D.J., West, R.A., **Alder, N.N.**, and Richards, J.H. (1999). Predawn disequilibrium between plant and soil water potentials. *Oecologia* 120: 209-217.

**Alder, N.N.**, Pockman, W.T., Nuismer, S., and Sperry, J.S. (1997). Use of centrifugal force in the study of xylem cavitation. *Journal of Experimental Botany* 48: 665-674.

**Alder, N.N.**, Sperry, J.S., and Pockman, W.T. (1996). Root and stem xylem embolism, stomatal conductance, and leaf turgor in *Acer grandidentatum* populations along a soil moisture gradient. *Oecologia*, 105: 293-301.

**Alder, N.N.**, and Eastlack, S.E., and Sperry, J.S. (1993). The effect of reduced hydraulic conductance on stomatal conductance and xylem cavitation. *Journal of Experimental Botany* 44, 1075-1082.

## Review Articles

Malhotra, K. and **Alder, N.N.** (2014). Advances in the use of nanoscale bilayers to study membrane protein structure and function. *Biotechnology and Genetic Engineering Reviews* 30:79-93.

**Alder, N.N.** and Johnson, A.E. (2004). Cotranslational membrane protein biogenesis at the endoplasmic reticulum. *The Journal of Biological Chemistry* 279: 22787-22790.



**Alder, N.N.** and Theg, S.M. (2003). Energy use by biological protein transport pathways. *Trends in Biochemical Sciences* 28: 442-451.

### **Book Chapters**

**Alder, N.N.** (2011). "Biogenesis of Lipids and Proteins within Mitochondrial Membranes" In: *The Structure of Biological Membranes* (Yeagle, P., ed), Third edition, pp. 315-377. CRC Press, New York.

Havrilla, M.E., **Alder, N.N.**, and Theg, S.M. (1998). "Protein Transport and Assembly in Thylakoids". In: *Photosynthesis: Mechanisms and Effects* (Garab, G., ed.) Vol. II, pp. 1443-1446. Kluwer Academic Publishers, The Netherlands.

## **Scientific Presentations**

### **Invited Speaker**

- Department of Biochemistry and Redox Biology Center, University of Nebraska, Lincoln, NE, April 2015.
- EMBO Conference, Mechanisms and Regulation of Protein Translocation", Dubrovnik, Croatia, March 2015.
- Biophysical Society Annual Meeting, Baltimore, MD, February 2015.
- Frankfurt Collaborative Research Consortium SFB-807 Transport and Communication across Biological Membranes Seminar Series, Frankfurt, Germany, January 2015.
- Animal Science Departmental Seminar Series, Department of Animal Sciences, University of Connecticut, Storrs, CT, December 2014.
- Gordon Research Conference on Protein Transport Across Cell Membranes, Galveston, TX, March 2014
- Medicinal Chemistry Seminar Series, Department of Pharmacy, University of Connecticut, Storrs CT, November, 2013.
- National Institutes of Health / NIDDK Seminar Series, Bethesda, MD, July 2013
- Miami University, Department of Chemistry and Biochemistry Lecture Series, Oxford, OH, October 2012.
- Johns Hopkins University School of Medicine, Physiology Lecture Series, Baltimore, MD, April 2012.
- Gordon Research Conference on Protein Transport Across Cell Membranes, Galveston, TX, March 2012
- Molecular and Cellular Biology Program Seminar Series, University of Massachusetts, Amherst, November 2011
- Keynote Lecture, University of Connecticut Health Center, Department of Molecular, Microbial and Structural Biology Retreat, Hartford, CT, May 2011
- FASEB Summer Research Conference on Mitochondria Assembly and Dynamics in Health and Disease, Carefree, AZ, July 2009
- Global-COE Symposium, Nagoya, Japan, March 2008
- Gordon Research Conference on Protein Transport Across Cell Membranes, Barga, Italy, June 2007
- Program in Membrane Structure and Function Symposium, Texas A&M University, January 2006
- Program in Membrane Structure and Function Symposium, Texas A&M University, January 2005
- American Society for Cell Biology Annual Conference, Washington DC, December 2004
- Biophysical Night Out Presentation, Texas A&M University, February 2004
- Center for Advanced Biomolecular Research Annual Conference, Navasota, TX, December 2002
- National Science Foundation Plant Cell Biology Training Grant Retreat, Fallen Leaf Lake, CA,

September 2000

- Molecular and Cellular Biology Training Grant Retreat, Fallen Leaf Lake, CA, October 1999

## **Scientific Presentations (Cont.)**

### **Contributed Presentations**

- American Society for Cell Biology Annual Conference, Philadelphia, PA, December 2014
- Biophysical Society Annual Meeting, San Francisco, CA, February 2014
- New England Structural Symposium Annual Conference, University of Connecticut, Storrs, CT, October 2013.
- Biophysical Society Annual Meeting, Philadelphia, PA, February 2013
- New England Structural Symposium Annual Conference, University of Connecticut Health Science Center, Farmington, CT, October 2012
- Gordon Research Conference on Protein Transport Across Cell Membranes, Galveston, Texas, March 2012
- American Society for Cell Biology Annual Conference, Denver, Colorado, December 2011
- Gordon Research Conference on Protein Transport Across Cell Membranes, Galveston, TX, March 2010
- Gordon Research Conference on Protein Transport Across Cell Membranes, Barga, Italy, June 2007
- Biophysical Society Annual Meeting, Salt Lake City, UT, February 2006
- European Science Foundation Conference on Protein Targeting, Spa, Belgium, September 2003: *This presentation received one of two first place awards.*
- American Society for Biochemistry and Molecular Biology Annual Conference, New Orleans, LA, April 2002
- American Society for Plant Physiology Annual Meeting, San Diego, CA, July 2000
- American Society of Microbiology Meeting on Macromolecular Transport Across Membranes, Savannah, GA, May, 2000
- Gordon Research Conference on Protons and Membrane Reactions, Ventura, CA, February 2000
- Western Conference on Photosynthesis, Asilomar, CA, January 1999

### **Awards and Honors**

- |   |                             |
|---|-----------------------------|
| • Walter R. and Roselinde H. Russell<br>Outstanding Graduate Student Fellowship | Received May 2001           |
| • Elsie Stocking Memorial Fellowship  | Received September 2000     |
| • Jastro Shields Research Fellowship  | July 1999 – September 2001  |
| • Pomology Department Research Assistantship                                    | September 1996 – July 1997  |
| • Henry A. Jastro Fellowship  | September 1996 – July 1997  |
| • Hughes Undergraduate Fellowship   | September 1992 to June 1993 |
| • National Science Foundation REU Supplement                                    | June 1992 to September 1992 |
| • Seville Flowers Scholarship   | September 1988 to June 1992 |

## **Activities and Services**

### **Research Mentorship**

- Undergraduate research project mentor (eight undergraduate students; January 2009 to present)
- University Scholar Committee advisor (five undergraduates; Fall 2009 to present)
- Graduate student major advisor (four M.S. students and four Ph.D. students; Fall 2009 to present)
- Graduate student associate advisor (15 students; Fall 2009 to present)

### **Professional Memberships**

- American Association for the Advancement of Science
- The American Society for Cell Biology
- Biophysical Society

### **Grant Proposal Review Committee**

- National Science Foundation Membrane Dynamics virtual panel, March 2014
- National Institutes of Health MBPP Study Section, *ad hoc* panelist, February 2015
- National Science Foundation Membrane Dynamics and Trafficking virtual panel, February 2015

### **Journal Reviewer (*ad hoc* reviewer)**

- *The Journal of Biological Chemistry*
- *Biochimica et Biophysica Acta – Biomembranes*
- *The Journal of Bioenergetics and Biomembranes*
- *EMBO Reports*
- *Nano Research*
- *The Journal of Cell Biology*
- *Biochemistry*
- *PLoS ONE*
- *BioTechniques*

### **Scientific Outreach**

- Advanced Research Mentorship Program (Summer 2013 to present)  
University instructors serve as mentors to high school students from regional schools in the development of a research proposal and a year-long research project conducted in the mentor's laboratory.
- University of Connecticut Early College Experience Biology Summer Institute (July 2012 to present)  
University instructors lead multiple series of classroom- and lab-based modular courses as a professional development institute for teachers and students from regional high schools.
- University of Connecticut Northeast Alliance Summer Outreach Program (Summer 2011)  
University instructors serve as mentors for minority undergraduates in the STEM fields from around the country in ten-week research programs that include research projects and professional development courses.
- Guest Lecturer in University of Connecticut Courses (Fall 2009 to present)  
Topics in Modern Biology (BIOL 1109); Introduction to Undergraduate Research (BIOL 2289); Human Disease and the Development of Therapeutic Agents (MCB 3022W); Advanced Biochemistry Laboratory (MCB 4026W); Introduction to Faculty Research (MCB 5899)

## **Activities and Services (Cont.)**

### **University Service**

- Departmental Committees
  - MCB Course and Curriculum Committee (2009 to present)
  - MCB Graduate Recruitment Committee (2009 to present)
  - MCB Departmental Retreat Committee (2009 to present)
  - MCB Planning Committee (2011 to 2012)
  - Field of Study Reorganization Committee (Biochemistry representative, 2010 to 2011)
  - MCB Self-Study Committee (2015)
- University Committees
  - University of Connecticut Radiation Safety Committee (2012 to present)

### **Press Releases and Media Coverage**

- Press for Malhotra et al. (2013) *Nature Structural and Molecular Biology* 20: 965-972.
  - (i) Article highlighted as a News and Views "Voltage-coupled conformational dynamics of a mitochondrial protein-import channel" by N. Pfanner and colleagues in the same issue.
  - (ii) "Peering into the Protein Pathways of a Cell" in *UConn Today*, University of Connecticut, July 8, 2013.
  - (iii) Article highlighted in Science Daily, Biology News Net, PhysOrg, and EurekAlert!
- Press for receipt of UCIG grant
  - "UConn Scientists Team Up to Conduct New Cancer Research" in *UConn Today*, University of Connecticut, September 27, 2012.
- Press for Alder et al. (2008) *Cell* 134: 439-450.
  - Article highlighted as a Leading Edge Previews article "Gazing at Translocation in the Mitochondrion" by C. Koehler and colleagues in the same issue.
- Press for Alder et al. (2005) *Journal of Cell Biology* 168: 389-399
  - Article highlighted in *J. Cell Biol* (same issue) and in *Nat. Struct. Mol. Biol.* (Vol. 12, p. 217).
- Press for Alder and Theg (2013) *Cell* 112: 231-242.
  - Article highlighted in *Chemical and Engineering News* (Vol. 8, p. 50) and in *Trends in Plant Science* (Vol. 8, p. 360-363).

This is to acknowledge the receipt of your letter (application) dated

5/27/15, and to inform you that the initial processing which includes an administrative review has been performed.

Amendment (06-01450-47)  
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

Please provide to this office within 30 days of your receipt of this card

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A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 587120.  
When calling to inquire about this action, please refer to this control number.  
You may call us on (610) 337-5398, or 337-5260.