

**Curriculum Vitae**  
Mark L. Dell'Acqua, Ph.D.

**1. Personal Information:**

Current Position: Professor and Interim Chair  
Department of Pharmacology  
Director, NeuroTechnology Center  
School of Medicine  
University of Colorado  
Anschutz Medical Campus, Mail Stop 8303  
12800 E. 19<sup>th</sup> Ave  
Aurora, CO 80045  
Email: [mark.dellacqua@cuanschutz.edu](mailto:mark.dellacqua@cuanschutz.edu)  
Phone: 303-724-3616

**2. Education:**

1985-1989, University of Maryland at College Park, B.S. Biochemistry *cum laude* with high honors in Chemistry, 1989. Advisor: John A. Gerlt, Ph.D.  
1989-1995, Harvard University, Ph.D. Biochemistry, 1995. Advisor: Ernest G. Peralta, Ph.D.  
1995-1999, Howard Hughes Medical Institute, Vollum Institute, Oregon Health Sciences University, Postdoctoral Training in Cell Biology and Neuroscience. Advisor: John D. Scott, Ph.D.

**3. Academic Appointments:**

1989-1995, Predoctoral Fellow, Department of Biochemistry and Molecular Biology, Harvard University.  
1995-1997, Postdoctoral Fellow, Vollum Institute, Oregon Health Sciences University  
1997-1999, Research Associate, Howard Hughes Medical Institute, Vollum Institute, Oregon Health Sciences University.  
1999-2006, Assistant Professor, Department of Pharmacology, School of Medicine, University of Colorado at Denver and Health Sciences Center.  
2006-2012, Associate Professor with tenure, Department of Pharmacology, School of Medicine, University of Colorado at Denver and Health Sciences Center.  
2012-present, Professor with tenure, Department of Pharmacology, School of Medicine, University of Colorado Anschutz Medical Campus

**4. Other Professional Positions:**

2010-2019, Director, University of Colorado School of Medicine Advanced Light Microscopy Core  
2010-present, Vice-Chair, Department of Pharmacology, University of Colorado School of Medicine  
2014-present, Member Linda Crnic Institute for Down Syndrome, University of Colorado  
2015-present, Member, University of Colorado Alzheimer's and Cognition Center,

2019-present, Director, University of Colorado School of Medicine Neurotechnology Center  
2022 Interim Chair Department of Pharmacology, University of Colorado School of Medicine

### **5. Honors, Special Recognition and Awards:**

1989-1990, National Research Service Award- Molecular and Cell Biology Training Grant Awardee, Department of Biochemistry and Molecular Biology, Harvard University, Cambridge, MA.

1990-1995, Howard Hughes Medical Institute Predoctoral Fellowship, Department of Biochemistry and Molecular Biology, Harvard University, Cambridge, MA.

1995-1996, National Research Service Award- Cardiovascular Science Training Grant Awardee, Oregon Health Sciences University, Portland, OR.

2001-2004, American Heart Association Scientist Development Grant Award, Department of Pharmacology, School of Medicine, University of Colorado at Denver and Health Sciences Center

2002, Invited Speaker, ASPET symposium on “Local Signaling Complexes and Regulation of Ion Channels” at Experimental Biology 2002, New Orleans, LA.

2003, Invited Speaker, Endocrine Society symposium on “Subcellular Localization of Kinase/Phosphatase Signaling Complexes” at Endocrine Society Meeting 2003, Philadelphia, PA.

2004, Invited Grass Foundation Keynote Speaker, “Protein Kinase and Phosphatase Scaffold Proteins in Synaptic Plasticity”, University of New Mexico Neuroscience Day 2004.

2005 UCDHSC Department of Pharmacology Research Award

2007 UCDHSC Department of Pharmacology Teaching Award

2007 Session Chair and invited speaker, ASPET Symposium on “Imaging Localized cAMP Signaling Dynamics Organized by AKAP Scaffold Proteins & Phosphodiesterases” at Experimental Biology 2007, Washington, DC.

2008 Louisiana State University Neuroscience Center Chancellor’s Award Lecture

2010 Session Chair and Invited Speaker, FASEB Summer Conference on Protein Phosphatases, Steamboat Springs, CO

2011 University of Colorado Denver, Graduate School, Dean’s Mentoring Award

2011 University of California Davis, Training Program in Basic and Translational Cardiovascular Science Distinguished Speakers Seminar Series

2011 University of Colorado Department of Pharmacology Vice-Chair Service Recognition Award

2013 Chair and Meeting Organizer 4<sup>th</sup> International Meeting on Anchored cAMP Signaling Pathways, Denver, CO.

2013 University of Colorado Department of Pharmacology Vice-Chair Service Recognition Award

2014 University of Colorado Department of Pharmacology Research Award

2015 University of Colorado Department of Pharmacology Research Award

2015-2017 Conference Organizer, FASEB Scientific Research Conference on Ion Channel Regulation, July 2017 9-14, Steamboat Springs, CO

2019 University of Colorado Department of Pharmacology Teaching Award

### **6. Membership in Professional Organizations:**

Society for Neuroscience (SfN), 2000-present  
American Society for Cell Biology (ASCB), 2005-present.  
American Society of Pharmacology and Experimental Therapeutics (ASPET), 2006-present

## **7. Committees and Service:**

### CU-Anschutz Department of Pharmacology:

Member of Pharmacology Training Grant Faculty-2000-present  
Member, Graduate Training Committee 2001-present  
Member, Graduate Admissions and Recruiting Committee 2001-2014  
Member, Annual Report Committee 2003-2004  
Chair, Fitzsimons Gala Committee 2003-2004  
Member of Pharmacology Seminar Committee 2010-2017  
Chair, Neuropharmacology Faculty Search Committee 2010-2011  
Vice-Chair, Pharmacology 2010-present  
Member, Cancer Pharmacology Faculty Search Committee 2011-2013  
Chair, Neuropharmacology Faculty Search Committee 2014-2015  
Chair, Neuropharmacology Faculty Search Committee 2016-2017  
Department Financial Administrator Search Committee Member 2018  
Ad-hoc Member, Dept. of Pharmacology/Neurotechnology Center faculty search committee 2019-2020  
Department Financial Administrator Search Committee Member 2021  
Department IT Support Professional Search Committee Member 2022

### CU-Anschutz Program in Neuroscience and Neurotechnology Center (NTC):

Member of Neuroscience Training Grant Faculty-2000-present.  
Member, Curriculum Committee 2002-2006.  
Director, Core B-Rocky Mountain Neurological Disorders Core Center-Gene targeted vectors, 2004-2011.  
Director, Core A-Rocky Mountain Neurological Disorders Core Center-Microscopy Core, 2011-2015  
Member, Neuroscience Program Steering Committee, 2012  
Director, Core B-Rocky Mountain Neurological Disorders Core Center-Nanoscopy Core, 2015-2020  
CNS Administrator Search Committee Member, 2018  
Director, University of Colorado School of Medicine Neurotechnology Center (NTC), 2019-present  
Ad-hoc Member, Dept. of Cell & Developmental Biology/Neurotechnology Center faculty search committee 2019-2020  
Neuroscience Graduate Program T32 Advisory Committee 2021-present

### CU-Anschutz, School of Medicine:

Member of Biological Sciences Program Faculty-2000-present  
Member of Medical Scientist Training Grant Faculty-2001-present  
Member, Microscopy Research Retreat Committee 2009  
Member, Combined Light Microscopy Core Steering Committee 2010  
Member, Strategic Planning Committee-Research-Neuroscience 2011-12  
Member, Strategic Planning Committee-Research-Infrastructure 2011-12  
Member, Anesthesiology Chair Search Committee 2014-15  
Director, Advanced Light Microscopy Core Facility 2010-2019

Member, Research Productivity Committee 2016-present  
Member, Dept. of Immunology and Microbiology Chair Search Committee, 2018  
Director, University of Colorado School of Medicine Neurotechnology Center (NTC), 2019-present  
Member, non-voting/guest; SOM Executive Committee 2019-present  
Member, Dept. of Physiology and Biophysics Chair Search Committee, 2020-21

University of Colorado, Denver – Anschutz Medical Campus and Downtown Campus:  
Member, Search Committee for Director, Office of Laboratory Animal Research 2005.  
Univ. of Colorado Cancer Center-ACS Grant review- 2006  
Member, Biomedical Sciences Graduate School Core Course subcommittee- 2008  
Member, Graduate School Student Appeals Panel-2008  
Univ. of Colorado Cancer Center-ACS Grant review- 2009  
Member, External Review Committee CU-Denver Department of Chemistry- 2015  
CCTSI K to R mock-study section grant review-2018  
CCTSI Co-pilot grant reviewer-2018  
Linda Crnic Institute for Down Syndrome Challenge Grant study section-2019  
Member, Research Misconduct Inquiry Panel, 2020

## **8. Licensure and Certifications:**

CU-Anschutz Diversity, Equity, and Inclusion Certificate program – January 2021

## **9. Inventions, Intellectual Property and Patents:**

N/A

## **10. Review and Referee Work:**

### Grant Review Service:

American Heart Association-Molecular Signaling 2 study section 2002-2003  
NIH-ZRG1 F03B Physiology, Pharmacology, & Molecular Structure study section 2005-2006 ad-hoc  
CDMRP Alcohol Review Panel 2005  
University of Colorado Cancer Center-ACS grant review panel 2006  
NIH-SYN Synapses, Cytoskeleton, & Trafficking study section 2007-2009 ad hoc  
NSF ad-hoc grant review 2008-present  
Wellcome Trust (UK) ad-hoc Grant review 2008  
NIH-NTRC study section 2009 ad hoc  
Wellcome Trust (UK) ad-hoc Grant review 2011  
DFG (Germany) ad-hoc Grant review 2012  
NIH-SYN Synapses, Cytoskeleton, & Trafficking study section study section, chartered member 2010-2014  
NIH ZRG1 IFCN-L (02) special emphasis panel 2017 ad hoc  
NIH ZRG1 IFCN-L (02) special emphasis panel 2018 ad hoc  
NIH ZRG1 IMST-D (02) special emphasis panel 2018 ad hoc  
NIH ZRG1 MDCN-E(04) special emphasis panel 2018 ad hoc  
FWF (Austria) ad-hoc grant review 2018-2020

NIH ZRG1 F03B Physiology, Pharmacology, & Molecular Structure study section 2019 ad-hoc  
NIH ZRG1 MDCN V(02) special emphasis panel 2019 ad hoc- March and November  
NIH ZRG1 MDCN-N (02) M special emphasis panel 2020 ad hoc - January  
NIH ZRG1 BCMB-G (55) R special emphasis panel 2020 ad hoc - October  
NIH ZRG1 MDCN-C (02) M special emphasis panel 2020 ad hoc – December  
FWF (Austria) ad-hoc grant review 2021  
ISF (Israel) ad-hoc grant review 2021  
NIH-NTRC Neurotransmitters, Transporters, Receptors, & Calcium Signaling study section, ad hoc reviewer 10/2021

Journal Review:

Ad hoc reviewer 1999-present for: *Neuron, Cell Reports, Sci Signaling, Nature Neurosci., J. Neurosci., J. Biol. Chem., PNAS, EMBO J., Curr. Biol., Mol. Cell Biol., J. Exp. Cell Res., Mol. Cell. Neurosci., J Cell Biol., Neuroscience, J. Dev. Neurobiol, PloS One, J. Neurochem, J. Neurophysiol., Nat. Chem. Biology, Curr Opin Cell Biol, TIBS, Biochemistry, JoVE, Proc Natl Acad Sci USA., J. Mol. Cell Cardiology, FEBS, PloS Bio, TINS, Molecular Pharmacology, eLife, Biological Psychiatry, Molecular Psychiatry, Hippocampus, eNeuro, Front Syn Neurosci*

Editorial Board Membership:

2016-2020 member, *Faculty of 1000*  
2014-present member *Molecular Pharmacology*

**11. Invited Seminars and Presentations:**

National:

- 2002 **Invited Speaker:** ASPET symposium on “Local Signaling Complexes and Regulation of Ion Channels” at Experimental Biology 2002, New Orleans, LA.
- 2002 **Invited Short Talk:** Keystone Symposium on “Protein Phosphorylation and Mechanisms of Cellular Regulation”, Taos, NM
- 2002 **Invited Seminar:** Oregon Health Sciences University, Vollum Institute Seminar, Portland, OR.
- 2003 **Invited Short Talk:** Keystone Symposium on “Signaling at Cell-Cell Contacts”, Keystone, CO
- 2003 **Invited Speaker:** Endocrine Society symposium on “Subcellular Localization of Kinase/Phosphatase Signaling Complexes” at Endocrine Society Meeting 2003, Philadelphia, PA
- 2003 **Invited Seminar:** Colorado State University, Neuroscience Program Seminar, Fort Collins, CO.
- 2003 **Invited Seminar:** University of North Dakota, School of Medicine, Dept. of Cell Biology and Anatomy Seminar, Grand Forks, ND.
- 2004 **Invited Short Talk:** in session on “Phosphatases in the Nervous System” at the FASEB Summer Conference on Protein Phosphatases, Snowmass, CO.
- 2004 **Invited Seminar:** University of Texas Health Sciences Center San Antonio, School of Medicine, Dept. of Physiology Seminar, San Antonio, TX.

- 2004 **Invited Seminar:** University of New Mexico, School of Medicine, Dept. of Neurosciences, SFN Grass Foundation Keynote Lecture for UNM Neuroscience Day, Albuquerque, NM.
- 2004 **Invited Presenter:** American Heart Association Research Symposium, New Orleans, LA.
- 2005 **Invited Speaker:** in session on “Compartmentalized Signaling in Neurons” at the Spring Brain Research Conference, Sedona, AZ talk (did not attend due to illness).
- 2005 **Invited Seminar:** University of Iowa, Neurosciences Program Seminar, Iowa City, IA.
- 2005 **Invited Seminar:** Albert Einstein College of Medicine, Dept. of Neuroscience Seminar, Bronx, New York, NY.
- 2006 **Invited Seminar:** SUNY at Stonybrook, Dept. of Pharmacology, Stonybrook, NY
- 2006 **Invited Short-talk:** in session on “Phosphatases in the Nervous System” at the FASEB Summer Conference on Protein Phosphatases, Snowmass, CO.
- 2007 **Chair and invited speaker:** Panel on “Postsynaptic Dynamics in Hippocampal Neurons” at the Winter Conference on Brain Research, Snowmass, CO
- 2007 **Chair and invited speaker:** ASPET Symposium on “Imaging Localized cAMP Signaling Dynamics Organized by AKAP Scaffold Proteins & Phosphodiesterases” during Experimental Biology 2007, Washington, DC.
- 2007 **Invited Seminar:** Emory University, Dept. of Pharmacology, Atlanta, GA
- 2007 **Chair and Invited Speaker:** session on “Neuronal AKAP Signaling Complexes” 2nd International Meeting on Anchored cAMP Signaling Complexes, Portland, OR
- 2008 **Invited Seminar:** Louisiana State University Neuroscience Center, Chancellor’s Award Lecture in Neuroscience, New Orleans, LA.
- 2008 **Invited Speaker:** “Regulation of Neuronal L-type Calcium Channel and Activity and Signaling to the Nucleus by AKAP-anchored Calcineurin” at the FASEB Summer Conference on Calcium and Cell Function, Snowmass, CO
- 2008 **Invited Short Talk:** “Calcium-dependent Inactivation of Neuronal L-type Calcium Channel is Mediated by Localized Calcineurin Signaling” at the FASEB Summer Conference on Protein Phosphatases, Snowmass, CO
- 2009 **Chair and Invited Speaker:** session on “Regulation of Neuronal Ion Channels by AKAP Signaling Complexes” at the Winter Conference on Brain Research, Copper Mountain, CO.
- 2009 **Invited Speaker:** Great Lakes GPCR Symposium, Rochester, NY
- 2009 **Invited Seminar:** University of Washington, Department of Pharmacology, Seattle, WA
- 2010 **Invited Seminar:** University of Denver, Department of Biology, Denver, CO
- 2010 **Invited Seminar:** NIH Synaptic and Developmental Plasticity Interest Group, Synaptic Integration Seminar Series, Bethesda, MD
- 2010 **Invited Seminar:** Regis University, Neuroscience Senior Seminar, Denver, CO
- 2010 **Chair and invited Speaker:** session on “Targeting of Protein Phosphatases: Control of Neuronal Calcineurin-PP2B Signaling by Dynamic Scaffolding Interactions” at the FASEB Summer Conference on Protein Phosphatases, Steamboat Springs, CO
- 2010 **Invited Short Talk:** “AKAP79/150 palmitoylation is required for endosomal localization and regulation of postsynaptic structure and function.” Gordon Research Conference on Cell Biology of the Neuron. Waterville Valley, NH
- 2010 **Invited Seminar:** “Regulation of Excitatory Synaptic Plasticity and Signaling to the Nucleus by AKAP-anchored Calcineurin”, University of Tennessee Health Science Center, Department of Pharmacology, Memphis, TN.

- 2011 **Chair and invited speaker:** session on “Regulation of Neuronal Function by AKAP Signaling Complexes” at the Winter Conference on Brain Research, Keystone, CO.
- 2011 **Invited Seminar:** “Regulation of Excitatory Synaptic Plasticity by AKAP Signaling Complexes.” Neurobiology Seminar, University of Maryland, College Park, MD,
- 2011 **Invited Seminar:** “Regulation of Excitatory Synaptic Plasticity and Synapse to Nucleus Signaling by AKAP Signaling Complexes”, Neurobiology Section, NIH-NIEHS, Durham, NC.
- 2011 **Invited Short Talk:** “Regulation of AMPA Receptor Trafficking and Synaptic Plasticity by an AKAP-Calcineurin Signaling Complex” in session on “Ion Channel Trafficking” at the FASEB Summer Conference on Ion Channel Regulation, Steamboat Springs, CO.
- 2011 **Invited Seminar:** “AKAP-anchored Calcineurin Regulates L-type Calcium Channel Activity and Signaling to the Nucleus”, Training Program in Basic and Translational Cardiovascular Science Distinguished Speakers Seminar Series, Departments of Pharmacology and Cardiology, University of California- Davis, Davis, CA
- 2011 **Invited Seminar:** “Regulation of Neuronal L-type Calcium Channels by an AKAP Signaling Complex”, Stark Neuroscience Research Institute, Indiana University School of Medicine, Indianapolis, IN
- 2012 **Invited Speaker:** “Regulation of NMDA receptor-dependent Synaptic Plasticity by AKAP-anchored Calcineurin”, Winter Conference on Brain Research, Snowbird, UT.
- 2012 **Invited Short Talk:** “Isoform-specific binding of MKK7 to Calcineurin” FASEB Summer Conference on Protein Phosphatases, Snowmass, CO.
- 2013 **Invited Seminar:** “Coordination of Postsynaptic cAMP and Calcium Signaling by an AKAP Scaffold Protein”, Neuroscience Program, University of Texas Southwestern Medical Center, Dallas, TX.
- 2013 **Chair and invited speaker:** session on “Imaging Regulation of Postsynaptic Signaling, Scaffolding, and Trafficking Underlying Neuronal Plasticity” at the Winter Conference on Brain Research, Breckenridge, CO.
- 2013 **Invited Seminar:** “Regulation of Synaptic Plasticity by AKAP Signaling Complexes”, Department of Physiology, University of Maryland School of Medicine, Baltimore, MD.
- 2013 **Meeting Organizer and invited speaker:** 4th International Meeting on Anchored cAMP Signaling Complexes, “Imaging postsynaptic AKAP signaling”, Aurora, CO.
- 2013 **Invited Seminar:** “Organization of Postsynaptic cAMP and Calcium Signaling by an AKAP Scaffold Protein” 12/2013, Department of Pharmacology, University of Vermont, Burlington, VT.
- 2014 **Chair and invited speaker:** session on “Regulation of the Dendritic Sine Actin Cytoskeleton and Membrane Trafficking in Health and Disease” at the Winter Conference on Brain Research, Steamboat Springs, CO.
- 2014 **Invited Seminar:** “Regulation of Synaptic Plasticity by an AKAP Scaffold Protein” 2/2014 Department of Pharmacology, University of California, Irvine, Irvine, CA.
- 2014 **Invited Seminar:** “Organization of Postsynaptic cAMP and Calcium Signaling by an AKAP Scaffold Protein” 4/2014, Department of Neuroscience, Johns Hopkins University, Baltimore, MD.
- 2014 **Invited Seminar:** “Organization of Postsynaptic cAMP and Calcium Signaling by an AKAP Scaffold Protein” 5/2014, Institute of Molecular Medicine and Genetics, Georgia Regents University, Augusta, GA.
- 2014 **Invited Speaker:** “Palmitoylation of the scaffold protein AKAP79/150 by DHHC2 regulates postsynaptic membrane trafficking and plasticity mechanisms” 11/2014, Minisymposium on “Activity-Dependent Regulation of Synaptic Organization and Function by Palmitoylation”, Society for Neuroscience Annual Meeting, Washington, DC.

- 2015 **Invited Speaker:** “Organization of postsynaptic cAMP and Ca<sup>2+</sup> signaling by an AKAP scaffold protein”, 1/2015, the Winter Conference on Brain Research, Big Sky, MT.
- 2015 **Invited Speaker:** “Calcineurin regulation of neuronal calcium channel activity and signaling to the nucleus”, 5/2015, 19<sup>th</sup> International Symposium on Calcium Binding Proteins and Calcium Function in Health and Disease: CaBP19, Nashville, TN.
- 2015 **Invited Speaker:** “Regulation of AMPA receptor subunit composition during synaptic plasticity by anchored kinase and phosphatase signaling”, 6/2015, Excitatory Synapses and Brain Function Gordon Research Conference, Newport, RI.
- 2015 **Invited Seminar:** “Organization of postsynaptic cAMP and Ca<sup>2+</sup> signaling by an AKAP scaffold protein”, 11/2015, Department of Integrated Biology and Pharmacology, University of Texas Health Sciences Center at Houston, Houston, TX.
- 2015 **Invited Seminar:** “Organization of postsynaptic cAMP and Ca<sup>2+</sup> signaling by scaffold proteins”, 11/2015, Department of Chemistry, University of Colorado-Denver, Denver, CO.
- 2016 **Invited Speaker:** “Amyloid beta postsynaptic signaling through AKAP-anchored calcineurin”, 1/2016, the Winter Conference on Brain Research, Breckenridge, CO.
- 2016 **Invited Seminar:** “Regulation of synaptic plasticity by anchored kinase and phosphatase signaling” 3/2016, Department of Physiology, University of Texas Health Sciences Center at San Antonio, San Antonio, TX.
- 2016 **Invited Seminar:** “Regulation of Synaptic Plasticity by Anchored Kinase and Phosphatase Signaling” 04/2016, Neuroscience Program, Colorado State University, Fort Collins, CO.
- 2016 **Invited Short-talk:** “L-type Ca<sup>2+</sup> Channel and STIM1 Regulation of Dendritic Spine ER Structural Plasticity and Excitation-Transcription Coupling” 06/2016 Cell Biology of the Neuron Gordon Research Conference, Waterville Valley, NH.
- 2016 **Invited Short-talk:** “Amyloid Beta Postsynaptic Signaling through AKAP-anchored Calcineurin” 07/2016 FASEB Science Research Conference on Protein Phosphatases, Steamboat Springs, CO.
- 2017 **Invited Speaker:** “Regulation of synaptic plasticity by AKAP palmitoylation”, 01-02/2017, the Winter Conference on Brain Research, Big Sky, MT.
- 2017 **Invited Seminar:** “Regulation of Synaptic Plasticity by Anchored Kinase and Phosphatase Signaling” 03/2016, Neuroscience Program, University of Colorado, Boulder, CO.
- 2017 **Invited Seminar:** Northwestern University, Feinberg School of Medicine, Department of Pharmacology, “Regulation of Synaptic Plasticity by Anchored Kinase and Phosphatase Signaling”, 09/2017, Chicago, IL
- 2017 **Invited Seminar:** Loyola University Chicago, Stritch School of Medicine, “Regulation of Neuronal Excitation-Transcription Coupling by L-type Ca<sup>2+</sup> Channel Signaling Complexes”, 09/2017, Maywood, IL
- 2017 **Invited Seminar:** University California Davis, Neuroscience Center, “Regulation of Synaptic Plasticity by Anchored Kinase and Phosphatase Signaling” 10/2017, Davis, CA.
- 2018 **Invited Seminar:** University of Illinois, Neuroscience Program, “Regulation of Neuronal Excitation-Transcription Coupling by L-type Ca<sup>2+</sup> Channel Signaling Complexes”, 04/2018, Urbana-Champaign, IL
- 2019 **Invited Speaker and Panel Chair:** the Winter Conference on Brain Research, “Regulation of Neuronal Excitation-Transcription Coupling by L-type Ca<sup>2+</sup> Channel Signaling Complexes”, 01-02/2019, Snowmass, CO.
- 2019 **Invited Speaker:** Excitatory Synapses and Brain Function Gordon Research Conference, “Regulation of Synaptic Plasticity by Anchored Kinase/Phosphatase Signaling and Ca<sup>2+</sup>-permeable AMPARs”, 06/2019, Manchester, NH.



- 2019 **Invited Seminar:** CU-Anschutz SOM Department of Neurology, Grand Rounds, "Regulation of Neuronal Synaptic Plasticity by AKAP Signaling Complexes in Health and Disease". 10/21/09, Aurora. CO.
- 2019 **Invited Speaker:** Banbury Meeting - CaMKII and its Role as a Self-tuning Structural Protein at the Synapse. "Crosstalk between Postsynaptic CaMKII and AKAP-PKA/Calcineurin Signaling during LTD." 10/2019, Cold Spring Harbor, NY.
- 2020 **Invited Speaker and Panel Chair:** the Winter Conference on Brain Research, "Role of palmitoylation in controlling nanodomain postsynaptic targeting of AKAP79/150" in panel session "A better pair of goggles: super-resolution imaging of synapses", 01/2020, Big Sky, MT
- 2020 **Invited Speaker:** AKAP2020: 6<sup>th</sup> International Meeting on Anchored cAMP Signaling Pathways, "Regulation of Neuronal Excitation-Transcription Coupling by L-channel-AKAP Signaling Complexes", 10/2020, Houston, TX and Seattle, WA – virtual Zoom conference
- 2020 **Invited Seminar:** TBD 03/2020, University of Rochester, Rochester, NY-cancelled due to COVID-19
- 2020 **Invited Panelist:** Ageing and Alzheimer's Disease in Down Syndrome Focus Group, NIH INCLUDE Down Syndrome Workshop, Virtual, 11/2020.
- 2021 **Invited Seminar:** "Regulation of Neuronal Synaptic Plasticity and Gene Transcription by L-type Ca<sup>2+</sup> Channel Signaling Complexes", University of California-Irvine, Virtual, 01/2021
- 2021 **Invited Seminar:** "Postsynaptic Ion Channel Signaling Complexes in Health and Disease", University of Colorado Anschutz Medical Campus, Department of Pharmacology, 04/2021
- 2021 **Invited Seminar:** "Postsynaptic Ion Channel Signaling Complexes in Health and Disease", New York University, Neurosciences Institute, Langone Medical Center, Virtual, 07/2021
- 2022 **Invited Speaker and Panel Chair:** The Winter Conference on Brain Research, "Beta-amyloid disruption of LTP/LTD balance by AKAP-PKA/Calcineurin regulation of Ca<sup>2+</sup>-permeable AMPA receptors" in panel session "Skiing the forest for the trees: new developments in synaptic plasticity research", 01/2022, Snowmass, CO
- 2023 **Invited Speaker:** The Winter Conference on Brain Research, "Regulation of Postsynaptic Structural Plasticity by L-type Ca<sup>2+</sup>-Channel-mediated Remodeling of the Dendritic Spine ER" in panel session "Postsynaptic Signaling at Glutamatergic Synapses", 01/2023, Snowbird, UT
- 2023 **Invited Seminar:** TBD University of Connecticut Health, 04/2023, Fairfield, CT

International:

- 2004 **Invited Speaker:** Spring Hippocampal Research Conference session on "Compartmentalized Signaling in Hippocampal Pyramidal Cells", Grand Cayman, BWI.
- 2005 **Invited Speaker:** 1st International Meeting on Anchored cAMP Signaling Events, Berlin, Germany.
- 2006 **Invited Seminar:** University of British Columbia, Brain Research Center, Vancouver, BC, Canada.
- 2009 **Invited Seminar:** University of Lausanne, Department of Pharmacology, Lausanne, Switzerland.

- 2009 **Poster Presenter:** Excitatory Synapses and Brain Function Gordon Research Conference, Les Diablerets, Switzerland.
- 2010 **Invited Seminar:** University of Innsbruck, Department of Physiology, Innsbruck, Austria.
- 2010 **Session Chair and Invited Speaker:** session on “Neuronal AKAP Signaling Complexes” 3rd International Meeting on Anchored cAMP Signaling Complexes, Oslo, Norway.
- 2016 **Invited Seminar:** “Regulation of Synaptic Plasticity by Anchored Kinase and Phosphatase Signaling” Centro De Biologia Molecular Severo Ochoa, University Of Madrid, Madrid, Spain.
- 2016 **Session Chair and Invited Speaker:** 5th International Meeting on Anchored cAMP Signaling Complexes, “Regulation of Synaptic Plasticity by Anchored Kinase and Phosphatase Signaling”, Zermatt, Switzerland.
- 2017 **Invited Seminar:** “Regulation of Synaptic Plasticity by Anchored Kinase and Phosphatase Signaling” University of Tokyo, Tokyo, Japan.
- 2017 **Invited Speaker:** International Ion Channel Conference, “L-type Ca<sup>2+</sup> Channel and STIM1 Regulation of Dendritic Spine ER Structural Plasticity and Excitation-Transcription Coupling” Qingdao, China.
- 2018 **Invited Speaker:** European Ca<sup>2+</sup> Channel Meeting, “Regulation of Dendritic Ca<sup>2+</sup> Signals and Excitation-Transcription Coupling by L-type Ca<sup>2+</sup> Channels”, Alpbach, Austria.
- 2019 **Invited Speaker:** FASEB Scientific Research Conference on Ion Channel Regulation, “Regulation of Neuronal Excitation-Transcription Coupling by L-channel Ca<sup>2+</sup> Spikes”, July 2019, Lisbon, Portugal.
- 2020 **Invited Seminar:** TBD May 2020, University College London, London, UK -cancelled due to COVID-19
- 2020 **Invited Seminar:** TBD May 2020, King’s College London, London, UK-canceled due to COVID-19
- 2021 **Invited Seminar:** “Regulation of Neuronal Synaptic Plasticity and Gene Transcription by L-type Ca<sup>2+</sup> Channel Signaling Complexes”, University of Innsbruck, Austria, Virtual due to COVID-19, 04/2021.
- 2021 **Invited Plenary Lecture:** “Dynamic interplay between protein palmitoylation and phosphorylation in synaptic plasticity”. July 2021, Virtual Symposium due to COVID-19- “Post-translational modifications in neuronal physiology and brain disorders”, Milan, Italy.
- 2021 **Invited Keynote Lecture:** “Neuronal Synaptic Plasticity and Postsynaptic Ion Channel Signaling Complexes in Health and Disease, August 2021, Virtual Meeting due to COVID-19 - “8th International Ion Channel Conference (IICC 2021)”, Tianjin, China.
- 2022 **Invited Speaker:** “Regulation of Local Synaptic Plasticity and Distal Signaling to the Nucleus by L-type Ca<sup>2+</sup> Channel Complexes” April 2022, Virtual Symposium due to COVID-19- The Neuronal Synapse: Molecular and Cellular Mechanisms of Plasticity and Stability”, Hamburg, Germany
- 2022 **Invited Speaker:** “Regulation of neuronal structural plasticity by L-type Ca<sup>2+</sup> channel-STIM1-Orai1 mediated ER remodeling” May 2022, “European Calcium Channel Conference”, Alpbach, Austria

- 2022 **Invited Speaker:** “Regulation of Postsynaptic Structural Plasticity by L-type Ca<sup>2+</sup>-Channel-mediated Remodeling of the Dendritic Spine ER” September 2022, Onsite Bordeaux Brain Conference - Molecular, Cellular and Network Mechanisms of Synaptic Plasticity, Bordeaux, France.

## **12. Teaching Record:**

### Medical Students, UCHSC/UC-AMC:

#### Presentations:

2001-2002, Lecturer: Medical Pharmacology (PHCL6000) Opiate Analgesics I and II.  
2002-2003, Lecturer: Medical Pharmacology (PHCL6000) Opiate Analgesics I and II.  
2003-2004, Lecturer: Medical Pharmacology (PHCL6000) Opiate Analgesics I and II.  
2004-2005, Lecturer: Medical Pharmacology (PHCL6000) Opiate Analgesics I and II.  
2005-2006, Lecturer: Medical Pharmacology (PHCL6000) Opiate Analgesics I and II.  
2005-2006, Lecturer: Molecules to Medicine, (IDPT5002) Cell Signaling II; G protein-coupled receptors and second messengers  
2006-2007, Lecturer: Nervous System (IDPT6001) Opiate Analgesics I and II.  
2006-2007, Lecturer: Molecules to Medicine, (IDPT5002) Cell Signaling II; G protein-coupled receptors and second messengers  
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2012-2013, Lecturer: Nervous System (IDPT6001) Opiate Analgesics I and II.  
2012-2013, Lecturer: Molecules to Medicine, (IDPT5002) Cell Signaling II; G protein-coupled receptors and second messengers  
2013-2014, Lecturer: Nervous System (IDPT6001) Opiate Analgesics I and II.  
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2016-2017, Lecturer: Molecules to Medicine, (IDPT5002) Cell Signaling II; G protein-coupled receptors and second messengers  
2017-2018, Lecturer: Nervous System (IDPT6001) Opiate Analgesics I and II.  
2017-2018, Lecturer: Molecules to Medicine, (IDPT5002) Cell Signaling II; G protein-coupled receptors and second messengers

2018-2019, Lecturer: Nervous System (IDPT6001) Opiate Analgesics I and II.  
2018-2019, Lecturer: Molecules to Medicine, (IDPT5002) Cell Signaling II; G protein-coupled receptors and second messengers  
2019-2020, Lecturer: Nervous System (IDPT6001) Opiate Analgesics I and II.  
2019-2020, Lecturer: Molecules to Medicine, (IDPT5002) Cell Signaling II; G protein-coupled receptors and second messengers  
2020-2021, Lecturer: Nervous System (IDPT6001) Opiate Analgesics I and II.  
2020-2021, Lecturer: Molecules to Medicine, (IDPT5002) Cell Signaling II; G protein-coupled receptors and second messengers  
2021-2022, Lecturer: Nervous System (IDPT6001) Opiate Analgesics I and II.

Administration:

2000-2001, Reviewer: Medical Pharmacology (PHCL 6000) General Anesthetics I, II, and II; Narcotics I and II.  
2002-2003, Co-director: Medical Pharmacology (PHCL6000)

Dental Students, UCHSC:

Administration:

2000-2001, Reviewer: Dental Pharmacology (DSBS 6600) Opiate Analgesics, Anti-inflammatory agents, peripheral analgesics, antihistamines, non-prescription drugs.  
2001-2002, Co-director: Dental Pharmacology (DSBS6600)

Graduate Students, UCHSC/CU-Anschutz:

Presentations:

2000-2001, Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Subcellular Targeting of Signaling Enzymes by Anchoring, Scaffolding and Adapter Proteins.  
Lecturer: Graduate-Receptors and Cell Signaling (PHCL 7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II.  
2001-2002, Lecture: Graduate-Frontiers in Pharmacology (PHCL7600) Subcellular Targeting of Signaling Enzymes by Anchoring, Scaffolding and Adapter Proteins.  
Lecturer: Graduate Pharmacology (PHCL7620) Cholinergic Neurotransmission I-IV.  
Lecturer: Graduate-Receptors and Cell Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II.  
2002-2003, Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Imaging Kinase and Phosphatase Signaling.  
Lecturer: Graduate Pharmacology (PHCL 7620). Muscarinic Cholinergic Transmission, Glutamatergic Excitatory Synaptic Transmission and Plasticity, G-protein coupled receptors and scaffold proteins.  
Lecturer: Graduate-Receptors and Cell Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II.  
2003-2004, Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Imaging Kinase and Phosphatase Signaling.  
Lecturer: Graduate Pharmacology (PHCL 7620). Muscarinic Cholinergic Transmission, Glutamatergic Excitatory Synaptic Transmission and Plasticity, RGS proteins and GPCR-scaffold protein interactions.  
Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II.

- Lecturer: Graduate-Molecular and Cellular Neurobiology (NRSC7600)  
Glutamatergic Excitatory Synaptic Transmission and Plasticity.
- 2004-2005, Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Imaging Kinase and Phosphatase Signaling.  
Lecturer: Graduate Pharmacology (PHCL 7620). Muscarinic Cholinergic Transmission, Glutamatergic Excitatory Synaptic Transmission and Plasticity, RGS proteins and GPCR-scaffold protein interactions.  
Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II.  
Lecturer: Graduate-Molecular and Cellular Neurobiology (NRSC7600)  
Glutamatergic Excitatory Synaptic Transmission and Plasticity.
- 2005-2006, Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Imaging Kinase and Phosphatase Signaling.  
Lecturer: Graduate Pharmacology (PHCL 7620). Muscarinic Cholinergic Transmission, Glutamatergic Excitatory Synaptic Transmission and Plasticity, RGS proteins and GPCR-scaffold protein interactions.  
Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II.  
Lecturer: Graduate-Fundamentals of Neurobiology (NRSC7610) Glutamatergic Excitatory Synaptic Transmission and Plasticity.
- 2006-2007, Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Imaging Kinase and Phosphatase Signaling.  
Lecturer: Graduate Pharmacology (PHCL 7620). Muscarinic Cholinergic Transmission, Regulation of G-protein signaling, Glutamatergic Excitatory Synaptic Transmission, and Synaptic Plasticity,  
Lecturer: Graduate-Receptors and Signaling (PHCL7606) G protein Coupled Receptors and Second messengers, Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II.  
Lecturer: Graduate-Fundamentals of Neurobiology (NRSC7610) Glutamatergic Excitatory Synaptic Transmission and Synaptic Plasticity.
- 2007-2008, Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Imaging Kinase and Phosphatase Signaling.  
Lecturer: Graduate Pharmacology (PHCL 7620). Adrenergic and Muscarinic Cholinergic Transmission, Regulation of G-protein signaling, Glutamatergic Excitatory Synaptic Transmission, and Synaptic Plasticity, NIH mock site visit  
Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II.  
Lecturer: Graduate-Fundamentals of Neurobiology (NRSC7610) Hippocampus Learning Memory: Glutamatergic Excitatory Synaptic Transmission and Synaptic Plasticity.
- 2008-2009, Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Imaging Kinase and Phosphatase Signaling.  
Lecturer: Graduate Pharmacology (PHCL 7620). Adrenergic and Muscarinic Cholinergic Transmission, Regulation of G-protein signaling, Glutamatergic Excitatory Synaptic Transmission, and Synaptic Plasticity, NIH mock site visit  
Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II
- 2009-2010, Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Imaging Kinase and Phosphatase Signaling.  
Lecturer: Graduate Pharmacology (PHCL 7620). Adrenergic and Muscarinic Cholinergic Transmission, Regulation of G-protein signaling, GPCR paper discussion, Glutamatergic Excitatory Synaptic Transmission, and Synaptic Plasticity. Excitatory Synaptic Plasticity Paper Discussion.

- Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II
- 2010-2011, Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Imaging Kinase and Phosphatase Signaling.  
Lecturer: Graduate Pharmacology (PHCL 7620). GPCR I: Adrenergic and Muscarinic Cholinergic Transmission, GPCR II: Regulation of G-protein Trafficking and Signaling, GPCRIII- paper discussion, Glutamatergic Excitatory Synaptic Transmission and Synaptic Plasticity.  
Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II
- 2011-2012, Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Imaging Kinase and Phosphatase Signaling.  
Lecturer: Graduate Pharmacology (PHCL 7620). GPCR I: Adrenergic and Muscarinic Cholinergic Transmission, GPCR II: Regulation of G-protein Trafficking and Signaling, GPCRIII- paper discussion, Glutamatergic Excitatory Synaptic Transmission and Synaptic Plasticity I, Glutamatergic Excitatory Synaptic Transmission and Synaptic Plasticity II-paper discussion  
Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II-paper discussion
- 2012-2013, Lecturer-Molecular and Cellular Neuroscience (NRSC7600)-Regulation of Gene Expression in Neurons I and II-paper discussion  
Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Imaging Kinase and Phosphatase Signaling.  
Lecturer: Graduate Pharmacology (PHCL 7620). GPCR I: Adrenergic and Muscarinic Cholinergic Transmission, GPCR II: Regulation of G-protein Trafficking and Signaling, GPCRIII- paper discussion  
Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II-paper discussion
- 2013-2014, Lecturer-Molecular and Cellular Neuroscience (NRSC7600)-Regulation of Gene Expression in Neurons I and II-paper discussion  
Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Imaging Kinase and Phosphatase Signaling. Lecturer: Graduate Pharmacology (PHCL 7620). Autonomic Nervous System, GPCR I: Adrenergic and Muscarinic Cholinergic Transmission, GPCR II: Regulation of G-protein Trafficking and Signaling, GPCRIII- paper discussion  
Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II-paper discussion. MSTP tutorial for student Alison Hixon-16 hours.
- 2014-2015, Lecturer-Molecular and Cellular Neuroscience (NRSC7600)-Regulation of Gene Expression in Neurons I and II-paper discussion  
Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Imaging Kinase and Phosphatase Signaling. Lecturer: Graduate Pharmacology (PHCL 7620) Autonomic Nervous System and Cholinergic Neurotransmission; GPCRs-Adrenergic and Muscarinic Cholinergic Transmission, Opioids and Pain  
Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II-paper discussion.
- 2015-2016,  
Lecturer and paper discussion (NRSC7501)-Introduction to Neuroscience-Dendritic Spines as Postsynaptic Signaling Compartments (in 2015).  
Lecturer-Molecular and Cellular Neuroscience (NRSC7600)-Regulation of Gene Expression in Neurons I and II-paper discussion (in 2015).  
Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Imaging Kinase and Phosphatase Signaling (in 2015).

Lecturer: Graduate Pharmacology (PHCL 7620) Autonomic Nervous System and Cholinergic Neurotransmission; GPCRs-Adrenergic and Muscarinic Cholinergic Transmission, Opioids and Pain (in 2016)  
 Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II-paper discussion (in 2016).

2016-2017,  
 Lecturer and paper discussion (NRSC7501)-Introduction to Neuroscience-Dendritic Spines as Postsynaptic Signaling Compartments (in 2016).  
 Lecturer-Molecular and Cellular Neuroscience (NRSC7600)-Regulation of Gene Expression in Neurons I and II-paper discussion (in 2016).  
 Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Imaging Kinase and Phosphatase Signaling (in 2016).  
 Lecturer: Graduate Pharmacology (PHCL 7620) Autonomic Nervous System and Cholinergic Neurotransmission; GPCRs-Adrenergic and Muscarinic Cholinergic Transmission, Opioids and Pain (in 2017)  
 Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II-paper discussion (in 2017).

2017-2018,  
 Lecturer and paper discussion (NRSC7501)-Introduction to Neuroscience-Dendritic Spines as Postsynaptic Signaling Compartments (in 2017).  
 Lecturer-Molecular and Cellular Neuroscience (NRSC7600)-Regulation of Gene Expression in Neurons I and II-paper discussion (in 2017).  
 Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Imaging Kinase and Phosphatase Signaling (in 2017).  
 Lecturer: Graduate Pharmacology (PHCL 7620) Autonomic Nervous System and Cholinergic Neurotransmission; GPCRs-Adrenergic and Muscarinic Cholinergic Transmission (in 2018)  
 Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II-paper discussion (in 2018).  
 Pharmacology Program Student Journal Club Moderator

2018-2019,  
 Lecturer and paper discussion (NRSC7501)-Introduction to Neuroscience-Dendritic Spines as Postsynaptic Signaling Compartments (in 2018).  
 Lecturer-Molecular and Cellular Neuroscience (NRSC7600)-Regulation of Gene Expression in Neurons I and II-paper discussion (in 2018).  
 Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Neuronal Excitation Coupling (in 2018).  
 Lecturer: Graduate Pharmacology (PHCL 7620) Autonomic Nervous System and Cholinergic Neurotransmission; GPCRs-Adrenergic and Muscarinic Cholinergic Transmission (in 2019)  
 Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II-paper discussion (in 2019).  
 Pharmacology Program Student Journal Club Moderator

2019-2020,  
 Lecturer and paper discussion (NRSC7501)-Introduction to Neuroscience-Dendritic Spines as Postsynaptic Signaling Compartments (in 2019).  
 Lecturer-Molecular and Cellular Neuroscience (NRSC7600)-Regulation of Gene Expression in Neurons I and II-paper discussion (in 2019).  
 Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Neuronal Excitation Coupling (in 2019).  
 Lecturer: Graduate Pharmacology (PHCL 7620) Autonomic Nervous System and Cholinergic Neurotransmission; GPCRs-Adrenergic and Muscarinic Cholinergic Transmission (in 2020)

Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II-paper discussion (in 2020).  
Pharmacology Program Student Journal Club Moderator

2020-2021,

Lecturer (NRSC7501)-Introduction to Neuroscience- Synaptic Plasticity and Postsynaptic Signaling (in 2020).

Lecturer-Molecular and Cellular Neuroscience (NRSC7600)-Regulation of Gene Expression in Neurons I and II-paper discussion (in 2020).

Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Neuronal Excitation Coupling (in 2020).

Lecturer: Graduate Pharmacology (PHCL 7620) Autonomic Nervous System and Cholinergic Neurotransmission; GPCRs-Adrenergic and Muscarinic Cholinergic Transmission (in 2021)

Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II-paper discussion (in 2021).

Pharmacology Program Student Journal Club Moderator

2021-2022,

Lecturer (NRSC7501)-Introduction to Neuroscience- Synaptic Plasticity and Postsynaptic Signaling (in 2021).

Lecturer-Molecular and Cellular Neuroscience (NRSC7600)-Regulation of Gene Expression in Neurons (in 2021).

Lecturer: Graduate-Frontiers in Pharmacology (PHCL 7600) Neuronal Excitation Coupling (in 2021).

Lecturer: Graduate Pharmacology (PHCL 7620) Autonomic Nervous System and Cholinergic Neurotransmission; GPCRs-Adrenergic and Muscarinic Cholinergic Transmission (in 2022)

Lecturer: Graduate-Receptors and Signaling (PHCL7606) Serine/Threonine Kinases-Anchoring Proteins/Scaffolds I and II-paper discussion (in 2022).

Pharmacology Program Student Journal Club Moderator

#### Administration:

2004-2005, Director: Graduate-Receptors and Cell Signaling (PHCL7606)

2005-2006, Director: Graduate-Receptors and Cell Signaling (PHCL7606)

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2007-2008, Director: Graduate-Receptors and Cell Signaling (PHCL7606)

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2016-2017, Director: Graduate-Receptors and Cell Signaling (PHCL7606)

2017-2018, Director: Graduate-Receptors and Cell Signaling (PHCL7606)

2018-2019, Director: Graduate-Receptors and Cell Signaling (PHCL7606)

2019-2020, Director: Graduate-Receptors and Cell Signaling (PHCL7606)

2018-2019, PI: Pharmacology Graduate Training Program T32

2019-2020, PI: Pharmacology Graduate Training Program T32

2020-2021, PI: Pharmacology Graduate Training Program T32

2021-2022, PI: Pharmacology Graduate Training Program T32

#### Mentoring:



Current Graduate Predoctoral Trainees in my Laboratory:

2016-present, Tyler Martinez, Pharmacology  
Grants: NIH/NIGMS Pharmacology T32, NIH/NINDS NRSA F31 Predoctoral Fellowship

2018-present, Katlin Zent, Neuroscience  
Grants: NIH/NINDS Neuroscience T32, NIH/NIGMS Pharmacology T32 INCLUDE supplement

Current Postdoctoral Trainees in my Laboratory:

2019-present, Olga Prikhodko, PhD (co-mentor with Dr. Matthew Kennedy)

Grants: NRSA F32 postdoctoral fellowship

Publications:

1. Lucero EM, Freund RK, Smith A. Johnson NR, Dooling B, Sullivan E, **Prikhodko O**, Ahmed MM, Bennett DA, Hohman T.J., Dell'Acqua ML, Chial HJ, Potter H. (2022) Increased expression of KIF11/kinesin5 offsets Alzheimer A $\beta$ -mediated toxicity and cognitive dysfunction in cell culture, mice, and humans. *iScience* – In press  
(previous version: *bioRxiv*, <https://doi.org/10.1101/2021.09.09.459627> )
2. Actor-Engel HS, Schwartz SL, Crosby KC., Sinnen BL, **Prikhodko O**, Ramsey HJ, Bourne JN, Winborn C, Lucas S, Smith KR, Dell'Acqua ML, Kennedy MJ (2021) Precision mapping of amyloid beta binding reveals perisynaptic localization and spatially restricted plasticity deficits. *eNeuro*, 8 (6) ENEURO.0416-21.2021 (PMC8687484)

Current Undergraduate Predoctoral Trainees in my Laboratory:

2021-2022 Vincent Elias (URM), Colorado State University

Past Undergraduate Predoctoral Trainees in my Laboratory:

2010-2011 Sharon Wu, Yale University, Subsequent Position: M.D., Ph.D. Student Tufts University

2011-2012 Eric Robinson, Cornell University, Subsequent Position: Medical Student New York University Langone Medical Center, Icahn School of Medicine at Mount Sinai

2012-2015 Scott Schelp, University of Colorado, Denver, Subsequent Position: PhD Student, University of Maryland School of Medicine

2013-2014 Kendyl Greimann (URM), Gustavus Adolphus College, Subsequent Position: chiropractic student Northwestern Health Sciences University

2017 Claire Baker, Vassar College

2019 Phoebe Garfield, George Washington High School IB Program

Past Graduate Student and Postdoctoral Trainees in my Laboratory:

2001-2005, Karen E. Smith, Ph.D. (postdoc)

Current position: Clinical Practice Manager, Evergreen, CO.

Publications:

1. Gomez, L.L., Alam, S., **Smith, K.E.**, Horne, E., Dell'Acqua, M.L. (2002) Regulation of A-Kinase Anchoring Protein 79/150-cAMP-dependent Protein Kinase Postsynaptic Targeting by NMDA Receptor Activation of Calcineurin and Remodeling of Dendritic Actin. *J. Neurosci.* 22, 7027-7044.
2. **Smith, K.E.**, Gorski, J.A., Dell'Acqua, M.L. (2005) Regulation of AMPA receptor activity by associated proteins. *Cellscience Reviews* 2, 156-168.
3. Dell'Acqua, M.L., **Smith, K. E.**, Gorski, J.A., Horne, E. A., Gibson, E. S., Gomez, L.L. (2006) Regulation of Neuronal PKA Signaling through AKAP Targeting Dynamics. *Eur. J. Cell Biol.* 85, 627-633.
4. **Smith, K.E.**, Gibson, E.S., Dell'Acqua, M.L. (2006) cAMP-dependent Protein Kinase Postsynaptic Localization Regulated by NMDA Receptor Activation through Translocation of an A-kinase Anchoring Protein Scaffold Protein. *J. Neurosci.* 26, 2391-2402.

2002-2006, Jessica A. Gorski, Ph.D. (postdoc)

Current position: Lecturer and Director of Pre-Health Sciences Residential Academic Community Program, University of Colorado, Boulder, CO.

Publications:

1. **Gorski, J.A.**, Gomez, L.L., Scott, J.D., Dell'Acqua, M.L. (2005) Association of an AKAP Signaling Scaffold with Cadherin Adhesion Molecules in Neurons and Epithelial Cells. *Mol. Biol. Cell* 16, 3574-3590.
2. Smith, K.E., **Gorski, J.A.**, Dell'Acqua, M.L. (2005) Regulation of AMPA receptor activity by associated proteins. *Cellscience Reviews* 2, 156-168.
3. Dell'Acqua, M.L., Smith, K. E., **Gorski, J.A.**, Horne, E. A., Gibson, E. S., Gomez, L.L. (2006) Regulation of Neuronal PKA Signaling through AKAP Targeting Dynamics. *Eur. J. Cell Biol.* 85, 627-633.
4. Sanderson, J.L., **Gorski, J.A.**, Gibson, E.S., Lam, P., Freund, R.K., Chick, W.S., Dell'Acqua, M.L. (2012) AKAP150-anchored calcineurin regulate synaptic plasticity by limiting synaptic incorporation of Ca<sup>2+</sup>-permeable AMPA receptors. *J. Neurosci.* 32:15036-15052.
5. Murphy, J.G., Sanderson, J.L., **Gorski, J.A.**, Scott, J.D., Catterall, W.A., Sather, W.A., Dell'Acqua, M.L. (2014) AKAP-anchored PKA maintains neuronal L-type calcium channel activity and NFAT transcriptional signaling. *Cell Reports* 7: 1577-1588.
6. Sanderson, J.L, **Gorski, J.A.**, Dell'Acqua, M.L. (2016) NMDA receptor-dependent LTD requires transient synaptic incorporation of Ca<sup>2+</sup>-permeable AMPARs mediated by AKAP150-anchored PKA and calcineurin. *Neuron* 89:1000-1015.

Grants: American Heart Association Postdoctoral Fellowship.

2002-2007, Eric A. Horne, Ph.D. Pharmacology (predoc)

Current Position: Medical Director, Sage Therapeutics, Inc.

Publications:

1. Gomez, L.L., Alam, S., Smith, K.E., **Horne, E.**, Dell'Acqua, M.L. (2002) Regulation of A-Kinase Anchoring Protein 79/150-cAMP-dependent Protein Kinase Postsynaptic Targeting by NMDA Receptor Activation of Calcineurin and Remodeling of Dendritic Actin. *J. Neurosci.* 22, 7027-7044.
2. Uhlik, M.T., Abell, A.N., Johnson, N.L., Sun, W., Cuevas, B.D., Lobel-Rice, K.E., **Horne, E.A.**, Dell'Acqua, M.L., Johnson, G.L. (2003) Rac-MEKK3-

MKK3 scaffolding for p38 MAPK activation during hyperosmotic shock. *Nat Cell Biol.* 5, 1104-1110.

3. Dell'Acqua, M.L., Smith, K. E., Gorski, J.A., **Horne, E.A.**, Gibson, E. S., Gomez, L.L. (2006) Regulation of Neuronal PKA Signaling through AKAP Targeting Dynamics. *Eur. J. Cell Biol.* 85, 627-633.
4. **Horne, E.A.** and Dell'Acqua, M.L. (2007) Phospholipase C is required for changes in postsynaptic structure and function associated with NMDA receptor dependent long-term depression. *J. Neurosci.* 27: 3523-3534.
5. Woolfrey, K.M., O'Leary, H., Goodell, D.J., Robertson, H.R., **Horne, E.A.**, Coutrap, S.J., Dell'Acqua, M.L., Bayer, K.U. (2018) CaMKII regulates the de-palmitoylation and synaptic removal of the scaffold protein AKAP79/150 to mediate structural LTD. *J. Biol. Chem.* 293: 1551–1567.

Grants: NIH/NIGMS Pharmacology T32

2003-2008, Seth F. Oliveria, MSTP-Neuroscience (predoc, co-mentored with Dr. William Sather)

Current position: Neurosurgery private practice, Portland, OR.

Publications:

1. **Oliveria, S.F.**, Gomez, L.L., Dell'Acqua, M.L. (2003) Imaging Kinase-AKAP79-Phosphatase Scaffold Complexes at the Plasma Membrane in Living Cells using FRET Microscopy. *J. Cell Biol.* 160, 101-112.
2. **Oliveria, S.F.**, Dell'Acqua, M.L., and Sather, W.A. (2007) AKAP79/150 anchoring of calcineurin controls neuronal L-type Ca<sup>2+</sup> channel activity and nuclear signaling. *Neuron* 55:261-275.
3. **Oliveria, S.F.**, Dittmer, P.J., Yoon, D-H., **Dell'Acqua, M.L.**, Sather, W.A. (2012) Localized calcineurin confers Ca<sup>2+</sup>-dependent inactivation upon neuronal L-type Ca<sup>2+</sup> channels. *J. Neurosci.* 32:15328-15337.

Grants: NIH/NIGMS Medical Scientist Training Program T32, NIH NRSA F31 predoctoral fellowship.

2004-2008, Holly R. Robertson, Pharmacology (predoc)

Current position: Director, Medidata, Raleigh, NC.

Publications:

1. **Robertson, H.R.**, Gibson, ES, Benke, T.A., Dell'Acqua, M.L. (2009) Regulation of postsynaptic structure and function by an A-kinase anchoring protein-membrane associated guanylate kinase scaffolding complex. *J. Neurosci.* 29:7929-7943.
2. Woolfrey, K.M., O'Leary, H., Goodell, D.J., **Robertson, H.R.**, Horne, E.A., Coutrap, S.J., Dell'Acqua, M.L., Bayer, K.U. (2018) CaMKII regulates the de-palmitoylation and synaptic removal of the scaffold protein AKAP79/150 to mediate structural LTD. *J. Biol. Chem.* 293: 1551–1567.

Grants: NIH/NIGMS Pharmacology T32, American Heart Association Predoctoral Fellowship.

2005-2010, Peter Clapp, Ph.D., (postdoc; co-mentored with Dr. Paula Hoffman)

Current Position: Professor and Chair, Pharmaceutical Sciences, Regis University, Denver, CO.

Publications:

1. **Clapp, P.**, Gibson, E.S., Dell'Acqua, M.L., and Hoffman, P.L. (2010) Phosphorylation Regulates Removal of Synaptic NMDA Receptors after

Withdrawal from Chronic Ethanol Exposure. *J Pharmacol Exp Ther* 332:720-729.

Grants: NIH/NIAAA Pharmacology of Drug Addiction T32

2005-2010, Mathew D. Pink, Ph.D., Neuroscience (predoc)

Current Position: Director, Business Development at Biodesix, Boulder, CO.

Publications:

1. **Pink, M.D.** and Dell'Acqua, M.L. (2009) Subcellular Targeting of PKA through AKAPs: Conserved Anchoring and Unique Targeting Domains in *Handbook of Cell Signaling 2<sup>nd</sup> Edition* (Bradshaw and Dennis Eds.), Elsevier Oxford: Academic Press, Volume 2, pp1329-1336.
2. Li, H., \***Pink, M.D.**, Murphy, J.G., Dell'Acqua, M.L. and Hogan, P. (2012) Balanced interactions of calcineurin with AKAP79 regulate Ca<sup>2+</sup>-calcineurin-NFAT signaling. *Nat. Struct. Mol. Biol.* 19:337-346. (\***co-first author**)

Grants: NIH/NINDS Neuroscience T32, American Heart Association Predoctoral Fellowship.

2008-2014, Jennifer L. Sanderson, Ph.D., (postdoc)

Current Position: Research Instructor, Department of Pharmacology, University of Colorado, Aurora, CO.

Publications:

1. **Sanderson, J.L.** and Dell'Acqua, M.L. (2011) AKAP Signaling Complexes in Regulation of Excitatory Synaptic Plasticity, *The Neuroscientist* 17:321-336.
2. Keith, D.L., \***Sanderson, J.L.**, Gibson, E.S., Woolfrey, K.M., Robertson, H.R., Olszewski, K. Kang, R., El Husseini, A., and **Dell'Acqua, M.L.** (2012) Palmitoylation of an A-Kinase Anchoring Protein 79/150 Regulates Dendritic Endosomal Targeting and Synaptic Plasticity Mechanisms. *J. Neurosci.* 32:7119-7136. (\***co-first author**)
3. **Sanderson, J.L.**, Gorski, J.A., Gibson, E.S., Lam, P., Freund, R.K., Chick, W.S., **Dell'Acqua, M.L.** (2012) AKAP150-anchored calcineurin regulate synaptic plasticity by limiting synaptic incorporation of Ca<sup>2+</sup>-permeable AMPA receptors. *J. Neurosci.* 32:15036-15052.
4. Murphy, J.G., **Sanderson, J.L.**, Gorski, J.A., Scott, J.D., Catterall, W.A., Sather, W.A., Dell'Acqua, M.L. (2014) AKAP-anchored PKA maintains neuronal L-type calcium channel activity and NFAT transcriptional signaling. *Cell Reports* 7: 1577-1588.
5. Woolfrey, K.M., **Sanderson J.L.**, Dell'Acqua, M.L. (2015) The palmitoyl acyltransferase DHHC2 regulates recycling endosome exocytosis and synaptic potentiation through palmitoylation of AKAP79/150. *J. Neurosci.* 35: 442-456.
6. **Sanderson, J.L.**, Gorski, J.A., Dell'Acqua, M.L. (2016) NMDA receptor-dependent LTD requires transient synaptic incorporation of Ca<sup>2+</sup>-permeable AMPARs mediated by AKAP150-anchored PKA and calcineurin. *Neuron* 89:1000-1015.
7. **Sanderson, J.L.**, Scott, J.D., Dell'Acqua, M.L. (2018) Control of homeostatic synaptic plasticity by AKAP-anchored kinase and phosphatase regulation of Ca<sup>2+</sup>-permeable AMPA receptors *J. Neurosci.* 14: 2863-2876.

Grants: NIH/NIAAA Pharmacology of Drug Addiction T32, American Heart Association Postdoctoral Fellowship.

2009-2014, Jonathan G. Murphy, Ph.D. Neuroscience (predoc)

Current Position: Postdoctoral Fellow, laboratory of Dax Hoffman, PhD, NIH/NICHHD, Bethesda, MD.

Publications:

1. Li, H., Pink, M.D., **Murphy, J.G.**, \*Dell'Acqua, M.L. and \*Hogan, P. (2012) Balanced interactions of calcineurin with AKAP79 regulate Ca<sup>2+</sup>-calcineurin-NFAT signaling. *Nat. Struct. Mol. Biol.* 19:337-346.
2. **Murphy, J.G.**, Sanderson, J.L., Gorski, J.A., Scott, J.D., Catterall, W.A., Sather, W.A., **Dell'Acqua, M.L.** (2014) AKAP-anchored PKA maintains neuronal L-type calcium channel activity and NFAT transcriptional signaling. *Cell Reports* 7: 1577-1588.
3. **Murphy, J.G.**, Crosby, K.C., Dittmer, P.J., Sather, W.A., Dell'Acqua, M.L. (2019) AKAP79/150 recruits the transcription factor NFAT to regulate signaling to the nucleus by neuronal L-type Ca<sup>2+</sup> channels. *Mol Biol Cell* 30:1743-1756.

Grants: NIH/NINDS Neuroscience T32

2010-2016, Kevin M. Woolfrey, Ph.D., (postdoc)

Current Position: Research Associate, Department of Pharmacology, University of Colorado, Aurora, CO.

Publications:

1. Keith, D.L., Sanderson, J.L., Gibson, E.S., **Woolfrey, K.M.**, Robertson, H.R., Olszewski, K. Kang, R., El Hussein, A., and **Dell'Acqua, M.L.** (2012) Palmitoylation of an A-Kinase Anchoring Protein 79/150 Regulates Dendritic Endosomal Targeting and Synaptic Plasticity Mechanisms. *J. Neurosci.* 32:7119-7136.
2. **Woolfrey, K.M.**, Sanderson, J.L., **Dell'Acqua, M.L.**, (2015) The palmitoyl acyltransferase DHHC2 regulates recycling endosome exocytosis and synaptic potentiation through palmitoylation of AKAP79/150. *J. Neurosci.* 35: 442-456.
3. **Woolfrey, K.M.** and Dell'Acqua, M.L. (2015) Coordination of Protein Phosphorylation and Dephosphorylation in Synaptic Plasticity. *J. Biol. Chem.* 290:28604-28612.
4. **Woolfrey, K.M.**, O'Leary, H., Goodell, D.J., Robertson, H.R., Horne, E.A., Coutrap, S.J., Dell'Acqua, M.L., Bayer, K.U. (2018) CaMKII regulates the de-palmitoylation and synaptic removal of the scaffold protein AKAP79/150 to mediate structural LTD. *J. Biol. Chem.* 293: 1551-1567.
5. Tonn Eisinger, K.R., **Woolfrey, K.M.**, Swanson, S.P., Schnell, S.A., Meitzen, J., Dell'Acqua, M.L., Mermelstein, P.G. (2018) Palmitoylation of caveolin-1 is regulated by the same DHHC acyltransferases that modify steroid hormone receptor. *J. Biol. Chem.* 293:15901-15911.
6. Purkey, A.M., **Woolfrey, K.M.**, Crosby, K.C., Stich, D.G., Chick, W.S., Aoto, J., Dell'Acqua, M.L. (2018) AKAP150 palmitoylation regulates synaptic incorporation of Ca<sup>2+</sup>-permeable AMPA receptors to control LTP. *Cell Reports* 25: 974-987.
7. Dell'Acqua M.L. and **Woolfrey K.M.** (2018) FRETting over postsynaptic PKC signaling. *Nat Neurosci.* 21:1021-1022.
8. Gibson, E.S., \***Woolfrey, K.M.**, Li, H., Hogan, P.G., Nemenoff, R.A., Heasley, L.E., Dell'Acqua, M.L. (2019) Subcellular Localization and Activity of the Mitogen-activated Protein Kinase Kinase 7 (MKK7)  $\gamma$  Isoform are Regulated through Binding to the Phosphatase Calcineurin. *Mol Pharm* 95: 20-32. (\*co-first author)

Grants: NIH/NIAAA Pharmacology of Drug Addiction T32, American Heart Association Postdoctoral Fellowship.

2010-2017, Philip J. Dittmer, Ph.D., (postdoc, co-mentored with Dr. William Sather)

Current Position: Instructor, Department of Pharmacology, University of Colorado, Aurora, CO. Received AHA Career Development Award

Publications:

1. Oliveria, S.F., **Dittmer, P.J.**, Yoon, D-H., Dell'Acqua, M.L., Sather, W.A. (2012) Localized calcineurin confers Ca<sup>2+</sup>-dependent inactivation upon neuronal L-type Ca<sup>2+</sup> channels. *J. Neurosci.* 32:15328-15337.
2. **Dittmer, P.J.**, Dell'Acqua, M.L., Sather, W.A. (2014) Ca<sup>2+</sup>/Calcineurin-Dependent Inactivation of Neuronal L-type Ca<sup>2+</sup> Channels Requires Priming by AKAP-Anchored Protein Kinase A. *Cell Reports* 7: 1410-1416.
3. **Dittmer, P.J.**, Wild, A.R., Dell'Acqua, M.L., Sather, W.A., (2017) STIM1 Ca<sup>2+</sup> sensor control of L-type Ca<sup>2+</sup>-channel-dependent dendritic spine structural plasticity and nuclear signaling. *Cell Reports* 19: 321-334.
4. Wild, A.R., Sinnen, B.L., **Dittmer, P.J.**, Kennedy, M.J., Sather, W.A., Dell'Acqua, M.L. (2019) Synapse-to-nucleus communication through NFAT is mediated by L-type Ca<sup>2+</sup> channel Ca<sup>2+</sup> spike propagation to the soma. *Cell Reports* 26:3537-3550.
5. **Dittmer, P.J.**, Dell'Acqua, M.L., Sather, W.A. (2019) Synaptic crosstalk conferred by a zone of differentially-regulated Ca<sup>2+</sup> signaling in the dendritic shaft adjoining a potentiated spine. *PNAS* 116:13611-13620.
6. Murphy, J.G., Crosby, K.C., **Dittmer, P.J.**, Sather, W.A., Dell'Acqua, M.L. (2019) AKAP79/150 recruits the transcription factor NFAT to regulate signaling to the nucleus by neuronal L-type Ca<sup>2+</sup> channels. *Mol Biol Cell* 30:1743-1756.

Grants: NIH/NIAAA Pharmacology of Drug Addiction T32, NIH/NHLBI Cardiology T32

2014-2018, Kevin C. Crosby, Ph.D., (postdoc, co-mentored with Dr. William Sather)

Current Position: Research Associate, Department of Pharmacology, University of Colorado, Aurora, CO.

Publications:

1. Sinnen, B.L., Bowen, A.B, Forte, J.S., Hiester, B.G., **Crosby, K.C.**, Gibson, E.S., Dell'Acqua, M.L., Kennedy, M.J. (2017) Optogenetic control of synaptic composition and function *Neuron* 93: 646-660.
2. Purkey, A.M., Woolfrey, K.M., **Crosby, K.C.**, Stich, D.G., Chick, W.S., Aoto, J., Dell'Acqua, M.L. (2018) AKAP150 palmitoylation regulates synaptic incorporation of Ca<sup>2+</sup>-permeable AMPA receptors to control LTP. *Cell Reports* 25: 974-987.
3. **Crosby, K.C.**, Gookin, S.E., Garcia, J.D., Hahm, K.M., Dell'Acqua, M.L., Smith, K.R. (2019) Nanoscale subsynaptic domains underlie the organization of the inhibitory synapse. *Cell Reports* 26: 3284–3297.
4. Murphy, J.G., **Crosby, K.C.**, Dittmer, P.J., Sather, W.A., Dell'Acqua, M.L. (2019) AKAP79/150 recruits the transcription factor NFAT to regulate signaling to the nucleus by neuronal L-type Ca<sup>2+</sup> channels. *Mol Biol Cell* 30:1743-1756.

Grants: NIH/NIAAA Pharmacology of Drug Addiction T32

2014-2019, Alicia M. Purkey, Ph.D., Pharmacology (predoc),

Current Position: Postdoctoral Fellow, laboratory of Scott Soderling, PhD, Duke University, Durham, NC.

Publications:

1. Samelson, B.K., Gore, B.B., Whiting, J.L., Nygren, P.J., **Purkey, A.M.**, Colledge, M., Langeberg, L.K., Dell'Acqua, M.L., Zweifel, L.S., Scott, J.D.

- (2015) A-Kinase Anchoring Protein 79/150 recruits Protein Kinase C to phosphorylate Roundabout receptors. *J. Biol. Chem.* 290: 14107-14119.
2. **Purkey, A.M.**, Woolfrey, K.M., Crosby, K.C., Stich, D.G., Chick, W.S., Aoto, J., Dell'Acqua, M.L. (2018) AKAP150 palmitoylation regulates synaptic incorporation of Ca<sup>2+</sup>-permeable AMPA receptors to control LTP. *Cell Reports* 25: 974-987.
  3. Rajgor D., **Purkey A.M.**, Sanderson J.L., Welle, T.M., Garcia, J.D., Dell'Acqua, M.L., Smith KR (2020) Local miRNA-Dependent Translational Control of GABA<sub>A</sub>R Synthesis during Inhibitory Long-Term Potentiation. *Cell Reports* 31: 107785-107802.
  4. **Purkey, A.M.** and Dell'Acqua M.L. (2020) Phosphorylation-dependent Regulation of Ca<sup>2+</sup>-permeable AMPA Receptors during Hippocampal Synaptic Plasticity. *Front Syn Neurosci* 12:8.
- Grants: NIH/NIGMS Pharmacology T32, American Heart Association Predoctoral Fellowship, NIH NRSA F31 Predoctoral Fellowship

2014-2019, Angela R. Wild, Ph.D., (postdoc)

Current Position: Senior Research Associate, laboratory of Shernaz Bamji, Ph.D., University of British Columbia, Vancouver, BC, Canada.

Publications:

1. Dittmer, P.J., **Wild, A.R.**, Dell'Acqua, M.L., Sather, W.A., (2017) STIM1 Ca<sup>2+</sup> sensor control of L-type Ca<sup>2+</sup>-channel-dependent dendritic spine structural plasticity and nuclear signaling. *Cell Reports* 19: 321-334.
2. **Wild, A.R.** and Dell'Acqua, M.L., (2018) Potential for Therapeutic Targeting of AKAP Signaling Complexes in Nervous System Disorders. *Pharmacology and Therapeutics* 185: 99-121.
3. **Wild, A.R.**, Sinnen, B.L., Dittmer, P.J., Kennedy, M.J., Sather, W.A., Dell'Acqua, M.L. (2019) Synapse-to-nucleus communication through NFAT is mediated by L-type Ca<sup>2+</sup> channel Ca<sup>2+</sup> spike propagation to the soma. *Cell Reports* 26:3537-3550.

Grants: American Heart Association Postdoctoral Fellowship

2020-2022, Alexandra Huffman, Pharmacology (MS student)

Grants: NIH/NIGMS Pharmacology T32

## Faculty Mentoring

### University of Colorado Anschutz Medical Campus

2011-2018, Matthew Kennedy, PhD - Assistant Professor (now Associate Professor), Department of Pharmacology, University of Colorado School of Medicine

2015-2020, Santos Francos, PhD - Assistant Professor (now Associate Professor), Department of Pediatrics, University of Colorado School of Medicine

2016-present, Jason Aoto, PhD - Assistant Professor, Department of Pharmacology, University of Colorado School of Medicine

2016-present, Katharine Smith, PhD - Assistant Professor, Department of Pharmacology, University of Colorado School of Medicine

2018-present, Jamie Peters, PhD - Associate Professor, Department of Anesthesiology, University of Colorado School of Medicine

2019-present, Jasper Heinsbroek, PhD - Assistant Professor, Department of Anesthesiology, University of Colorado School of Medicine

2021-present, Jordan Jacobelli, PhD, Associate Professor, Department of Immunology and Microbiology, University of Colorado School of Medicine

#### Other Institutions

2016-2019, Anthony Baucum, PhD – Assistant Professor (now Associate Professor), Department of Biology, Indiana University-Purdue University Indianapolis, Indianapolis, IN (through the NIH/NIND Mentoring in Neuroscience Diversity Scholars (MINDS) Program)

2018-present, Olalekan Michadl Ogundele, PhD – Assistant Professor, Department of Comparative Biomedical Sciences, LSU School of Veterinary Medicine, Louisiana State University, Baton Rouge, LA.

2019- Winter Conference on Brain Research – new participant/junior scientist mentoring

### **13. Grant Support:**

#### Active Research Funding:

<u>Project</u>	<u>Dates of Project</u> <u>Direct Costs/Year (Total Costs)</u>	<u>Calendar Effort</u>
5R01 NS040701-20 (Dell'Acqua) NIH/NINDS Regulation of Calcium-permeable AMPA Receptors by AKAP79 Postsynaptic Signaling Role: PI	5/01/2019-3/31/2024 \$278,131/year (\$2,162,470)	3.0
1R01 NS110383-04 (Multi PI: Dell'Acqua, Bayer, Kennedy) NIH/NINDS Postsynaptic Kinase/Phosphatase Networks in Amyloid beta-induced Synaptic dysfunction Role: corresponding PI	9/30/2018-6/30/2023 \$165,000/year (\$2,332,660)	1.8
R01MH123700-02 NIH/NIMH L-type Ca <sup>2+</sup> Spike Regulation of Structural Plasticity and Excitation-Transcription Coupling Role: PI	04/01/2021-01/31/2026 \$357,179/year (\$2,718,945)	3.0
NeuroTechnology Center (NTC) Director Funds University of Colorado SOM Role: PI/Director	07/01/2019-06/30/2024 \$250,000 total	
2T32 GM007635-44 (Dell'Acqua)	07/01/2019-06/30/2024	



NIH/NIGMS \$253,528/year  
Predoctoral Training Grant in Pharmacology  
Role: PI (Co-PI, Port)

2T32 GM007635-44S1 (Dell'Acqua)07/01/2022-06/30/2023  
NIH/NIGMS \$121,779  
INCLUDE for Down Syndrome Supplement to Predoctoral Training Grant in  
Pharmacology  
Role: PI (Co-PI, Port)

1RF1NS129022-01(Multi-PI: Dell'Acqua, Dabertrand) 07/15/2022-6/30/2027 2.4  
NIH/NINDS \$443,394/year (\$3,032,865)  
Rescuing neurovascular coupling to protect neuronal plasticity and cognition  
Role: corresponding PI

1R01MH128199-01A1 (Smith) 08/01/2022-06/30/2027 0.6  
NIN/NIMH \$318,715/year (\$2,470,310)  
Local translation mechanisms to control inhibitory synaptic plasticity.  
Role: Co-I

Pending Research Funding

None

Completed Research Funding:

<u>Project</u>	<u>Dates of Project</u> <u>Direct Costs/Year</u>
SDG-0130228N (Dell'Acqua) American Heart Association Regulation of the Dendritic Actin Cytoskeleton by the AKAP79 Signaling Scaffold during Glutamate Excitotoxicity. Role: PI	1/01/2001-12/31/2004 \$60,000
R01 NS40701-04 (Dell'Acqua) NIH/NINDS Regulation of AKAP79 Postsynaptic Membrane Targeting Role: PI	08/01/2001-07/30/2005 \$175,000
U01 AA14101 (Hoffman) NIH/NIAAA Role of Glutamate Receptors in excessive alcohol drinking Role: Co-investigator	2/01/2002-1/31/2006 \$183,002
P01 AG04418 (Bickford) NIH/NIA Program: Aminergic Function in Aging and Alzheimer's Disease Project 1: Catecholamines, Antioxidants, and Inflammation in the Cerebellum	7/01/2001-6/31/2006 \$30,000

Role: Co-investigator as a subcontract on two specific aims (aims 4 and 5) of PPG-project 1 (PI: Paula Bickford, University of South Florida) for an Aging Program Project Grant.

PN200605-300 (Dell'Acqua) 07/01/2006-06/30/2007  
 Sie Foundation Seed Grant \$50,000  
 Altered Excitatory Postsynaptic Structure and Function in Down Syndrome  
 Role: PI

R01 NS40701-08 (Dell'Acqua) 08/01/2005-07/30/2009  
 NIH/NINDS \$218,000  
 Regulation of AKAP79 Postsynaptic Membrane Targeting  
 Role: PI

R01 AA014021 (Hoffman) 02/01/2005-12/31/2009  
 NIH-NIAAA \$257,680  
 Regulation of NMDA Receptor Localization by Chronic Ethanol Exposure  
 Role: Co-investigator

P30 NS048154 (Ribera) 09/15/04-06/30/2009 plus a 1 year no-cost  
 NIH/NINDS extension and a 5 month supplement to 11/30/2010  
 Core Center Grant \$154,655  
 Role: Core director of molecular biology core B to construct targeting vectors for  
 generation of transgenic and gene knockout mice and viral expression vectors for brain  
 slice and in vivo imaging of fluorescent proteins.

1R01 NS076577 (Benke) 09/01/2011-12/31/2012  
 NIH/NINDS \$218,750  
 Molecular mechanisms linking early life seizures, autism and intellectual disability  
 Role: Co-investigator.

5R01 NS40701-12 (Dell'Acqua) 08/01/2009-05/14/2013  
 NIH/NINDS \$265,000  
 Regulation of AKAP79 Postsynaptic Membrane Targeting  
 Role: PI

5UL1 RR025780(Sokol) 05/18/2008 – 10/31/2013  
 NIH/NCRR \$43,500  
 Colorado Clinical and Translational Sciences Institute-CTSA 4 NeTT Microscopy Core  
 Role: I am the director of the University of Colorado School of Medicine Advanced Light  
 Microscopy Core (ALMC) that is supported in part by this UL1 CTSA grant.

2R56 NS40701-13 (Dell'Acqua) 5/15/13-04/30/15(A0-A1 bridge)  
 NIH/NINDS \$349,918  
 Regulation of AKAP79 Postsynaptic Membrane Targeting and Signaling  
 Role: PI

LCI Seed Grant (Dell'Acqua) 04/01/14-03/31/15  
 Linda Crnic Center \$100,000  
 Amyloid Beta Postsynaptic Signaling through Anchored Calcineurin  
 Role: PI.

5R01 MH080291 (Dell'Acqua) 8/01/2013-7/31/2015 (7/31/2016 NCE)  
 NIH/NIMH \$350,542

AKAP Regulation of Neuronal L-type Calcium Inactivation (modified from original)  
Role: PI.

P30 NS048154-10 (Ribera) 02/01/11-11/30/2015  
NIH/NINDS \$130,000

Core Center Grant

Role: I am the director of the University of Colorado School of Medicine Advanced Light Microscopy Core that is supported in part by this P30 core center grant.

1R01 NS081248 (Bayer) 07/01/2013-03/31/2017  
NIH/NINDS \$218,750

CaMKII substrate-selection in opposing forms of synaptic plasticity

Role: Co-investigator.

1R21 NS094453 (Dell'Acqua) 07/01/2016-06/30/2018  
NIH/NINDS \$150,000

Amyloid beta postsynaptic signaling through AKAP-anchored calcineurin

Role: PI.

Multi-PI pilot grant 01/01/2017-09/30/2018  
Department of Pharmacology. \$37,000 (\$100,000 total)

Pathological A $\beta$  signaling mechanisms and how to block them

Role: Co-PI

5R01 NS040701-16 (Dell'Acqua) 8/01/2014-4/30/2019  
NIH/NINDS \$243,326

Regulation of AKAP79 Postsynaptic Membrane Targeting and Signaling

Role: PI

5R01 NS040701-16S1 (Dell'Acqua) 8/01/2018-4/30/2019  
NIH/NINDS \$30,000

Administrative Supplement to parent grant "Regulation of AKAP79 Postsynaptic Membrane Targeting and Signaling"

Role: PI

CU-Anschutz CNS co-Pilot 04/01/2018-08/31/2019  
Center for Neuroscience \$100,000

Role of L-type Calcium Channels in Abnormal Synaptic Plasticity and Neurocognitive Disorders

Role: Co-PI

5R01 MH102338 (Dell'Acqua) 12/01/2013-11/30/2019  
NIH/NIMH \$279,000

Mechanisms of Neuronal Calcineurin-NFAT Synapse-to-Nucleus Signaling

Role: PI.

R01 MH102338-05S1 (Dell'Acqua) 12/01/2018-11/30/2019  
NIH/NIMH \$25,000

Administrative Supplement to parent award “Mechanisms of Neuronal Calcineurin-NFAT Synapse-to-Nucleus Signaling”

2T32 GM007635-41S1 (Dell’Acqua)07/01/2019-06/30/2020

NIH/NIGMS \$110,288

INCLUDE for Down Syndrome Supplement to Predoctoral Training Grant in Pharmacology

Role: PI (Co-PI, Port)

P30 NS048154 (Ribera) 01/01/15-12/31/2019 (NCE 2020) 0.12

NIH/NINDS \$120,000

Core Center Grant

Role: I am the director of the University of Colorado School of Medicine Advanced Light Microscopy Core that is supported in part by this P30 core center grant.

P30 NS048154-12S1 (Ribera) 01/01/19-12/31/2020 0.12

NIH/NINDS \$120,000

Administrative Supplement to Core Center Grant

Role: I am the director of the University of Colorado School of Medicine Advanced Light Microscopy Core that is supported in part by this P30 core center grant.

2T32 GM007635-42S1 (Dell’Acqua)07/01/2020-06/30/2021 0.6

NIH/NIGMS \$110,288

INCLUDE for Down Syndrome Supplement to Predoctoral Training Grant in Pharmacology

Role: PI (Co-PI, Port)

4R01 NS081248-05 (Bayer) 04/01/2017-05/31/2021 0.6

NIH/NINDS \$218,750

CaMKII substrate-selection in opposing forms of synaptic plasticity

Role: Co-investigator.

2T32 GM007635-43S1 (Dell’Acqua)07/01/2021-06/30/2022

NIH/NIGMS \$111,960/year

INCLUDE for Down Syndrome Supplement to Predoctoral Training Grant in Pharmacology

Role: PI (Co-PI, Port)

#### **14. Bibliography:** (Updated 09/12/22)

	<u>All</u>	<u>Since 2017</u>
<u>Citations</u>	6407	2456
<u>h-index</u>	41	32
<u>i10-index</u>	60	52

Peer-reviewed Publications:

1. Wilde, J.A., Bolton, P.H., **Dell'Acqua, M.**, Hibler, D.H., Pourmotabbed, T., Gerlt, J.A. (1988). Identification of Residues Involved in a Conformational Change Accompanying Substitutions for Glutamate-43 in Staphylococcal Nuclease. *Biochemistry* **27**, 4127-4132.
2. Stanczyk, S.M., Bolton, P.H., **Dell'Acqua, M.**, Pourmotabbed, T., Gerlt, J.A. (1988). Direct Observation of Multiple Environments for the H $\delta$  but not the H $\epsilon$  Proton of a Histidine Residue in Staphylococcal Nuclease. *J Am Chem Soc* **110**, 7908-7910.
3. Pourmotabbed, T., **Dell'Acqua, M.**, Gerlt, J.A., Stanczyk, S.M., Bolton, P.H. (1990). Kinetic and Conformational Effects of Lysine Substitutions for Arginines 35 and 87 in the Active Site of Staphylococcal Nuclease. *Biochemistry* **29**, 3677-3683.
4. **Dell'Acqua, M.L.**, Carroll, R.C., Peralta, E.P. (1993). Transfected m2 Muscarinic Acetylcholine Receptors Couple to G $\alpha$ i2 and G $\alpha$ i3 in Chinese Hamster Ovary Cells: Activation and Desensitization of the Phospholipase C Signaling Pathway. *J Biol Chem* **268**, 5676-5685.
5. Hausken, Z.E., **Dell'Acqua, M.L.**, Coghlan, V.M., Scott, J.D. (1996) Mutational Analysis of the A-Kinase Anchoring Protein (AKAP)-binding Site on RII: Classification of Side Chain Determinants for Anchoring and Isoform Selective Association with AKAPs. *J Biol Chem* **271**, 29016-29022.
6. Gao, T., Yatani, A., **Dell'Acqua, M.L.**, Sako, H., Green, S.A., Dascal, N., Scott, J.D., Hosey, M.M. (1997) cAMP-dependent Regulation of Cardiac L-type Calcium Channels Requires Membrane Targeting of Protein Kinase A and Phosphorylation of Channel Subunits. *Neuron* **19**, 185-196.
7. **Dell'Acqua, M.L.**, Faux, M.C., Thorburn, J., Thorburn, A., Scott, J.D. (1998) Membrane Targeting Sequences on AKAP79 Bind Phosphatidylinositol-4,5-bisphosphate. *EMBO J* **17**, 2246-2260. (Featured on Journal Cover)
8. **Dell'Acqua, M.L.**, Dodge, K.L., Tavalin, S.J., Scott J.D. (2002) Mapping the Protein Phosphatase-2B Anchoring Site on AKAP79: Binding and Inhibition of Phosphatase Activity are Mediated by Residues 315-360. *J Biol Chem* **277**, 48796-48802.
9. Gomez, L.L., Alam, S., Smith, K.E., Horne, E., **Dell'Acqua, M.L.** (2002) Regulation of A-Kinase Anchoring Protein 79/150-cAMP-dependent Protein Kinase Postsynaptic Targeting by NMDA Receptor Activation of Calcineurin and Remodeling of Dendritic Actin. *J Neurosci* **22**, 7027-7044.
10. Oliveria, S.F., Gomez, L.L., **Dell'Acqua, M.L.** (2003) Imaging Kinase-AKAP79-Phosphatase Scaffold Complexes at the Plasma Membrane in Living Cells using FRET Microscopy. *J Cell Biol* **160**, 101-112. (PMC2698451) (Featured on Journal Cover)
11. Uhlik, M.T., Abell, A.N., Johnson, N.L., Sun, W., Cuevas, B.D., Lobel-Rice, K.E., Horne, E.A., **Dell'Acqua, M.L.**, Johnson, G.L. (2003) Rac-MEKK3-MKK3 scaffolding for p38 MAPK activation during hyperosmotic shock. *Nat Cell Biol.* **5**, 1104-1110.
12. Gorski, J.A., Gomez, L.L., Scott, J.D., **Dell'Acqua, M.L.** (2005) Association of an AKAP Signaling Scaffold with Cadherin Adhesion Molecules in Neurons and Epithelial Cells. *Mol Biol Cell* **16**, 3574-3590. (Featured on Journal Cover) (PMC1182299)
13. Smith, K.E., Gibson, E.S., **Dell'Acqua, M.L.** (2006) cAMP-dependent Protein Kinase Postsynaptic Localization Regulated by NMDA Receptor Activation through Translocation of an A-kinase Anchoring Protein Scaffold Protein. *J Neurosci* **26**, 2391-2402.
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### Meeting Abstracts:

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6. **Dell'Acqua, M.L.** (2003) Subcellular Localization of Kinase/Phosphatase Signaling Complexes Endocrine Society Meeting 2003 Symposium of Subcellular Organization of Kinase/Phosphatase Signaling Complexes, Philadelphia, PA. Abstract S49-2. Plenary Presentation.
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24. Keith, D.L., Sanderson, J.L., Gibson, E.S., Woolfrey, K., Robertson, H.R., Olszewski, K., Kang, R., El Husseini, A., and **Dell'Acqua, ML** (2011) Palmitoylation of an AKAP Scaffold Protein Regulates Dendritic Endosomal Targeting and Synaptic Plasticity Mechanisms. Program No. 754 American Society for Cell Biology Annual Meeting. Denver, CO.
25. Gorski, JA, Sanderson, JL, Pink, MD, **Dell'Acqua, ML**, (2011) Synaptic Activity Stabilizes the Post-synaptic Density Scaffold Proteins SAP97 and AKAP79 in the Neuronal Dendritic Spine. Program No. 747 American Society for Cell Biology Annual Meeting. Denver, CO.
26. Lin, L, Sun, W, Kung, F, **Dell'Acqua, ML**, and Hoffman, DA (2011) AKAP79/150 impacts intrinsic excitability of hippocampal neurons through phospho-regulation of A-type K<sup>+</sup> channel trafficking. Program No. 253.04 Abstract Viewer. Washington, DC, Society for Neuroscience.
27. Yang, H, Siddoway, B, Hou, H, **Dell'Acqua, ML**, Xia, H (2011) Studying the Interaction between Protein Phosphatase 1 and its Binding Proteins by Bioluminescence Resonance

Energy Transfer Program No. 658.15 Abstract Viewer. Washington, DC, Society for Neuroscience.

28. Murphy, JG, **Dell'Acqua, ML** (2012) AKAP79/150 regulates signaling from dendritic spines to the nucleus through recruitment of protein kinase A and calcineurin to the L-type voltage-gated calcium channel. Program No. 239.05 Abstract Viewer. New Orleans, LA, Society for Neuroscience.
29. Dittmer, PJ, Sather, WA, **Dell'Acqua, ML** (2012) AKAP79/150 anchored PKA and calcineurin are critical components in calcium-dependent inactivation of neuronal L-type calcium channels. *Biophys J.* 102: 127a-128a
30. Youn, D, Oliveria, SF, **Dell'Acqua, ML**, Sather, WA (2012) Ser1928 is required for regulation of in calcium-dependent inactivation of Cav1.2 L-type calcium channels. *Biophys J.* 102:128
31. Freund, R.K., Potter, H., **Dell'Acqua, M.L.** (2014) Amyloid beta inhibition of long-term potentiation may involve block of Eg5 motor protein. Program No. 133.02. Abstract Viewer. Washington, DC, Society for Neuroscience
32. Woolfrey, K.M., Sanderson, J.L., **Dell'Acqua, M.L.** (2014) Palmitoylation of AKAP79/150 by the palmitoyl acyltransferase DHHC2 controls synaptic potentiation.. Program No. 505.09. Abstract Viewer. Washington, DC, Society for Neuroscience
33. Woolfrey, .K.M., Caballes, H., Goodell, D., **Dell'Acqua, M.L.**, Bayer, K.U. (2016) CaMKII regulates the de-palmitoylation and synaptic removal of AKAP79/150 to mediate structural LTD. Program No. 223.18. Abstract Viewer. San Diego, CA, Society for Neuroscience.
34. Chen, X., Feng, A., Crosby, K., Purkey, A., Winters, C., Crocker, V., Aronova, M., Leapman, R., Reese, T., **Dell'Acqua, M.** (2016) Distinct Molecular Conformations of AKAP79/150 in hippocampal spine synapses. Program No. 589.03 Abstract Viewer. San Diego, CA, Society for Neuroscience.
35. Purkey, A.M., Woolfrey, K.M., Crosby, K.C., Stich, D.G., Chick, W.S., Aoto, J., **Dell'Acqua, M.L.** (2018) AKAP150 palmitoylation regulates synaptic incorporation of Ca<sup>2+</sup>-permeable AMPA receptors to control LTP. Program No. Abstract Viewer. San Diego, CA, Society for Neuroscience.
36. 2020-2021 No meeting abstracts due to COVID-19

#### Competitive:

1. **Dell'Acqua, M.L.** (2002) Imaging a ternary kinase-AKAP-phosphatase signaling complex in living cells using FRET microscopy. Keystone Symposium on Protein Phosphorylation and Mechanisms of Cellular Regulation. Abstract# 221. Oral Presentation and Poster.
2. Gorski, J.A., Gomez, L.L., Alam, S., Bishop, A., Scott, J.D., **Dell'Acqua, M.L.** (2003) AKAP79 binding to cadherins: polarized targeting of a kinase-phosphatase signaling scaffold to cell-cell contacts in neurons and epithelial cells. Keystone Symposium on Signaling via Cell-Cell Interactions. Abstract#119. Oral Presentation and Poster.
3. Smith, K.E., Oliveria, S.F., Horne, E., Giobson, E.S., and **Dell'Acqua, M.L.** (2004) NMDA Receptor-PP2B Pathways Implicated in LTD Induce Loss of AKAP79/150 and Anchored PKA-RII from Synapses. FASEB Summer Research Conference on Protein Phosphatases. Snowmass, CO. Abstract#46. Oral Presentation and Poster.
4. Hudson, H.R., Gibson, E. S., Benke, T.A., **Dell'Acqua, M.L.** (2005) Role of A Kinase Anchoring Protein 79/150 (AKAP79/150) in Dendritic Spine Formation. Gordon Research Conference on Excitatory Amino Acids. Aussois, France. Poster.
5. Gorski, J.A., Gomez, L.L., Scott, J.D., **Dell'Acqua, M.L.** (2005) Association of an AKAP Signaling Scaffold with Cadherin Adhesion Molecules in Neurons and Epithelial Cells. American Society for Cell Biology Annual Meeting. San Francisco, CA. Plenary presentation.

6. Horne, EA and **Dell'Acqua, M.L.** (2006) Regulation of AKAP79 Dendritic Spine Targeting by Phospholipase C Gordon Research Conference on Cell Biology of the Neuron New London, NH. Poster.
7. Hudson, HR, Gibson, E.S., Benke, TA., **Dell'Acqua, M.L.** (2006) Regulation of Postsynaptic Structure and Function by an AKAP-MAGUK Interaction. Gordon Research Conference on Cell Biology of the Neuron New London, NH. Poster.
8. Oliveria, SF, Ohrtman, J., Gibson, E.S., Sather, W.A., **Dell'Acqua, M.L.** (2006) Regulation of Neuronal L-type Ca<sup>2+</sup> channels by AKAP-anchored PKA and Calcineurin. FASEB Summer Research Conference on Protein Phosphatases. Snowmass, CO. Oral Presentation and Poster.
9. Oliveria, SF, Sather, WA, **Dell'Acqua, M.L.** (2008) Localized Calcineurin Signaling Confers Ca<sup>2+</sup>-dependent Inactivation upon Neuronal L-type Ca<sup>2+</sup> Channels. FASEB Summer Research Conference on Protein Phosphatases. Snowmass, CO. Oral Presentation and Poster.
10. Pink, MD, Oliveria, SF, Sather, WA, **Dell'Acqua, M.L.** (2008) Dynamic Anchoring of Calcineurin to the Postsynaptic Scaffold Protein AKAP79/150 Controls Neuronal L-type Ca<sup>2+</sup> Channel Signaling to NFAT and CREB in the Nucleus. FASEB Summer Research Conference on Calcium and Cell Function. Snowmass, CO. Oral Presentation and Poster.
11. Sanderson, JL, Freund, RK, Gibson, ES, Smith, KE, Chick, W, **Dell'Acqua, M.L.** (2009) Regulation of Excitatory Synaptic Plasticity by postsynaptic Anchoring of Calcineurin. Gordon Research Conference on Excitatory Synapses and Brain Function. Les Diablerets, Switzerland. Poster Presentation.
12. Robertson, HR, Keith, DL, Gibson, ES, El-Husseini, A, **Dell'Acqua, M.L.** (2009) Dynamic Regulation of AKAP79/150 Targeting to Dendritic Spines by Palmitoylation. Gordon Research Conference on Excitatory Synapses and Brain Function. Les Diablerets, Switzerland. Poster Presentation.
13. Keith, D, Gibson, ES, Robertson, HR, Sanderson, JL, Kang, R, **Dell'Acqua, ML** (2010) AKAP79/150 palmitoylation is required for endosomal localization and regulation of postsynaptic structure and function. Gordon Research Conference on Cell Biology of the Neuron. Waterville Valley, NH. Invited Short talk and Poster Presentation.
14. Sanderson, JL, Gibson, ES, Freund, RK, Smith, KE, Chick, W, **Dell'Acqua, ML** (2010) Mice deficient in AKAP150-Calcineurin anchoring have altered hippocampal synaptic plasticity. Gordon Research Conference on Cell Biology of the Neuron. Waterville Valley, NH. Poster Presentation.
15. Keith, DJ, Sanderson JL, Gibson, ES, Robertson, HR, Woolfrey, K, Olszewski, K, Kang, R, El Husseini, A, **Dell'Acqua, ML** (2011) Palmitoylation of an AKAP Scaffold Protein Regulates Dendritic Endosomal Targeting and Synaptic Plasticity Mechanisms. Gordon Research Conference on Excitatory Synapse and Brain Function. Easton, MA. Poster Presentation.
16. **Dell'Acqua, ML**, Sanderson, J, Gibson, E, Freund, R, Smith, K, Chick, W (2011) Regulation of AMPA Receptor Trafficking and Synaptic Plasticity by an AKAP-Calcineurin Signaling Complex” in session on “Ion Channel Trafficking” FASEB Summer Conference on Ion Channel Regulation, Steamboat Springs, CO. Oral Presentation and Poster.
17. Sather, WA, Oliveria, SF, **Dell'Acqua, ML** (2011) Localized Calcineurin in Calcium-dependent Inactivation of L-type Ca<sup>2+</sup> Channels. FASEB Summer Conference on Ion Channel Regulation, Steamboat Springs, CO. Oral Presentation by WA Sather.
18. Murphy, JG, **Dell'Acqua, ML** (2011) Visualizing the Regulation of L-type Calcium Channel-dependent Dendrite to Nucleus Signaling by AKAP79/150. FASEB Summer Conference on Ion Channel Regulation, Steamboat Springs, CO. Poster Presentation.
19. Dittmer, PJ, Sather, WA, **Dell'Acqua, ML** (2012) AKAP79/150 anchored PKA and calcineurin are critical components in calcium-dependent inactivation of neuronal L-type calcium channels. FASEB Summer Conference on Calcium and Cell Function, Snowmass, CO. Poster Presentation and Oral Presentation.

20. Murphy, JG, **Dell'Acqua, ML** (2012) An AKAP79/150::L-type voltage-gated calcium channel complex regulates postsynaptic signaling to the transcription factor NFAT. FASEB Summer Conference on Calcium and Cell Function, Snowmass, CO. Poster Presentation.
21. **Dell'Acqua, ML**, Gibson, ES, Li, H, Hogan, PG (2012) Isoform-specific binding of MKK7 to calcineurin/PP2B is mediated by a PxIxIT docking motif. FASEB Summer Conference on Protein Phosphatases , Snowmass, CO. Poster Presentation and Oral Presentation.
22. Murphy, JG, Sanderson, JL, Gorski, JA, Scott, JD, Catterall, WA, Sather, WA, **Dell'Acqua, ML** (2013) Neuronal L-type Calcium Channel Activity and NFAT Transcriptional Signaling Requires AKAP79/150-anchored PKA. 4th International Meeting on Anchored cAMP Signaling Complexes, Aurora, CO. Poster Presentation and Oral Presentation.
23. Woolfrey, KM, Sanderson, JL, **Dell'Acqua, ML** (2013) Palmitoylation of AKAP79/150 by DHHC2 is Required for Excitatory Synaptic Potentiation. 4th International Meeting on Anchored cAMP Signaling Complexes, Aurora, CO. Poster Presentation and Oral Presentation.
24. Dittmer, PJ, Sather, WA, **Dell'Acqua, ML** (2013). Ca<sup>2+</sup>/Calcineurin-Dependent Inactivation of Neuronal L-type Ca<sup>2+</sup> Channels Requires Priming by AKAP-Anchored Protein Kinase A. 4th International Meeting on Anchored cAMP Signaling Complexes, Aurora, CO. Poster Presentation
25. Murphy, J.G., Sanderson, J.L., Gorski, J.A., Scott, J.D., Catterall, W.A., Sather, W.A., **Dell'Acqua, M.L.** (2014) AKAP-anchored PKA maintains neuronal L-type calcium channel activity and NFAT transcriptional signaling. Gordon Research Conference on Cell Biology of the Neuron. Waterville Valley, NH. Poster Presentation.
26. Murphy, J.G., Dittmer, P.J., Sanderson, J.L., Gorski, J.A., Scott, J.D., Catterall, W.A., Sather, W.A., **Dell'Acqua, M.L.** (2015) AKAP-anchored PKA maintains neuronal L-type calcium channel activity and NFAT transcriptional signaling. Keystone Symposium on "The Molecular Code of Cell Signaling: A tribute to Tony Pawson", Steamboat Springs, CO, Poster Presentation.
27. Murphy, J.G., Dittmer, P.J., Sanderson, J.L., Gorski, J.A., Scott, J.D., Catterall, W.A., Sather, W.A., **Dell'Acqua, M.L.** (2015) AKAP-anchored PKA maintains neuronal L-type calcium channel activity and NFAT transcriptional signaling. FASEB Scientific Research Conference on Ion Channel Regulation, Big Sky, MT, Poster Presentation.
28. Dittmer, P.J., **Dell'Acqua, M.L.**, Sather, W.A., (2015) Postsynaptic engagement of STIM1 by depletion of ER Ca<sup>2+</sup> stores governs L-channel signaling to the nucleus. FASEB Scientific Research Conference on Ion Channel Regulation, Big Sky, MT, Poster Presentation.
29. Wild, A.R., Sather, W.A., **Dell'Acqua, M.L.** (2015) Regulation of neuronal L-type calcium channel synapse-to-nucleus signaling by AKAP79/150. FASEB Scientific Research Conference on Ion Channel Regulation, Big Sky, MT, Poster Presentation.
30. Dittmer, P.J., **Dell'Acqua, M.L.**, Sather, W.A (2016) L-type Ca<sup>2+</sup> Channel and STIM1 Regulation of Dendritic Spine ER Structural Plasticity and Excitation-Transcription Coupling Cell Biology of the Neuron Gordon Research Conference, Waterville Valley, NH. Poster Presentation. Poster Presentation and short talk.
31. Purkey, A., Woolfrey, K.M., Crosby, K.C., **Dell'Acqua, M.L.** (2016) Regulation of Synaptic Plasticity by AKAP79/150 Palmitoylation. Gordon Research Conference on Cell Biology of the Neuron. Waterville Valley, NH. Poster Presentation.
32. Freund, R.K., Gibson, E.S., Potter, H., **Dell'Acqua, M.L.** (2016) Amyloid Beta Postsynaptic Signaling through AKAP-anchored Calcineurin. FASEB Science Research Conference on Protein Phosphatases, Steamboat Springs, CO. Poster Presentation and short talk.

33. Purkey, A., Woolfrey, K.M., Crosby, K.C., **Dell'Acqua, M.L.** (2017) Regulation of Synaptic Plasticity by AKAP79/150 Palmitoylation. Gordon Research Conference on Excitatory Synapse and Brain Function. Les Diablerets, Switzerland. Poster Presentation
34. Sanderson, J.L., Scott, J.D., **Dell'Acqua, M.L.** (2017) Control of homeostatic synaptic plasticity by AKAP-anchored kinase and phosphatase regulation of Ca<sup>2+</sup>-permeable AMPA receptors,. Gordon Research Conference on Excitatory Synapse and Brain Function. Les Diablerets, Switzerland. Poster Presentation
35. Dittmer, P.J., **Dell'Acqua, M.L.**, Sather, W.A. (2017) STIM1 Ca<sup>2+</sup> Sensor Control of L-type Ca<sup>2+</sup> Channels Directs Plasticity of Dendritic Spine Ultrastructure. FASEB Science Research Conference on Ion Channel Regulation, Steamboat Springs, CO. Poster Presentation
36. Martinez, T.P., Gibson, E.S., Freund, R.K., **Dell'Acqua, M.L.** (2017) Possible Role of L-type Calcium Channel-NFAT Signaling in Amyloid  $\beta$ -induced Dendritic Spine Loss. FASEB Science Research Conference on Ion Channel Regulation, Steamboat Springs, CO. Poster Presentation
37. Wild, A.R., Sather, W.A., **Dell'Acqua, M.L.** (2017) Spatiotemporal Characteristics of Excitation-Transcription Coupling through the L-type Ca<sup>2+</sup> Channel-NFAT Pathway. FASEB Science Research Conference on Ion Channel Regulation, Steamboat Springs, CO. Poster Presentation and short-talk
38. Purkey, A.M., Woolfrey, K.M., Crosby, K.C., Stich, D.G., Chick, W.S., Aoto, J., **Dell'Acqua, M.L.** (2018) AKAP150 palmitoylation regulates synaptic incorporation of Ca<sup>2+</sup>-permeable AMPA receptors to control LTP. Gordon Research Conference on Synaptic Transmission. Waterville Valley, NH. Poster Presentation
39. Wild, A.R., Sinnen, B.L., Dittmer, P.J., Kennedy, M.J., Sather, W.A., **Dell'Acqua, M.L.** (2018) Synapse-to-nucleus communication through calcineurin and NFAT is mediated by L-type Ca<sup>2+</sup> channel-dependent Ca<sup>2+</sup> spike propagation to the soma. Gordon Research Conference on Synaptic Transmission. Waterville Valley, NH. Poster Presentation and short-talk.
40. Wild, A.R., Sinnen, B.L., Dittmer, P.J., Kennedy, M.J., Sather, W.A., **Dell'Acqua, M.L.** (2019) Regulation of Neuronal Excitation-Transcription Coupling by L-channel Ca<sup>2+</sup> Spikes. FASEB Scientific Research Conference on Ion Channel Regulation, Lisbon, Portugal. Oral presentation
41. 2020-2021 No meeting abstracts due to COVID-19