



**University of Colorado**  
**Department of Pharmacology**  
**Graduate Student**  
**&**  
**Post-Doctoral Fellow**  
**Research Day**

September 12<sup>th</sup>, 2016

## Schedule

*\*\*All talks will be held in Hensel Phelps East. Poster sessions, lunch & reception with faculty will be held in the Krugman Conference Hall*

- 9:30-10:30 AM      Check-in & Poster Set-up  
*Light refreshments will be served*
- 10:30-10:45 AM      Welcome & Opening Remarks  
Dr. Mark Dell'Acqua  
Professor & Pharmacology Vice Chairman
- 10:45-11:05 AM      Brooke Sinnen  
4<sup>th</sup> Year Pharmacology Graduate Student  
Kennedy Lab  
*Determining the mechanism of beta-amyloid-induced NMDA receptor dysfunction*
- 11:05-11:30 AM      Sizhao 'Kevin' Lu, PhD  
Post-Doctoral Fellow  
Weiser-Evans Lab  
*The protective role of PTEN against cardiovascular inflammation and fibrosis*
- 11:30-11:50 AM      Sascha Strait  
4<sup>th</sup> Year Pharmacology Graduate Student  
Wang Lab  
*Smad Science: How the loss of Smad4 promotes immune suppression in head and neck cancer*
- 11:30-12:15 PM      Angie Wild, PhD  
Post-Doctoral Fellow  
Dell'Acqua Lab  
*Synapse to nucleus communication: long distance signaling through the transcription factor NFAT*
- 12:15-1:00 PM      Lunch
- 1:00-1:20 PM      Jess Spiltoir  
6<sup>th</sup> Year Pharmacology Graduate Student  
Tucker Lab  
*Illuminating transcriptional regulation*
- 1:20-1:45 PM      Mel Vincent, PhD  
Post-Doctoral Fellow  
Ford Lab  
*Defining the role of Six1 in Ewings sarcoma*

1:45-2:00 PM Coffee Break *in Hensel Phelps East*

2:00-2:20 PM Alicia Purkey  
4<sup>th</sup> Year Pharmacology Graduate Student  
Dell'Acqua Lab  
*Regulation of synaptic plasticity by AKAP79/150 palmitoylation*

2:20-2:45 PM Wallace Liu, PhD  
Post-Doctoral Fellow  
Churchill Lab  
*Mechanisms of chromatin assembly by histone chaperones*

2:45-3:00 PM Coffee Break *in Krugman Conference Hall*

3:00-4:00 PM Poster Session (Even numbers)

4:00-5:00 PM Poster Session (Odd numbers)

5:00-7:00 PM Extended Poster Session with Faculty  
Reception with food & drink  
Awards & Raffle Drawings (at 5:30)

# Poster Titles

## Developmental & Cancer Biology

1. Autophagic degradation of FOXO3a links autophagy to apoptosis and cancer drug chemosensitization  
*Brent Fitzwalter, 5<sup>th</sup> year Pharmacology Student, Thorburn Lab*
2. Exploring how the loss of Smad4 promotes immune suppression in head and neck squamous cell carcinoma  
*Sascha Strait, 4<sup>th</sup> year Pharmacology Student, Wang Lab*
3. Clinical mechanisms of resistance to cisplatin-based therapies in bladder cancer  
*Andrew Goodspeed, 4<sup>th</sup> year Pharmacology Student, Costello Lab*
4. Deciphering opposing roles of six1a and six1b in rhabdomyosarcoma tumorigenesis  
*Jessica Hsu, 3<sup>rd</sup> year Pharmacology Student, Artinger/Ford Labs*
5. Investigation of tumor cell autonomous and TME-dependent vulnerabilities in murine HNSCC cell lines  
*Sean Korpela, 2<sup>nd</sup> year Pharmacology Student, Heasley Lab*
6. Investigating a role for transient site-specific copy gain in metallothionein gene amplification  
*Greg Wright, 2<sup>nd</sup> year Pharmacology Student, Black Lab*
7. The combined activity of MLL1 and MLL2 supports leukemogenesis by MLL fusion oncoproteins  
*Yufei Chen, 7<sup>th</sup> year Dartmouth Graduate Student, Ernst Lab*
8. Dissection of EGFR inhibitor induced EMT reprogramming in lung cancer  
*Natalia Gurulé, 3<sup>rd</sup> year Cancer Biology Student, Heasley Lab*
9. Breast cancer cells overexpressing EMT-inducing transcription factors mediate metastasis of neighboring tumor cells via secretion of molecules that upregulate hedgehog signaling  
*Hengbo Zhou, 3<sup>rd</sup> year Cancer Biology Student, Ford Lab*
10. Six1 promotes EMT and tumor growth by regulating phospholipid metabolism  
*Michelle Guney, Post-Doctoral Fellow, Ford Lab*
11. The autophagy machinery controls cell death switching between apoptosis and necroptosis  
*Megan Goodall, Post-Doctoral Fellow, Cramer/Thorburn Labs*
12. Epigenetic regulation of craniofacial development: a study on *Danio rerio* implementing CRISPR/Cas9  
*Rwik Sen, Post-Doctoral Fellow, Artinger Lab*

## Neuroscience

13. Regulation of synaptic plasticity by AKAP79/150 palmitoylation  
*Alicia Purkey, 4<sup>th</sup> year Pharmacology Student, Dell'Acqua Lab*
14. Manipulating cells and synapses with light  
*Brooke Sinnen, 4<sup>th</sup> year Pharmacology Student, Kennedy Lab*
15. Extended therapeutic window of a novel inhibitor of TRPM2 channels after stroke  
*Ivelisse Cruz-Torres, 3<sup>rd</sup> year Pharmacology Student, Herson Lab*

16. Characterization of schizophrenia-related CaMKII mutations  
*Sarah Cook, 2<sup>nd</sup> year Pharmacology Student, Bayer Lab*
17. Utilizing circuit tracing virus to visualize the subiculum-nucleus accumbens connections  
*Brett Dunn, 2<sup>nd</sup> year Pharmacology Student, Aoto Lab*
18. Postsynaptic AKAP-anchored calcineurin/PP2B signaling mediates amyloid  $\beta$ -induced synaptic dysfunction  
*Tyler Martinez, 2<sup>nd</sup> year Pharmacology Student, Dell'Acqua Lab*
19. Cooperative regulation of postsynaptic membrane composition by NMDA receptors and L-type voltage-gated calcium channels  
*Brian Hiester, Post-Doctoral Fellow, Kennedy Lab*
20. The ER  $\text{Ca}^{2+}$  sensor, STIM1 directs L-type  $\text{Ca}^{2+}$  channel-dependent structural plasticity in dendritic spines and NFAT signaling to the nucleus  
*Philip Dittmer, Post-Doctoral Fellow, Dell-Acqua/Sather Labs*
21. Developing a framework for the application of fluorescence fluctuation microscopy to study protein mobility in excitatory neurons  
*Kevin Crosby, Post-Doctoral Fellow, Dell'Acqua Lab*

### **Cardiovascular & Respiratory**

22. Heparan sulfate is shed into the alveolus after intratracheal lung injury and facilitates alveolar epithelial repair  
*Sarah Haeger, 4<sup>th</sup> year Pharmacology/MSTP Student, Tuder Lab*
23. Characterization of smoking-induced microparticles  
*Danting Cao, 3<sup>rd</sup> year Pharmacology Student, Petrache Lab*
24. Epigenetic mechanisms governing pro-fibrotic impairment of cardiomyogenesis  
*Andrew Riching, 3<sup>rd</sup> year Pharmacology Student, Song Lab*
25. Modeling and mechanistic study of Danon disease with human iPSC-derived cardiomyocytes  
*Congwu Chi, Instructor, Song Lab*

### **Computational Bioscience**

26. Elucidating the systemic effects of trisomy 21 using a novel blood protein signature  
*Rani Powers, 3<sup>rd</sup> year Computational Biosciences Student, Costello Lab*
27. Network inference and the knowledge base of biomedicine  
*Tiffany Callahan, 2<sup>nd</sup> year Comp. Biosciences Student, Hunter Lab*
28. Knowledge-based analysis and interpretation of heart failure GWAS data  
*Laura Stevens, 2<sup>nd</sup> year Comp. Biosciences Student, Görg Lab*
29. Modeling cellular circuitry using Boolean networks  
*Brian Ross, Post-Doctoral Fellow, Costello Lab*

### **Structural Biology**

30. Allosteric inhibition of small GTPases  
*Cassie Smith, 2<sup>nd</sup> year Structural Biology & Biochemistry Student, Jones Lab*

31. Multivalent chromatin engagement and inter-domain crosstalk regulate MORC3 ATPase  
*Forest Andrews, Post-Doctoral Fellow, Kutateladze Lab*
32. Developing photoactivatable neurotoxins for light-dependent synaptic silencing using  
CRY2/CIB dimerization system  
*Qi Liu, Post-Doctoral Fellow, Tucker Lab*

## Pharmacology Faculty Taking Students

### **Yes**

Jason Aoto  
Ulli Bayer  
Joshua Black  
Mair Churchill  
Mark Dell'Acqua  
Robert Doebele  
Elan Eisenmesser  
Patricia Ernst  
Joaquin Espinosa  
Curt Freed  
Matthew Kennedy  
Tatiana Kutateladze  
Timothy McKinsey  
Catherine Proenza  
Kate Smith (for 3<sup>rd</sup> rotation)  
Kunhua Song  
Carmen Sucharov  
Chandra Tucker  
Xiao-Jing Wang  
Mary Weiser-Evans

### **Maybe**

Timothy Benke  
Heide Ford  
Anthony Gerber  
Lynn Heasley  
Jeffrey Kieft  
James Sikela

### **No**

James Costello  
Peter Henson  
Paco Herson  
Robert Hodges  
Paula Hoffman  
Christina Leslie  
Robert Murphy  
Raphael Nemenoff  
Irina Petrache  
J. David Port  
William Sather  
Dan Theodorescu  
Andrew Thorburn  
Rubin Tudor  
Dennis Voelker

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Graduate School

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Department of Pharmacology

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**Our Faculty Poster Judges:** Drs. Jason Aoto, Josh Black, Mair Churchill, Matt Kennedy, Tanya Kutateladze, David Port, & Kunhua Song

