UPSTATE
MEDICAL UNIVERSITY
COLLEGE OF GRADUATE STUDIES

upstate grad update

transforming students from consumers of knowledge into producers of knowledge

september 2016

THE THREE-YEAR ITCH

In my time, long ago, as a graduate student and more recently as dean I have come to discover a phenomenon called the three-year itch. No, this has nothing to do with marriage but instead refers to students in their third to fourth year. It is a really tough spot in the trek through graduate school. At that point students have finished all of their classes and the qualifying exam and are full time in the lab. For most students nothing is working yet; all of their experiments are failing in completely unpredictable ways. I have seen tubes of radioactivity disintegrate in microfuges, agarose gels melt down in the box or run the wrong way, boxes of precious materials go into the refrigerator instead of the freezer, and fungi completely take over every culture dish. And then there is the gorgeous gel without any controls, or the beautiful figure you made but never saved on the computer. Worse yet is your advisor ,who is starting to doubt your technical and mental abilities, and your fellow third year that just submitted their second paper. All of these things lead to serious doubts: can I do this; is this really what I want to do; why didn't I join that other lab I rotated in; or I would be good as a waiter. Then you realize that your apartment is a mess, you haven't slept or eaten much in a week, your lab mate seems to indicate that you smell, and people keep asking you in a concerned voice how you are doing.

This is a point where we want to give up. We start looking at job ads and consider other careers. Students have different ways of getting through this itch, and some do leave, but this is where we need to ask for help. We need to get some sleep so we remember the controls. We need to think hard, and plan, and read before we jump into doing the same experiment for the tenth time. Suddenly, things will usually start to work. Experiments become easier and the project gets really exciting. We wonder why we did things differently before since it makes no sense now. We remember why we got into science and the joy of discovery. We become the leaders in the lab, help the junior students, and our advisors brag about us to other faculty. The satisfaction is enormous. Hang in there!

– Mark E. Schmitt, PhD
Dean, College of Graduate Studies
schmittm@upstate.edu

publications

Repairing the Brain by SCF+G-CSF Treatment at 6 Months Postexperimental Stroke: Mechanistic Determination of the Causal Link Between Neurovascular Regeneration and Motor Functional Recovery.

Cui L, **WANG D**, McGillis S, Kyle M, **ZHAO LR.**; ASN Neuro. 2016 Aug 9;8(4). pii: 1759091416655010. doi: 10.1177/1759091416655010. Print 2016 Jun.

Protein-like Nanoparticles Based on Orthogonal Self-Assembly of Chimeric Peptides.

Jiang L, Xu D, **NAMITZ KE**, **COSGROVE MS**, Lund R, Dong H.
Small. 2016 Aug 9. doi: 10.1002/smll.201600910. [Epub ahead of print]

Structural and functional basis of protein phosphatase 5 substrate specificity.

Oberoi J, **DUNN DM**, Woodford MR, Mariotti L, Schulman J, **BOURBOULIA D**, **MOLLAPOUR M**, Vaughan CK.; Proc Natl Acad Sci U S A. 2016 Aug 9;113(32):9009-14. doi: 10.1073/pnas.1603059113. Epub 2016 Jul 27.

The Ets protein Pointed prevents both premature differentiation and dedifferentiation of Drosophila intermediate neural progenitors.

XIE Y, **LI X,** Deng X, Hou Y, O'Hara K, Urso A, Peng Y, Chen L, **ZHU S**.; Development. 2016 Sep 1;143(17):3109-18. doi: 10.1242/dev.137281. Epub 2016 Aug 10.

RNA sequencing of transformed lymphoblastoid cells from siblings discordant for autism spectrum disorders reveals transcriptomic and functional alterations: Evidence for sex-specific effects.

TYLEE DS, Espinoza AJ, **HESS JL**, Tahir MA, McCoy SY, Rim JK, Dhimal T, **COHEN OS**, **GLATT SJ**.; Autism Res. 2016 Aug 16. doi: 10.1002/aur.1679. [Epub ahead of print]

Incision of damaged DNA in the presence of an impaired Smc5/6 complex imperils genome stability.

PENG J, **FENG W**.; Nucleic Acids Res. 2016 Aug 17. pii: gkw720. [Epub ahead of print]

Lmx1b is required for the glutamatergic fates of a subset of spinal cord neurons.

HILINSKI WC, Bostrom JR, England SJ, Juárez-Morales JL, de Jager S, Armant O, Legradi J, Strähle U, Link BA, **LEWIS KE**.; Neural Dev. 2016 Aug 23;11(1):16. doi: 10.1186/s13064-016-0070-1.

Shared and distinct mechanisms of atonal regulation in Drosophila ocelli and compound eyes.

ZHOU Q, **DESANTIS DF**, Friedrich M, **PIGNONI F.**; Dev Biol. 2016 Oct 1;418(1):10-6. doi: 10.1016/j.ydbio.2016.08.025. Epub 2016 Aug 23.

Targeted Disruption of the Interaction Between WD-40 Repeat Protein 5 (WDR5) and Mixed Lineage Leukemia (MLL)/SET1 Family Proteins Specifically Inhibits MLL1 and SETd1A Methyltransferase Complexes.

ALICEA-VELÁZQUEZ NL, **SHINSKY SA**, Loh DM, Lee JH, Skalnik DG, **COSGROVE MS**.; J Biol Chem. 2016 Aug 25. pii: jbc.M116.752626. [Epub ahead of print]

Tbx3 represses bmp4 expression and with Pax6 is required and sufficient for retina formation.

MOTAHARI Z, **MARTINEZ-DE LUNA RI**, **VICZIAN AS**, **ZUBER ME**.; Development. 2016 Aug 30. pii: dev.130955. [Epub ahead of print]

Drug-Specific Design of Telodendrimer Architecture for Effective Doxorubicin Encapsulation.

Jiang W, Wang X, **GUO D**, **LUO J**, Nangia S.; J Phys Chem B. 2016 Sep 15;120(36):9766-77. doi: 10.1021/acs.jpcb.6b06070. Epub 2016 Aug 31.

Design, synthesis, and biological characterization of novel PEG-linked dimeric modulators for CXCR4.

Yang Y, **GAO M**, Zhang Q, Zhang C, Yang X, Huang Z, An J.; Bioorg Med Chem. 2016 Aug 31. pii: S0968-0896(16)30679-4. doi: 10.1016/j.bmc.2016.08.062. [Epub ahead of print]

presentations

SOCIETY FOR DEVELOPMENTAL BIOLOGY 75TH ANNUAL MEETING

Boston, MA | August 4th - 8th

Several of our students attended the 75th Annual SDB Meeting in Boston last month. Attendees, pictured from left, are:

DANA DESANTIS, a PhD Student in Neuroscience, who presented "Genetic Congrol of Perippodial Epithelium identity in the eye disc of Drosophila"

ANDREW JACOB, a PhD Student in Anatomy & Cell Biology, who presented "Paxillin in Myotome Morphogenesis. "

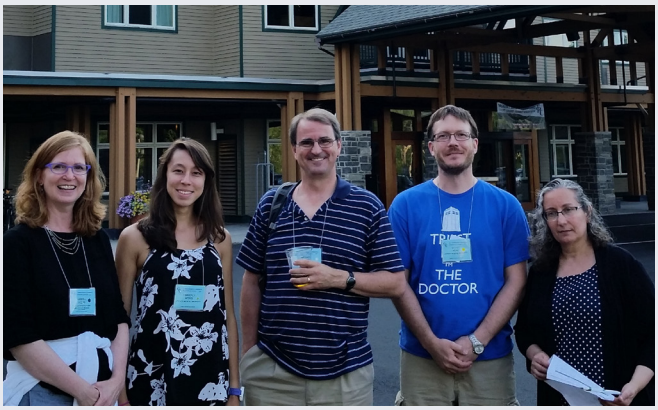
AGNIK DASGUPTA, a PhD Student in Anatomy & Cell Biology, who presented "Quantitative analysis of Left-Right Organizer Morphogenesis"

ERIC ZLUHAN, a PhD Student in Neuroscience, who presented "Morphological response of genetically identified, immature cortical neurons to cortical extracellular matrix and ethanol exposure"

Also pictured: **JOSH ENCK** a first year PhD Student in Neuroscience student who previously worked as a tech in Dr. Olson's laboratory.

SERGIO COUOH-CARDEL, a PhD Student in Biochemistry & Molecular Biology, presented at the Gordon Research Conference, Synaptic Transmission, held in Waterville Valley, NH, August 14th through 19th. His poster title was: "The V-ATPase c-ring acts as an ion-conducting pore suggesting a direct involvement in neurotransmitter release." Sergio was also the discussion leader in a session titled: Presynaptic Mechanisms of Neurotransmission

ROBERT CARROLL, a PhD Student in Anatomy & Cell Biology, presented at the Gordon Research Conference, Plant and Microbial Cytoskeleton, held in Andover, NH, August 14th through 19th. The title of his presentation was: "Cooperation between Myo1 head and tail promotes Myo1 localization and function during endocytosis in fission yeast."



GORDON RESEARCH CONFERENCE, VISUAL SYSTEM DEVELOPMENT

Mount Snow, VT | August 6th - 12th

Attendees, pictured from left, are: **DR. ANDREA VICZIAN, KIMBERLY WONG,** a PhD Student in Neuroscience, who presented "Rapid generation of photoreceptor progenitor-like cells by inhibition of BMP and Activin/TGFß signaling in mouse embryonic stem cell cultures," and served as a discussion leader, **DR. MICHAEL ZUBER, SCOTT NEAL,** a postdoc in Ophthalmology, who presented ."Genetic control of peripodial identity in the eye disc of Drosophila" and **DR. FRANCESCA PIGNONI.**

RYAN O'DELL, an MD/PhD Student in Neuroscience, and Dr. Schwartz have authored and published "Second and Third Generation Antipsychotics" now available on Amazon at the link below!

https://www.amazon.com/Second-Third-Generation-Antipsychotics-COMPREHENSIVE-ebook/dp/B01KFY1UAO/ref=sr_1_fkmr0_1?ie=UTF8&qid=1471954143&sr=8-1-fkmr0&keywords=pharmacodynamics+of+the+second+and+third+generation+antipsychotics#nav-subnav

from our students

HARNEET BHATTI, an MS student in Anatomy, successfully defended her thesis last month. Harneet's thesis advisor is Dr. Donna Osterhout. Harneet is attending medical school at the American University of the Carribean.
Congratulations, Harneet!

RENEE BULLARD, an MS student in Biochemistry, successfully defended her thesis last month. . Renee's thesis advisor is Dr. Dimitra Bourboulia. Renee has accepted a position as a Lecturer in the Biology Department at SUNY Cortland.
Congratulations, Renee!

MICHAEL JASKOLKA, a PhD Student in Biochemistry & Molecular Biology, successfully passed his qualifying exam last month. Michael's dissertation advisor is Dr. Patricia Kane. **Congratulations, Michael!**

ERICA COLICINO, a PhD Student in Anatomy & Cell Biology, successfully passed her qualifying exam last month. Erica's dissertation advisor is Dr. Heidi Hehnly. **Congratulations, Erica!**

AARON ALTMAN, an MD/PhD Student in Microbiology & Immunology, successfully passed his qualifying exam last month. Aaron's dissertation advisor is Dr. Gary Chan. **Congratulations, Aaron!**

MARISSA SMITH, a PhD Student in Biochemistry & Molecular Biology, successfully passed her qualifying exam last month. Marissa's dissertation advisor is Dr. Bruce Knutson. **Congratulations, Marissa!**

from our alumni

KRISTIN GIAMANCO, PHD, started her new position as an Assistant Professor of Biology at Western Connecticut State University in August 2016. Kristin will be primarily teaching undergraduates but is also running a small lab. She is retaining her connection with Weill Cornell Medical College, in New York City, as an Adjunct Assistant Professor of Research in Neuroscience. Kristin married Steven Fierraro, a cabinetmaker, on September 26, 2014, in New York City. Kristin earned her PhD from the Neuroscience Program in 2012. **Congratulations, Kristin!**

We love hearing from you ...
Drop by our website & let us know how you're doing!

STEPHEN SHINSKY, PHD has accepted a new postdoc position the lab of Dr. David W. Christianson in the Department of Chemistry at the University of Pennsylvania beginning this month. Stephen was previously working in Dr. Brian Strahl's lab at UNC Chapel Hill in the department of Biochemistry & Biophysics and Lineberger Comprehensive Cancer Center.

Though only there 10 months, it has been his most productive year in science. Stephen was awarded two competitive postdoctoral fellowships:
1. Ruth L. Kirschstein National Research Service Award (NSRA) Individual Postdoctoral Fellowship 1F32CA210919-01 (June, 2016) through the National Cancer Institute (NCI) of the National Institutes of Health (NIH)
2. Pagono Postdoctoral Fellowship Award in Integrative Training in Cancer Model Systems (ITCMS) (January, 2016) through the Lineberger Comprehensive Cancer Center of the University of North Carolina at Chapel Hill

He has also published two co-first authored papers and one co-authored paper:
1. Hacker, K.E.*, Fahey, C.C.*, Shinsky, S.A.*, Chiang, Y-C.J.*, DiFiore, J.V.*, Jha, D.K., Vo, A.H., Shavit, J.A., Davis, I.J., Strahl, B.D., Rathmell, W.K. 2016. Structure/Function Analysis of Recurrent Mutations in SETD2 Reveals a Critical and Conserved Role for a SET Domain Residue in Maintaining Protein Stability and H3K36 Trimethylation. Journal of Biological Chemistry (in press, accepted) *Equal Contribution
2. Andrews F.H.*, Shinsky S.A.*, Shanle, E.K., Bridgers, J.B., Gest, A., Tsun, I.K., Krajewski, K., Shi, X., Strahl, B.D., Kutateladze, T.G. 2016. The Taf14 YEATS domain is a reader of histone crotonylation. Nature Chemical Biology 12: 396-398 *Equal Contribution
3. Gatchalian, J.*, Mora, C.*, Shinsky, S.A., Ospina, R.R., Liendo, A.M., Klein, B.J., Andrews, F.H., Krajewski, K., Strahl, B.D., van Wely, K.H.M., Kutateladze, T.G. 2016. Chromatin condensation and recruitment of PHD finger proteins to histone H3K4me3 are mutually exclusive. Nucleic Acids Research 44(13): 6101-6112

In March of this year, Stephen began working as an independent research scientist (contractor) and consultant at Epicypher Inc., a startup biotechnology company founded by Dr. Stahl about 4 years ago. Stephen will continue as a consultant at Epicypher Inc. now that he has begun work at University of Pennsylvania. He says: "It has been interesting and fun to gain some 'industry' experience."

IS THERE SOMETHING WE MISSED??
Email Jennifer Brennan at brennanj@upstate.edu to get it included in the next issue!

incoming class of graduate students

WE ARE SO VERY EXCITED TO WELCOME THE BRAND NEW CLASS OF GRADUATE STUDENTS TO CAMPUS!

ALEXANDER BAKER-WILLIAMS
PhD Student
Biomedical Sciences Program
University of Portsmouth

JOSHUA ENCK
PhD Student
Neuroscience Program
SUNY ESF

KAMAL NAPHRI
PhD Student
Biomedical Sciences Program
Rutgers University - New Brunswick

MICHAEL WHITEHEAD
PhD Student
Biomedical Sciences Program
Florida State University, BS;
University of South Florida, MS

MICHAEL BURKE
PhD Student
Biomedical Sciences Program
Cornell University

FANGHUI HUA
PhD Student
Biomedical Sciences Program
Nanjing Medical University, BS;
Nanjing University of Chinese Medicine, MS

MARIA PRESTI
PhD Student
Biomedical Sciences Program
Bard College at Simon's Rock

REBECCA WINKLER
PhD Student
Biomedical Sciences Program
Thomas A. Edison State College

MADELINE CLARK
PhD Student
Biomedical Sciences Program
SUNY ESF

BAO LE
PhD Student
Biomedical Sciences Program
Wichita State University, BS;
University of Houston-Clear Lake, MS

JAVIER SANCHEZ POZO
PhD Student
Biochemistry Program
King Juan Carlos Unviersity

BRIAN ZEBERL
PhD Student
Biomedical Sciences Program
RIT

DEVIN DAPONTE
PhD Student
Biomedical Sciences Program
University of Central Florida

MEI YUN LIN
PhD Student
Biomedical Sciences Program
D'Youville College

ASHLEY SWEENEY
PhD Student
Biomedical Sciences Program
University of Massachusetts - Dartmouth

NICHOLAS ZEHRBACK
PhD Student
Biomedical Sciences Program
University of Arizona

NATELA DUSHUKYAN
PhD Student
Biomedical Sciences Program
Rhode Island College

S. M. JAMIL MAHMUD
PhD Student
Biomedical Sciences Program
Jahangirnagar University, MS & BS

ANDREW UNDERWOOD
PhD Student
Biomedical Sciences Program
SUNY ESF, BS;
University of Rochester, MS

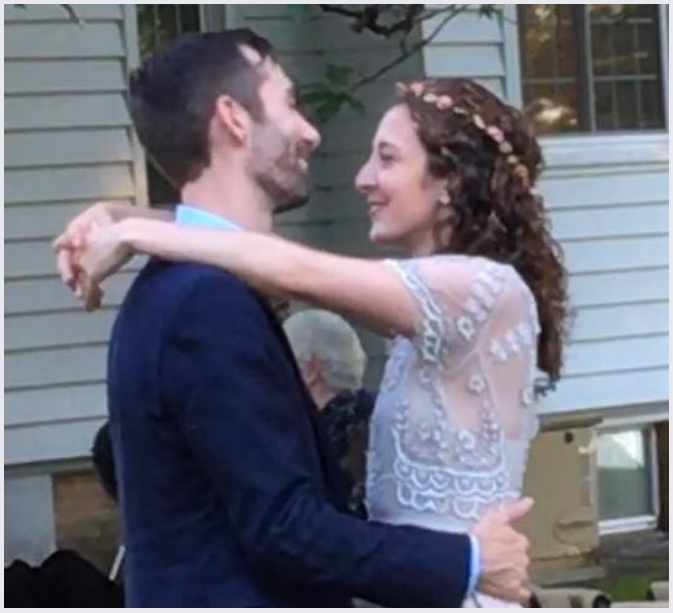
SCROLL DOWN FOR PICTURES FROM THE WELCOME RECEPTION!

upcoming events & save the dates!

Last month, we welcomed 19 first year students into the College of Graduate Studies at the annual Welcome Reception. Current students, postdocs, faculty, and staff attended.

Last month, we said good-bye to our Summer Undergraduate Research Fellowship (SURF) students. The summer program ended on August 12th. Pictured above, the students proudly held their certificates of completion with Dr. Michael Cosgrove, Director of the SURF Program, on their last day.

in other news



NYCOLE MAZA, a PhD Student in Neuroscience, married Kevin Cronin on the shores of Oneida Lake on August 6th. Kevin is a chef at the Inn Between Restaurant. Congratulations, newlyweds!

OLESEA COJOHARI, a PhD Student in Microbiology & Immunology, performed at the New York State Fair on Saturday, August 27th. The event, held in the Empire Theater, featured various performances by dancers from the community and included swing, ballroom, and even belly dancing. Olesea's group performed two cuban dances: the Salsa and the Rueda de Casino - a type of Salsa dance performed in a circle. The Rueda/ Salsa dancers are pictured above. From left to right: Kanat Bolazar, Camille Warner, Susan Sapareto, Christine Akoh, Howard Mantequilla, and Olesea.

HEATHER NELSON, a PhD Student in Anatomy & Cell Biology, and **STUTI SHARMA,** a PhD Student in Biochemistry & Molecular Biology, participated in the 8th Annual Syracuse Iron Girl Competition at Oneida Shores on Sunday, August 7th. Nearly 700 women competed in the triathalon, which included a 600-meter swim, 30K bike ride and a 5K run. Heather Nelson was the winner in the competitive wave with an overall time of 1:25:03.7.

upcoming events & save the dates!

CAREER DEVELOPMENT

Wednesday, October 5, 2016 | 2:00 - 5:00 PM | Weiskotten 3111

ENGAGING A DIVERSE AUDIENCE: TELLING A SCIENTIFIC STORY

Itai Cohen (Associate Professor of Physics, Cornell University)
Linda Glaser (Writer & Publicist for Faculty, Cornell University)

Learn how to effectively communicate your scientific message to any audience: academics, reporters, investors and more in this fun and interactive workshop. Participants will learn how to create and deliver an elevator pitch and conduct an interview. You don't want to miss it!

CAREER DEVELOPMENT

Wednesday, October 19, 2016 | 12:00 - 1:00 PM | Setnor 3509

HOW TO SELECT A POSTDOC ADVISOR

Michael Cosgrove (Associate Professor, Biochemistry & Molecular Biology, Upstate Medical University)

Whether you're getting ready to graduate or just starting to think about life post-grad school, you won't want to miss this! Find out the things you need to know as you start applying for postdoc positions and the things you should be looking for when selecting a postdoc advisor and lab. Join us as Dr. Cosgrove and some of our junior faculty offer their best advice and tips!

CAREER DEVELOPMENT

Wednesday, November 16, 2016 | 11:00 - 1:30 PM | Weiskotten 3109

INTERNATIONAL PROFESSIONALS IN SCIENCE: NAVIGATING OPT, J1, H1 & MORE!

Jennifer Abbott (International Student Advisor, Student Affairs, Upstate)
Patty Brecht (Human Resources, Upstate)
Mary Jo Dinuzzo (Graduate Medical Education Upstate)
Sue Henderson-Kendrick (Graduate Medical Education Upstate)
Ramon Rivera (Attorney at Law, Mackenzie Hughes, LLP)

Our panel of experts will walk you through the application process for OPT, transitioning to an H1 or J1 visa and explain the differences of each. Then, we'll open up the discussion to you, where our panel and a local attorney who specializes in international law will answer your questions.

AFTERNOON TEA:
Every Wednesday at 3:00
First Wednesday of the month, tea is at the NRB 3708 (call 6-7753), all others in WH 3120.

IS THERE SOMETHING WE MISSED??
Email Jennifer Brennan at brennanj@upstate.edu to get it included in the next issue!