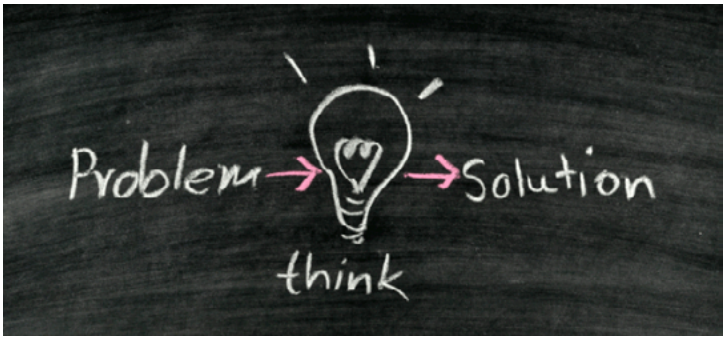
upstategrad update

transforming students from consumers of knowledge into producers of knowledge

august 2015



FROM THE DEAN: SOLUTION BASED THINKING

Earlier this week a faculty member called me about some issues with a student. It took him some time to articulate the issues, but then he said, "The student is too concerned about what went wrong in an experiment as opposed to how to solve the problem."

I recognized this issue immediately. I have seen it, heard about it and it keeps coming back. We all know this problem and have seen it a thousand times. We have often done it ourselves and may not even realize when we do it. Yes, we all find ourselves complaining too much. Whether we are students, faculty, staff or administration there are always targets for complaining. But as this faculty member so keenly pointed out, we need to focus on the solution to the problem, not how we got there or how bad the problem is in front of us.

We need to change our focus from griping to solving. After all, we are scientists and the occupation of scientists is to pursue the unknown and to find solutions to problems of all types. We need to keep this in mind in our research, in meetings and even random discussions in the hallway. This is the only way to keep improving our research, our workplace and our lives.

publications

In the past month, the following researchers in the College of Graduate Studies have published articles:

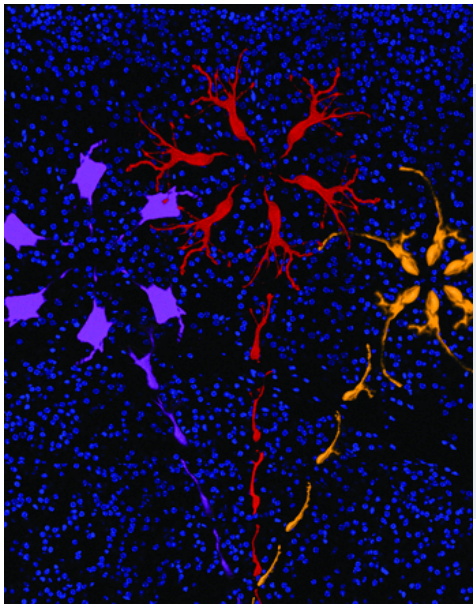
BLANDEN AR, Yu X, **LOH SN**, Levine AJ, Carpizo DR.
Reactivating mutant p53 using small molecules as zinc metallochaperones: awakening a sleeping giant in cancer. *Drug Discov Today*. 2015 Jul 20;. [Epub ahead of print]
http://www.ncbi.nlm.nih.gov/pubmed/26205328?dopt=Abstract

Shi C, **GUO D**, Xiao K, **WANG X**, **WANG L**, **LUO J**.
A drug-specific nanocarrier design for efficient anticancer therapy. *Nat Commun*. 2015 Jul 9;6:7449.
http://www.ncbi.nlm.nih.gov/pubmed/26158623?dopt=Abstract

Liu Y, Yu J, **OAKS Z**, Marchena-Mendez I, Francis L, Bonilla E, Aleksiejuk P, Patel J, Banki K, Landas SK, **PERL A**.
Autoimmunity and disease activity may involve the liver in patients with systemic lupus erythematosus. *Clin Immunol*. 2015 Jul 6;. [Epub ahead of print]
http://www.ncbi.nlm.nih.gov/pubmed/26160213?dopt=Abstract

SHAH NB, **DUNCAN TM**.
Aerobic growth of Escherichia coli is reduced and ATP synthesis is selectively inhibited when five C-terminal residues are deleted from the ϵ subunit of ATP synthase. *J Biol Chem*. 2015 Jul 9;. [Epub ahead of print]
http://www.ncbi.nlm.nih.gov/pubmed/26160173?dopt=Abstract

Phillips MA, Lotharius J, Marsh K, White J, Dayan A, White KL, Njoroge JW, El Mazouni F, Lao Y, Kokkonda S, Tomchick DR, Deng X, Laird T, Bhatia SN, March S, Ng CL, Fidock DA, Wittlin S, Lafuente-Monasterio M, Benito FJ, Alonso LM, Martinez MS, Jimenez-Diaz MB, Bazaga SF, Angulo-Barturen I, Haselden JN, Louttit J, Cui Y, Sridhar A, Zeeman AM, Kocken C, Sauerwein R, Dechering K, Avery VM, Duffy S, Delves M, Sinden R, Ruecker A, **WICKHAM KS**, **ROCHFORD R**, Gahagen J, Iyer L, Riccio E, Mirsalis J, Bathhurst I, Rueckle T, Ding X, Campo B, Leroy D, Rogers MJ, Rathod PK, Burrows JN, Charman SA.
A long-duration dihydroorotate dehydrogenase inhibitor (DSM265) for prevention and treatment of malaria. *Sci Transl Med*. 2015 Jul 15;7(296):296ra111.
http://www.ncbi.nlm.nih.gov/pubmed/26180101?dopt=Abstract

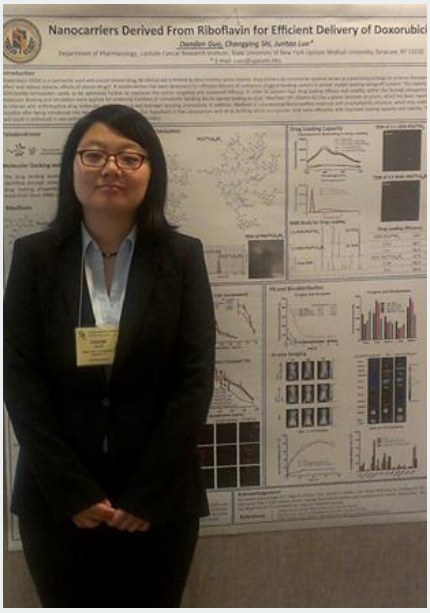


O'DELL RS, Cameron DA, Zipfel WR, **OLSON EC**
Reelin Prevents Apical Neurite Retraction during Terminal Translocation and Dendrite Initiation.
J Neurosci. 2015 Jul 29;35(30):10659-74
http://www.ncbi.nlm.nih.gov/pubmed/26224852

The image at left from the O'Dell, et al article made the cover of the July 29th issue of ***The Journal of Neuroscience.***

presentations

In the past month, the following researchers have attended, and presented, at conferences:



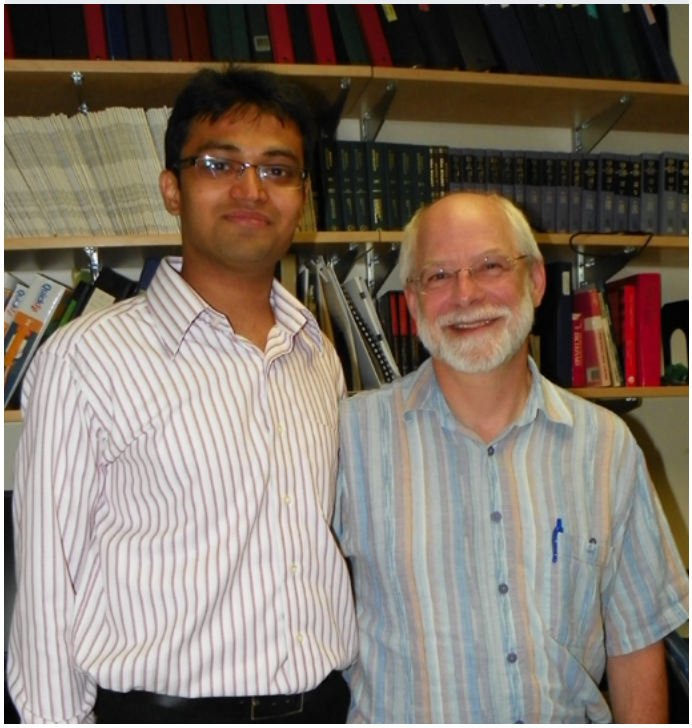
Gordon Research Conference: Cancer Nanotechnology
West Dover, Vermont | June 28 - July 2nd
Dandan Guo, a PhD Candidate in Pharmacology

International Herpes Virus Workshop
Boise, Idaho | July 25 - 30th
Carrie Coleman, a Postdoctoral Associate in Microbiology & Immunology

National MD/PhD Student Conference
Keystone, Colorado | July 17 - 19
Rebecca Sager, an MD/PhD Student in Biochemistry and Molecular Biology, and Daniel Tylee, an MD/PhD Student in Neuroscience MD/PhD Student, represented SUNY Upstate Medical University at the National MD/PhD Student Conference held at the University of Colorado. The conference provides an opportunity for MD/PhD students around the country to present their work and interact with other students and prominent scientific investigators.

from our students:

PAURAV DESAI, a PhD Candidate in Anatomy and Cell Biology, successfully defended his thesis last month. Paurav's advisor is Dr. David Mitchell, pictured below. Congratulations, Paurav and best of luck!



JASON GOKEY, a PhD Candidate in Anatomy and Cell Biology, successfully defended his thesis last month. Jason's advisor is Dr. Jeffrey Amack. Jason has accepted a postdoctoral position in the Pulmonary Biology Department at Cincinnati Children's Hospital Medical Center with Dr. Jeffrey Whitsett.

Jason pictured with Dr. Joseph Sanger, Chair of Cell & Developmental Biolgoy

KAREN HOWARD, an MD/PhD Student in Anatomy and Cell Biology with Dr. Kenneth Mann, has been granted a four-year NIH pre-doctoral fellowship: "Supraphysiologic Fluid Shear Stress as an Alternative Cause of Short-term Aseptic Loosening in Total Knee Replacements." Congratulations, Karen! Keep up the great work!

The **MD/PHD PROGRAM** hosted its first annual picnic on July 24th at Shove Park in Camillus. We had approximately 30 students, significant others, faculty and staff join us for a potluck lunch on a beautiful summer afternoon. We even had a festive fruit pizza. We look forward to carrying out the tradition in the future years.

from our alumni:

JASON HORTON, PHD has accepted a position as an Assistant Professor in Orthopedic Surgery here at SUNY Upstate Medical University beginning 10/1/15. Jason is a graduate of the Physiology Program; his thesis advisor was Dr. Timothy Damron. After his 2011 graduation, Jason completed two fellowships at NIH: first at National Cancer Institute, then at National Institute for Dental and Craniofacial Research.
WELCOME BACK, JASON!

MARK YOUR CALENDAR! We are very excited to announce that Charles Danko, PhD will be joining us at the 15th Annual Biomedical Sciences Retreat on Thursday, September 17th at The Lodge at Welch Allyn. Charles will be giving a presentation entitled: "Positive Selection in Regulatory Elements Drives Changes in Gene Expression in the Adaptive Immune System of Primate Species." Don't forget to register for the retreat today, you don't want to miss it! To register, please visit **http://www.upstate.edu/grad/retreat.**

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

Dr. Richard Cross, Distinguished Speaker, Commencement 2015

the TOP 10 REASONS TO BE HAPPY NOW THAT YOU'VE EARNED AN ADVANCED DEGREE IN SCIENCE

I'm very happy to be here with you today, to share this joyous occasion. The timing for me is perfect. Since retiring in December, I've been trying to figure out why I had so much fun being a scientist for the last 50 years. And, because you're at the beginning of your careers, it makes sense to share some of the answers I've come up with. So, with apologies to David Letterman, I'm going to present them as:

#10 YOU GET TO MAKE A DECENT LIVING.

Note I've listed this last. Few of us go into science to make money, although some of you might strike it rich if you end up at the right biotech or pharmaceutical. But at the least, you should make a comfortable living, and all of you will eventually become financially independent of your parents. This, by the way, is one of the reasons your proud parents are smiling today.

#9 YOU GET TO LIVE AN HONEST LIFE.

Science is one human endeavor in which honesty is rewarded. In other disciplines, telling the truth can get you in trouble. For example, few car salesman would say "this is the price I hope you will pay, but I can go much lower if you press me". However, in science you have to apply the strictest ethical standards in collecting, analyzing, and reporting your data. It's insane to do otherwise, because if your results are important, others will attempt to repeat and confirm them.

#8 YOU GET TO AVOID BOREDOM.

Every day is different for a scientist. You get to think and speculate about how nature might work, you get to do experiments to test your ideas, you get to read the latest articles in your field, you get to interact with young people who want to learn from you, and, as a member of society, you get to refute popular misconceptions about health, diet, and nutrition. I have to be honest with you, there will be so much for you to do, you will experience stress, maybe even a lot of stress. But, you will never be bored.

#7 YOU GET TO TRAVEL AND SEE THE WORLD.

Scientists belong to an international community. Experts from all over the world meet to discuss their latest results. As you travel to foreign places for such meetings, you will come to appreciate and respect different cultures. You'll meet people you would otherwise never have encountered, and you'll be exposed to ideas you might never have considered.

#6 YOU GET TO LIVE AN INTELLECTUAL LIFE.

To be successful as a scientist, you will need to be a life-long learner. You have to read the literature, attend lectures, and, I would like to emphasize this, have as many conversations as possible with people who are smarter than you, so that you can learn from them. You have to continuously acquire knowledge, and you have to develop the ability to sift out what's true from what's not true. Louis Pasteur noted that "chance favors the prepared mind". And it's true, sometimes you just need to be lucky in the laboratory, but your chances of being lucky are greatly enhanced if you have a solid knowledge base.

#5 YOU GET TO EXPERIENCE THE THRILL OF DISCOVERY.

If you are lucky enough to discover something really important once every 10 years, you will have a very successful career. Paul Boyer observed that "most of your productivity will be like the coal that is mined while searching for diamonds. The coal keeps you in business, but when you find a diamond, it's an incredible high". Normally, science advances slowly and steadily as a result of contributions from many laboratories, but every now and then, an individual will achieve a huge leap forward. This usually comes from challenging dogma. If you are fortunate to be such an individual, you will experience resistance from those invested in the beliefs you are overturning. But, if you're right, your contribution will eventually receive its due recognition, because in science as in Shakespeare, "the truth will out".

#4 YOU GET TO TEACH THE NEXT GENERATION OF SCIENTISTS.

You get to experience the pleasure of sharing your skills, knowledge, and approach to science with young people. Believe me, there is nothing more rewarding than seeing someone you've trained progress and eventually excel in what they do.

#3 YOU GET TO HELP OTHERS.

Discovering how nature works benefits everyone. Your work may be very basic and not have any immediate applications beyond shedding light on the mysteries of life. But that, in itself, is a very worthy goal, and with time others may use the knowledge you have gained for practical purposes. In a best-case scenario, you might be lucky enough to do something that improves the quality of life for millions of people. Being a physician is a very gratifying occupation, and some of you are about to receive degrees in both medicine and science. But, it is as a scientist that you will have the opportunity to affect far more people than anyone could ever treat during a lifetime in a clinic. That is why so many physicians, as well as basic scientists, devote a significant part of their time to research.

#2 YOU GET TO MAKE A LOT OF FRIENDS.

Despite the fact that scientists have often been portrayed in movies and literature as loners, we all know that science is a highly interactive endeavor. You will meet many interesting and smart people during your career. Enjoy their company, and look for opportunities to collaborate with them. If you treat both your colleagues and competitors with respect and kindness, many of these interactions will blossom into friendships. At my advanced age, I am in a position to predict with some level of certainty that when you reach the end of your career, and you look back on what you've done, it will not be the number of papers you've published, nor the citations those papers have received that will bring you the greatest gratification. Instead, it will be the friendships you have formed. So, treasure these relationships and cultivate them along the way, and they will bring you great happiness.

And now **THE #1 REASON** to be happy that you've earned an advanced degree in science: **NO MORE TESTS, NO MORE QUALIFYING EXAMS, AND NO MORE THESIS DEFENSES.** You have a graduate degree!!! That means that we attest to the fact that you have the skills and knowledge to successfully pursue a career in science. So, congratulations to each of you. Take a well-deserved day or two off to celebrate, and then go out there and make us proud!

in other news

Congratulations to Jessica Ouderkirk Pecone, a PhD Candidate in Anatomy and Cell Biology, and her husband, Chris, who welcomed a beautiful baby girl on July 1st! Gabriella James Pecone, the couple's first child, weighed 7lbs 3 oz, and was 20 inches long. Congratulations, Jess!

Congratulations to Zainab Mansaray-Storms, a PhD Candidate in Neuroscience, and her husband, Justin, who welcomed a beautiful baby boy on July 31st! Elliott Sallieu Storms, the couple's first child, weighed 7lbs, 12oz and was 20.5 inches long. Congratulations, Zainab!

save the dates!

Mark Your Calendars for the 15th Annual

Biomedical Sciences Retreat

Thursday, September 17, 2015 • 8:00 am – 6:00 pm
The Lodge at Welch Allyn, Skaneateles, NY

Abstract Deadline: Sunday, August 23rd
Registration Deadline: Monday, August 31st

This full day symposium features faculty presentations, two guest speakers and a poster session. This is a great opportunity to catch up on the research happening around you and to meet the new faculty and incoming class of graduate students.

Registrants are eligible to submit an abstract and present a poster at the retreat. Graduate student first-authored posters have priority and will also be eligible for cash awards. Please contact Jennifer Brennan at brennanj@upstate.edu.

For more information or to register visit:
http://www.upstate.edu/grad/retreat/

UPSTATE
MEDICAL UNIVERSITY
COLLEGE OF GRADUATE STUDIES

AMERICAN PHYSICIAN SCIENTIST NORTHEAST REGIONAL MEETING

Saturday, October 17, 2015
8:00 AM - 5:00 PM
Weiskotten Hall, Ninth Floor

The Upstate MD/PhD Program with the support of the College of Graduate Studies, College of Medicine, and President's Office are proud to host the American Physician Scientist Association Northeast Regional Meeting. The schedule and registration information can be found at **http://goo.gl/yVfSxY**

Register today to give a poster presentation, oral presentation, or just come support Upstate! Please contact Krystal Ripa at smithkry@upstate.edu with any questions.

MARK YOUR CALENDARS!

BEYOND THE DOCTORATE RESEARCH DAY
Wednesday, March 9, 2016

STUDENT RESEARCH DAY
Friday, April 8, 2016

Join us EVERY WEDNESDAY at 3PM in the GRAD STUDIES CONFERENCE ROOM* for AFTERNOON TEA & SWEETS!!
***First Wednesday of the month, tea is at NRB 3708.**

IS THERE SOMETHING WE MISSED??
Email Jennifer Brennan at brennanj@upstate.edu