



The Restriction Digest

G.S.A. Newsletter

a publication of the
Graduate Student Association
Johns Hopkins University School of Medicine

Volume 16

Number 5

June 2006

GSA Notes

by Drew Watkins

So this is my final article as GSA President. It has been a fun year and my privilege to serve my fellow students. It has also been a good excuse to avoid labwork. As usual we are closing out the year with a final flurry of activities- by which I mean we realized there is money left in our budget that we have to spend by June 1.

The Spring flurry began with the now annual March Madness Happy hour in which we celebrate the only day this year that anyone had anything close to a correct bracket (thanks George Mason). April marked the annual poster session at which we at the GSA annually test the hypothesis that if you give cash prizes and free beer people will always enter. We proved the hypothesis once again with over forty entries and some great posters.

We also had a wine tasting, back by popular demand, at which students sampled six different wines under the tutelage of the former editor of Wine Spectator Magazine. May marked the beginning of Graduate Student Appreciation week. We hosted an ice cream party with over a dozen ice cream flavors and as many toppings.

Continued on page 2

Interview with Jonathan Pevsner, Teacher of the Year

by Tullia Bruno

It comes as no surprise that Dr. Jonathan Pevsner has been voted teacher of the year for 2006. His commitment to teaching has previously won him teacher of the year in 2001, as well as the professor's award for excellence in teaching, which is decided by a panel of professors, graduate students and deans. In response to these honors, the professor of neurology comments "I feel as though something is going right."

Right does not even begin to describe it. Dr. Pevsner has a genuine enthusiasm for learning and loves "to see light bulbs turn on." He admits that teaching has made him a better scientist and has given him as much back as he has put in. He believes that as a teacher you learn more and more as you go on, and that definitely explains his continuous involvement in various areas of teaching on campus. His primary appointments are as an Associate Professor in Neurology at the Kennedy Krieger Institute and Neuroscience in the School of Medicine. He also has a secondary appointment in Molecular Microbiology and Immunology in the School of Public Health and is part of the Division of Health Sciences Informatics. His involvement in other graduate programs is vast due to the relevance of bioinformatics to many diverse fields, from Art as Applied to Medicine to Pharmacology.

I had the pleasure of spending some time with the teacher of the year to discuss both his passion for teaching as well as his passion for the life of Leonardo da Vinci.

Continued on page 2

Graduation Speech

by Jaime Cheah

Good afternoon to the graduates of 2006 and to our family and friends. I have been afforded the honor of speaking at our graduation ceremony, so I would like to take a few minutes to reflect on the past ... well, goodness, six and a half years I have been at Johns Hopkins. I remember the fateful day that I decided to attend graduate school. As any good twenty-something, angst-ridden, American-raised woman would do, I blame my mother for this decision. You see, coming from a traditional Asian family, the only acceptable careers to pursue in life were medicine, engineering, and if you must sink so low, law and commerce. Laboratory science was just a bridge to medicine, that is, until one night while watching an *ER* episode directed by Quentin Tarantino, the thought of attending medical school made me want to hurl – literally. I called my mother and informed her that under no circumstances would I be applying, let alone attending medical school. Her response: aghast, horrified. "Well, what *do* you plan on doing with your life then??" I told her I had decided to get my Ph.D. Stunned silence greeted me on the other end of the line. When I eventually entered graduate school, I was asked three questions: My mom asked me "Can you go to medical school after you get your Ph.D.?", my dad asked "Do I have to pay for this?" and my grandmother asked "Do I still get to call you 'Doctor'?"

Reflecting on this decision, and my family's response to it, I got to thinking about how, ten years ago, the general public's perception of what scientists actually do was much different than it is today. A common

Continued on page 4

The next day we had our annual beer tasting and followed that up with a night at the Baltimore Museum of Art for those who were more culturally inclined.

Still to come we are planning a tubing trip on the Shenandoah River and a catered night at Camden Yards. Thanks for making it a great year and special thanks to those who made all the events a success by planning and/or showing up. As always if you have ideas for future events, let us know at gsa-g@jhmi.edu.

Finally I would like to leave you with my thoughts on the Top Perks of being GSA President:

- 10- Unanimous (uncontested) election by my peers really boosted my self-esteem.
- 9- Fame- People come up to me on the street and say "Hey! You're the guy whose e-mails I'm always deleting."
- 8- The raw power of controlling a budget nearly the size of a graduate student stipend.
- 7- Great chance to sharpen my beer and pizza ordering skills.
- 6- Band plays "Hail to the Chief" every time I walk into lab.
- 5- I receive the same salary I got for being president every year for the rest of my life.
- 4- Secret service protection for me and my dog Lucy.
- 3- With the printing of this article I managed FIVE publications in one year (Thanks Restriction Digest!).
- 2- Adds a couple more years to the time I get to spend in grad school.
- 1- Making my thesis committee address me as "Mr. President".

Drew Watkins
GSA President '05-'06

Bruno: Being voted teacher of the year, I am sure people are curious what drove you in the direction of teaching?

Pevsner: "I never had a chance to teach as a graduate student or postdoctoral fellow, but I always thought I might want to teach. When I came to Hopkins in 1995 there were courses in the area of neurotransmitter release that needed to be taught, and these were appropriate because I focused on this subject during my postdoctoral research. I taught graduate students in neuroscience as well as a lecture for medical students on neurotransmitter release."

Bruno: So the classes that you started out teaching are the ones you are teaching today?

Pevsner: "Yes, I am still teaching these today. I have started to incorporate a lot more bioinformatics into the courses. For example, I often talk about how many genes are relevant in synaptic transmission or how many proteins are in the nerve terminal. It is good to have a bioinformatics perspective on these areas of research."

Bruno: You mentioned you started teaching at Hopkins in 1995; however, how did you actually obtain the job as a faculty member at Hopkins?

Pevsner: "It is a process...and I feel that obtaining a faculty position is an important process for graduate students to know about. As a graduate student you do your best to be as productive as possible and publish in good journals. Basically you want to learn things no one knows about your particular research area. After completing your thesis work, you choose a postdoctoral fellowship in an area of interest to you. There are not really any teaching obligations as a fellow, but rather you are just to be productive in your area of research. Once there is enough productivity, then you can start to look in journals and other places for available positions. There is an interview process and then eventually you can find a home for yourself as faculty."

"Personally, I did my graduate work here at Hopkins with Sol Snyder in the Pharmacology program. When I moved on to my postdoctoral fellowship, I went to Richard Sheller's lab at Stanford University. My primary areas of interest were in molecular biology and the brain, and I was particularly interested in looking at the two areas in combination. It took me a while to get productive as a fellow; however, after the first four years, I published in a good number of journals. I had the opportunity to interview at a few good institutions, and was then offered a position by [the] Kennedy Krieger Institute."

Bruno: Were you approached to teach bioinformatics or did you start the class?

Travel Essay: I Heart NMR

by Erika Gebel

As the Dr. Seuss hills spotted with brown cheese cows rolled past me at 80 mph, my thoughts anticipated the next five days of NMR, booze, and raucous decadence. It's an even year, so the annual Experimental NMR Conference (ENC) returns to the Asilomar conference center. Located on the Monterrey peninsula and within a drunken stumble of the Pacific Ocean, Asilomar ENC's are a popular event amongst NMR spectroscopists around the globe. Even before one's first ENC, tales of ENC's past will reach the young NMR spectroscopist's ears and fill them with a wistful awe. Now it was my turn, so I cranked up the radio and opened all the windows. Mountains to the left of me-ocean to the right -open road in front of me-and all my troubles behind me. Welcome to California- home of the 2006 ENC.



When the scent of cypress, pine, and salt permeated my rented charcoal Saturn ion, I ascertained that my arrival at Asilomar was imminent. The place was already littered with bearded slouchers carrying the trademark ENC tote bag. Not a typical hotel, Asilomar consists of small brown brick villas (with cheerful names like Afterglow, Ember, and Pirates Den) as well as a few larger halls connected by wooded sand strewn pathways that weave about the grounds, occasionally sloping upward to provide a view of the dunes and ocean. There is a distinctly camp-like feel to this conference. NMR camp: complete with fires, meals in the cafeteria, and ping pong in the main hall. As the sole female ENC attendant from Hopkins, I got the grab bag roommate: Brenda from Puerto Rico—sweet as sugar cane. Too sweet to share in the excesses that I was about to discover.

Quite apart from the gentle majesty that is Asilomar, the ENC provides an entirely separate form of amusement: the vendor suite. NMR is expensive, hence competition for business is fierce. This bodes well for the NMR user. ENC is an opportunity for the many companies who specialize in NMR goods to meet their customers—and get them wasted. Each vendor, something like 20, sets up in a room and lures conference attendees to navigate the Asilomar labyrinth for their rivers of alcohol, perpetual delicacies, bands playing golden oldies, Nano raffles, karaoke, massage, t-shirts, blackjack, pig

roasts, sushi, bouncy balls that flicker blue & red upon impact—a seemingly endless bounty of delights.

One legend of ENC is 'late-night at Suraj's'. Suraj, who sells isotopes, has the uncanny ability to remember everyone's name and throws a killer party. His vendor suite is where all the hardest hitting NMR spectroscopists end their evenings. It's a total drunkfest. People are slurring about everything from Chemical Shift Anisotropy tensors to potential hookups. My particular brand of blurry ranting involved playing a "typical American" to the Europeans I'd befriended. I would offer "five AMERICAN dollars" for someone's shoes or admonish the metric system with a Texas-like ferocity. Another classic moment occurred when I called a collaborator my "personal Jesus". This, of course, was all explained to me the next day through my throbbing regretful haze.

ENC is quite top-heavy and the vendor suites provide a unique opportunity to talk to that Nobel Prize winner or NMR superstar you've always fancied (with the help of that great equalizer...). Besides talking to the biggies, the vendor suites also provide an excellent ground for my other conference objective—the ENC crush. The conference crush. Furtive glances stolen in darkened lecture halls. Feigned interest in an incomprehensible poster. Straining the limits of vision attempting to read distant name tags. We are all familiar with this subgenre of star-crossed crush: doomed because conferences are short and scientists painfully inept at socializing.

Three days in and it was looking pretty grim, the stench of inconceivable awkwardness thick. But that's when a smiling Fernando Guevara, crown of dark hipster locks blowing in an imperceptible breeze, strolled into the Cambridge Isotopes vendor suite. The impossibility of it all did little to suppress the repeated and blatant heaving of myself at Fernando, 5 feet and 5 inches of irresistible perfection. Sigh. The wind through the cypress and the compressed air of sample ejection shall always whisper "Fernando".

Lest you think that ENC is all about lascivious debauchery, one day I medicated my hangover, donned sunglasses, and searched for some good clean fun. What I found was Point Lobos state park. If ever near the Monterrey peninsula, a stop at Point Lobos is an absolute must. David Shortle described it as "middle earth". As for me, I could never have imagined that such a place existed in reality. Atop a cliff, the chunky land is constructed of bizarrely shaped petrified sand, in which there are crop circle designs and embedded multi-colored stones. The electric blue ocean below violently crashes into the shore causing geysers of foam to erupt into the sky. The songs of seals perched upon an offshore rock island punctuate the silence. Gnarled cypress trees cling to precarious ledges and are cloaked in an other-worldly crimson lichen. Awesome in the true meaning of the word.

Feeling rather wind battered and water eroded myself, I left Asilomar and drove down to LA to visit my college buddy. But that's another story (one that features a Jessica Simpson sighting). Thanks to GSA for providing me funding for a week of science fun. Oh, and in case there's a doubt (or if David Shortle should inquire), I presented and learned NMR stuff.

Continued from page 1

generalization was that all scientists were either curing cancer, Alzheimer's disease or HIV. With the expansion of the Internet, the popularity of shows like *CSI*, and increasing coverage by the media of both scientific accomplishments and downfalls, many words like "protein", "cloning" and "embryonic stem cells" are now becoming commonplace. True, most of the non-scientific community thinks that we solve the biochemical problems of the world using brightly colored liquids stirring in beakers and that the results from gas chromatography will lead us to the bad guy. Still, for better or for worse, the spotlight has never been shined brighter on our field. I knew this to be true when I was asked, after the cloning scandal in Korea surfaced, whether my work would help cure a greater disease and was I sure that I didn't falsify my data. Despite some of the negative press, perhaps this greater public enlightenment will lead to a greater amount of respect, understanding and empathy for our line of work.

So why do we do what we do? It's obviously not for the fame and glory, and definitely not for the money. Anyone here will tell you that the life of a graduate student is not glamorous. We do it for the love of our craft, to answer the bigger questions in life and to understand what makes the world go round. Scientific research takes dedication and perseverance, as shown by those who are sitting here today, all of whom have it in spades. You know you've been suckered in, when in the middle of the night, you wake up your significant other (while on vacation, mind you), not to ask whether they love you or where your relationship is headed, but rather "Honey, how much glycerol do you use in your protein purification, because mine keeps degrading and it's keeping me up at night?"

In the last few moments, I'd like to share with you my list of "Things that I learned in Grad School":

- 1) It's all about preparation and execution. A former BCMB graduate student, Derek Jantz, once told me that all of the work you do to obtain your Ph.D. really occurs in your last two years of graduate school; that the early years are a preparation for that. He was absolutely correct. To have a successful experiment, you have to prepare your reagents and execute your protocol. The trials and tribulations of grad school have prepared us for our lives to come in the real world. At the very least, our ability to follow a protocol has taught some of us how to be better cooks.
- 2) Life is better when you have great people around you. Everyone here will say that in order to get through the ups and downs of grad school, you need the love and support of your family and friends. No one understands better what you are going through than your own classmates. Furthermore, no one would have made it to their Ph.D. without the unfailing support of their PIs. Even when they probably should have fired you for breaking your umpteenth piece of equipment or for not producing a single piece of data in two years, your PIs believe that you will someday make that mind-boggling discovery and publish that paper in *Cell*. And in the end, they were right. Not that we tell them that too often ...
- 3) You must savor the little victories where you can get them. Getting your name as the 17th author on someone's paper

earns you a round of beers. Getting your own first author paper allows you to upgrade to dinner at Petit Louis, a bottle of champagne and a call to your parents. Getting a job in Big Pharma means that you are now buying dinner for your friends who are headed to academic post-docs. Winning the Cooley Center's Intramural Soccer "B" League Championship with 11 of your classmates: priceless.

- 4) There is always a light at the end of the tunnel. At some point, all of us (and probably all of the family members sitting in the audience) thought that we would never make it to this day. I will admit that some hope surfaced after the New England Patriots won not one, not two, but three Superbowls and my beloved Boston Red Sox won a World Series all during the time I was ensconced at my lab bench. Really, who here didn't think for a moment that Hell had frozen over, that pigs might just be flying and that we may just finish our Ph.D.s? We are here now and I have every faith that we will all go on to do great things. But just in case, I have all of your names and will be hitting you up for jobs in case my life plans don't pan out.

In conclusion, I would like to answer the three questions asked when I decided to pursue my Ph.D. Mom: Yes, I technically can go to medical school, but you'll just have to settle for "this kind of doctor". Dad: No, you don't have to pay for grad school, but you might want to buy me food once in a while to keep me alive. And I don't have the heart to explain to you the finer points of being a post-doc. Grandma: Yes, you can call me "Doctor".

I want say that I am incredibly proud to call you all friends and colleagues. Congratulations to the Doctors of 2006!

Congratulations Graduates!

On behalf of the School of Medicine Development & Alumni Relations Office and the Johns Hopkins Medical & Surgical Association, we wish the 2006 graduates the best of luck!

Don't forget to keep your contact information current with us to ensure that you receive your free subscription to *Hopkins Medicine* magazine as well as updates on important news and information on future Biennial Meetings and Reunion Week-ends.

If you are not remaining at Hopkins after graduation, **your jhmi.edu e-mail address will be disconnected around August 31st**. To avoid interruption of your e-mail and to stay connected with your class, sign up for a free e-mail alias provided by the Johns Hopkins University Alumni Association. Visit: www.hopkinsnet.jhu.edu, click on "yourname@jhu.edu," and follow the directions for signing up.

If there is any way that our office can be a resource for you now or in the future, do not hesitate to contact us at 410-516-0776, 888-JHM-1336 (toll free), JHMalumni@jhmi.edu or One Charles Center, 100 North Charles Street, Suite 208, Baltimore, MD 21201.

Hopkins Celebrates its Young Scientists during Young Investigators' Day: A Conversation with Randy Reed

by William Hendricks

“Students often think that the University doesn't appreciate all of the hard work that they do,” muses Randy Reed, Professor of Molecular Biology and Genetics at Hopkins. He may well be right, even though most of us grad students do feel like our specific grad programs and labs train us well, take good care of us, and give us credit where it's due. In our more globally-enlightened moments we may even suspect that we're a bit pampered. Yet, we are in many ways the cheap labor keeping the well-oiled research machine running smoothly and it's not often that the higher-ups step down from their ivory thrones to shake our hands and say “well done.” Grad students who do feel like a cog in the institutional machine should turn their attention, however, to Hopkins' annual Young Investigators' Day, an award program designed to shine a spotlight on student research. Randy, the chair of the Young Investigators' Day Committee, claims “Young Investigators' Day is an opportunity for at least one day to prove [those students] wrong. We want students to know that we're excited about their research and that Hopkins appreciates and admires their accomplishments.”

Young Investigators' Day (YID) is an annual ritual during which Hopkins graduate students, medical students, and postdoctoral fellows apply for 17 awards (11 graduate/medical and 6 postdoctoral) that celebrate excellent work by the institution's young scientists. The awards are given in the names of former Hopkins students and faculty. They include cash prizes funded by the friends and family of the awards' namesakes and by the Johns Hopkins Medical and Surgical Society.

The award program was created in 1978 by Paul Talalay, Professor of Molecular Pharmacology, and has featured the work of many scientists who have continued to make groundbreaking contributions to science and medicine at many prestigious institutions in academia and industry. Many past award winners such as Stephen Desiderio, Drew Pardoll, and Kenneth Kinzler are even faculty members here at Hopkins.

This year's YID took place on April 20th. The 17 award winners were chosen from a pool of about 100 applicants. As it has consistently done in the past, the program highlighted diverse research questions from many disciplines and across the basic/translational spectrum, from “MR-guided transplantation of magneto-capsules immunoprotecting pancreatic islets” to “catalysis in translation elongation and termination.”

The YID application process traditionally begins in the fall with application deadlines falling in January. Stu-

dents apply for the awards by submitting a 3-4 page research statement, a CV, and a letter of recommendation from their mentor. Application requirements are somewhat open-ended with the strictest requirement being that students must be members of the Hopkins community, i.e. they must be registered students in September of the year before they receive the award. The strongest applicants are students who have been engaged in novel, creative research that addresses fundamental questions in their field. Usually, these applicants have at least one accepted publication, but publication isn't a requirement. Students don't have to wait until their last year to apply, either. Randy encourages students to apply once they feel their research has reached a clear point of maturation. Though he doesn't recommend applying too early in a graduate career, students may apply early and then reapply in later years if they don't receive the award (as long as they meet the registration requirement). Overall, the most successful applicants not only present seminal work in their field, but they also focus on reaching across disciplinary boundaries and making the impact of their work understandable to a broad, sophisticated, biomedical audience.

The rigorous application review process is proof of the YID committee's dedication to personally recognizing our accomplishments. The extensive review structure is modeled on the NIH grant review process. Twenty five faculty members from a broad spectrum of School of Medicine departments sit on the committees (one for grad students and one for postdoctoral awards). The committee members read through all of the applications and rate each of the nearly 100 submissions received each year. The committee then convenes to evaluate a large fraction of the top applications by formal presentation and further discussion. Each application is presented to the whole committee by panelists who are specialists and nonspecialists in that field before final selections are made. The committee members aren't the only faculty members to take this program seriously either. Many faculty members attend the ceremony even if they don't have students who've received awards. Broad institutional attendance at the awards ceremony is evidence of the prestige the awards have accumulated and highlights the respect of the whole School of Medicine community for our work.

Overall, Randy encourages everyone to apply once their research has reached a point of maturation. He emphasizes, “It's not just about recognizing the best research coming out of Hopkins, it's about celebrating the diversity of the research and the accomplishments of our young scientists.”

For more information on applying for YID, contact YID@jhmi.edu.

Bitchin' Kitchen **by Renee Domergue**

For the love of the grill

I'm one of those individuals who believe that nearly everything tastes better when it's been slapped on a grill. Chicken is better on a grill. Veggies are better on a grill. Even dessert is better on a grill. And trust me, if you've never grilled something for dessert, you don't know what you are missing. Now, I've been known to sporadically layer up my wool duds and throw a steak on the grill in the middle of winter, but during the summer-time, I do practically all of my cooking out there. I've come up with some good recipes over the years, but for this edition, I want to focus on an all time classic, the grilled steak. Now for many of you unfortunate enough to have those "rules" about having a "fire" near your apartment, well, these same ideals of steak heaven can be yours with the substitution of a broiling pan or a grill pan. (Remember- never broil in your oven without leaving the door cracked.)

Now, professional steakhouses have special meat suppliers that give them the best (aka most expensive) meat available, the quality of which, for certain, affects the outcome of the steak. We are graduate students. We don't have money, or meat suppliers. But, I do suggest looking through the local grocery store weekly ad online, and when NY strip or ribeye is on sale for \$4/lb, buy baby, buy.

Steakhouses also usually don't mess too much with the flavor of the meat. Generally, to go real steakhouse style, melt some butter, scoop off the gunk at the top, then mix in about 1/2 as much vegetable oil, slather your meat in it, then rub on coarse salt and freshly ground pepper. I, personally, am not against marinades and rubs. Marinades can be made out of almost any combo you like. An important rule, however, is to remember to balance acids and fats. Acids such as balsamic vinegar or lime-juice must be mixed with roughly twice the amount of oil. And always rub coarse salt and pepper onto the steak before adding the marinade.

Now we come to the really important part, the grilling. To get the perfect steak, you really need a searing hot surface on one side of the grill and a more moderately heated spot elsewhere. For charcoal grills, rearrange your brickettes, once warmed, to have a higher pile on one side, and for gas grills, adjust the flames on either side. Make sure your steak is at room temp before slapping it on the really hot side of the grill. Now, leave it alone! Sear the steak for about 2 minutes a side, and then move it over to the cooler side of the grill to finish. Move the steak as little as possible to avoid tearing. So, how to check a steak for doneness? Well, professionals know by touch. A rare steaks gives to pressure much as the portion of your palm below your thumb does, and a well done steak is like the middle of your palm, moving in between for the various

grades of doneness. Now, I have not yet mastered this technique, and rely on a thermometer check in the middle (about 145°F for medium and 5° steps in either direction). A common technique is to slice into the steak to check, but best to avoid this if possible.

Why avoid the cutting? Well, it has to do with the same reason why you should also let your steak rest for a few minutes after removing it from the heat. The high heat puts pressure on the juices inside. The outside of the meat is much hotter than the inside, and while still being heated, and for a few minutes afterwards, the outside is still cooking and moving the heat gradually towards the center. Now, as the heat more evenly distributes and the pressure relaxes, the juices distribute more evenly, and the fibers, as they cool, begin to take on more water (in this case, flavorful juice). And who doesn't want a juicy steak?

So, go outside! Leave the lab! Throw a Frisbee or football. Just do something to enjoy the warm air and daylight while they are here. And if you're drinking a cold beer, and thinking about grilling a steak, just remember, you should probably invite me.

.....

Technology Corner **by Jon Trow**

Net Neutrality

Allow me to editorialize (read: rant) for a moment. Internet Neutrality is a term you may have heard thrown around in the last few months- or maybe not. Either way, if you use the Internet on a regular basis it is something you should be familiar with due to its' potential to change the way you use the web. Let's start by defining the term. Net Neutrality generally refers to the network infrastructure treating all traffic equally; that is, no certain types of activity get priority or are degraded. That's generally how things on the Internet work now. However, Internet Service Providers (ISPs), like AT&T and Verizon, would like to change that.

They want to expand from a flat pricing setup to a tiered service based on speed, reliability and security. In other words, if content providers such as Google or eBay don't pay them an extra fee, - they won't get priority bandwidth. Information from a site that has been de-prioritized will be slower and delivered less reliably to the consumer. Let me just say that I hate this idea.

The Internet has thrived because it is a vast bastion of innovation. Granted, not all of this innovation turns out to be revolutionary (hey, the hamster dance wasn't *that* bad), but the point is that if one has an idea- they can get it out to the masses. If the ISPs only give priority access to companies able to pay

Pevsner: “I brought up the idea of teaching a class like this...it is actually remarkably easy to start a new course if you want. In spring of 2000, I co-directed a course with Jef Boeke that had mainly outside speakers. Then in Fall 2000, I directed a course where I did the bulk of the lectures, providing hands-on instruction to bioinformatics tools i.e. pairwise alignment and making phylogenetic trees. There were about 300 people for the first class; it was mostly graduate students, but also postdocs and faculty. It was a great topic of interest for many individuals because they were trying to understand their favorite gene or just understand the language of bioinformatics.”

Bruno: *Briefly, what projects is your lab currently working on, and is there anything that you are particularly excited about that is happening right now?*

Pevsner: “In the lab I am excited about the ability to see chromosomes with single nucleotide polymorphisms (SNPs). SNP technology allows us to visualize and identify deletions and duplications. There are many abnormalities of all types...not only variation between diseased and normal individuals but also variation within apparently normal cases. We are trying to look deeper into chromosomes by developing databases and algorithms in order to study and view chromosome disorders better.”

Bruno: *Based on your teacher of the year lecture, it seems you have two passions-bioinformatics and Leonardo da Vinci-what caught your interest about Leonardo da Vinci?*

Pevsner: “I have loved Leonardo since I was a teenager. It has been a lifelong passion to learn more about who he was and what he did. Right now I am teaching a course with the Odyssey program here at Hopkins that covers his life, manuscripts, art and science. He opened entire branches of thought...he covered such a wide range that it is inspiring to thousands. I am one of those people who simply finds his life fascinating.”

Bruno: *When did the interest in Leonardo da Vinci start, in high school or in a class?*

Pevsner: “I wrote a paper on him when I was in 8th grade and then at 17 I moved to London for a year and saw a painting of his in the National Gallery...that painting sparked the interest.”

Bruno: *In your lecture about Leonardo da Vinci you spoke a lot about his work on the brain, however what fascinates you most about Leonardo Da Vinci?*

Pevsner: “How many hours do we have? (laughing) Leonardo is very deep and very broad and he is always very surprising. One thing is that anyone can enjoy what he did...he is a ‘gateway to the past.’ In general, from a human perspective he really provides not only a gateway but a way to look at [the] history of human

thought in any field. I do not have any specific aspect that I really find fascinating...well...the brain. I made these casts of a brain with Dr. Alessandro Olivi [a Johns Hopkins neurosurgeon] by injecting hot wax and taking out the molds (as he shows me the molds).”

“I think anyone can look at a sheet of Leonardo’s notes and see something they can bring with their own experience. I find doctors and clinicians see things in his anatomical drawings while artists see things in his sketches of nature.”

Bruno: *The da Vinci Code by Dan Brown has been causing a lot of controversy among readers, especially with the movie coming out this May, what are your feelings on the da Vinci Code?*

Pevsner: “The book is a phenomenon. In terms of historical accuracy, most statements about Leonardo are inaccurate but do not detract from the book. Leonardo provides a great symbol of mystery. There are three levels to this book. There is the present, which is a fun, adventurous story. There is the past in looking at Leonardo as a “gatekeeper of secrets”, which is actually not his personality because he was very open about all his teachings. Finally, there is the idea of antiquity and the story of Jesus. I think people are searching for truth in their spiritual lives, and some people are looking for alternate explanations of the life of Jesus and perhaps that is the reason why the book is so successful. The controversy is interesting because it is much like the controversy found with the new Gospel of Judas...the contention between historical facts and what is taught in the church as dogma.”

Dr. Jonathan Pevsner is a man of great intellectual diversity. His ability to merge various disciplines is what makes him successful as a teacher. Dr. Pevsner states he is a biologist first, and that bioinformatics is a skill that he developed over time. However, it is bioinformatics that has opened doors to many other types of research for Dr. Pevsner. He is very well known on campus and has involvement in many disciplines. Further, to accent his scientific mind, Dr. Pevsner has become an expert on Leonardo da Vinci. He believes da Vinci serves as a beautiful example of mystery and the search to penetrate the deepest secrets of nature, an idea that embodies all scientific pursuits. To say that Dr. Pevsner deserves to be teacher of the year is an understatement. He is a phenomenal addition to the faculty here at Johns Hopkins University, and his gratitude for this honor is plentiful.

Bruno: *Finally, how do you feel about being teacher of the year?*

Pevsner: “I am really glad you asked. I am delighted and it makes me feel fantastic. It is a really warm feeling to be recognized and I am passionate about teaching and I really want to communicate that with the students. I was not expecting to be recognized in this way. I want to take the chance to thank the graduate students.”

large fees for precedence, small startups will be at a major disadvantage. In a world of high speed downloads, no one wants to wait for a slow loading page. This problem is especially evident now that sites featuring loads of streaming video and pictures are available like YouTube and Flickr. As overall bandwidth requirements increase, the problem is exacerbated.

I read an analogy that I thought captured the issue quite well: Imagine if I-95 made a deal with an automaker, say GM, such that GM cars would get priority on the highway- they have their own lane. Suddenly the marketplace would change. Customers would be more likely to buy a GM car, not because it is better than the competition but because it allows them to get to work faster due to priority road access. Furthermore, carmakers would spend less time trying to make improvements in their car, instead focusing on making deals to get priority access for their vehicles in key markets. Certainly one could argue that Internet access is fundamentally different than public roads or utilities, and perhaps you would be correct. However, I would contend that this is a temporary difference. The web is swiftly becoming the backbone of international business and is increasingly becoming an integral part of how we live our day-to-day lives. If the precedent is set now, we'll be living with it for decades.

I don't need my ISP to guide my surfing habits, I appreciate the offer and everything, but I think I can handle it. I don't like the idea of Comcast striking a deal with Microsoft to give Hotmail and MSN Search priority on their network if I prefer to use Google Search and Gmail. If I as a consumer am paying for bandwidth my ISP shouldn't restrict what I do online (outside of things that are illegal of course). Furthermore, a great many consumers (including yours truly) don't have a choice when it comes to broadband providers. Comcast is the only choice where I live, so if they go tiered, my options are to go with dial-up (yeah, that's probably gonna happen) or just take whatever Comcast is willing to give me.

ISPs own the network and claim they need the added revenue from tiered Internet to support expansion of their infrastructure to bring a faster and better network to market. While I sympathize, I think the consumer is going to end up paying for it either way. I would rather pay more for Internet access at home than have them degrade my access. Even if tiered Internet did reduce my monthly costs, sites such as eBay, online investment and banking sites, as well as sites selling pretty much anything, would all simply pay for priority access and then pass that cost on to the consumer by raising their prices. So if I am going to fund the expansion of the national Net infrastructure (which I am fine with) I at least want to be granted unfettered access to any part of the network.

The Internet is a resource with unimaginable potential. If the ISPs can find it in their greedy hearts to not charge us on both ends, maybe we can keep innovation alive and well on the Net. A bill concerning Net Neutrality is set to go before congress, I encourage anyone interested to stay informed and tell your representatives what you think. Alternatively, just tell Verizon to shove it.

Restaurant Review

by Ian Kaplan

Baja Broadway

Call it what you want—Baja Broadway, Fells Norte, Little Mexico, Cabo San Apex Theatre—there is a world of exotic flavors just waiting to be sampled right down the road. It took a few years before I realized what we had. Just a few weeks ago I was on my way down Broadway, heading for a certain upscale supermarket, when it dawned on me; why am I digging through an overpriced International aisle of a supermarket when I could find everything I need right here? When I got out of my car to check out the first Latin market I could find I was struck by all the little restaurants, markets and shops, and that's when it hit me.

There is real Mexican food in Baltimore. Sure, Chipotle makes a damn good burrito and you can have 'Mexican food' just about anywhere. Nearly every bar can serve you up a plate of nachos. Cooking Mexican food is easy, right? All the seasoning comes in a little packet with your taco shells, but real Mexican food has so much more depth and is much more inventive than that. I took a little tour of that neighborhood north of Fells Point to see what I could dig up, here's a little taste of what I found but check it out for yourself because there's so much more.

Arcos (129 S Broadway) Looking for that date spot to turn up the *calor*? One that screams, 'I'm a man/woman of the world who's not afraid to break out my High School Spanish to order a margarita'? Then Arcos is your spot. Even if you don't speak a word of Spanish, don't worry they're more than happy to help you feel at home. Expertly constructed almost entirely of recycled materials, walking through Arcos I felt transported into another place and time. The crafted brick façade and carved wooden furniture inside of Arcos seems so real, as if we were all guests in some *hacienda* south of the border. The most memorable dish I tried there was a plate of enchiladas covered in rich dark *mole* sauce dressed lightly with sour cream. If the weather is nice, remember to check out the patio area out back.

Latin American Grocery (249 S Broadway) If you're up for cooking a real Mexican meal you're going to need real ingredients (note: Old El Paso seasoning won't cut it). Check out a few recipes, if you haven't already, and you'll know that you're going to need more varieties of peppers than jalapenos and chipotles. Peppers like *guajillos* and *mulatos* utilized for their rich flavors and colors, not just for heat, which you can find dried here. They also have a variety of other Latin foods ranging

Continued from page 8

from Argentinean *mate* to Mexican chocolate. Their produce section isn't much to write home about but when you need guava paste and you need it fast this is the place to go.

Sin Fronteras (305 S Broadway) For some reason *tortas* are a rare find, so when I saw the sign outside this little shop I had to indulge. To be honest, I took one step in this place and almost turned around and walked out. No joke. This place is little more than a shop that sells calling cards and other nick-knacks but with a little counter built into the front window where they make *liquados* (blended juices) and *tortas* (basically the Mexican version of a sub or a hero) with chorizo, chicken, pork or beef. They start out with some kind of flat bread that's a little richer and than a normal roll and grill the meat. I could barely believe my eyes when I saw her spoon fresh avocado onto the sandwich. It was excellent and only cost me \$5. This stop was a little more of an adventure because the woman making my sandwich made no effort to speak English to me; I took that as a good sign.

In my opinion, neighborhoods like these truly are one of the great advantages afforded by city life. I think we should welcome neighborhoods like these that add culinary authenticity to our *mélange* of cuisines. Imagine a city without a Little Italy, Chinatown or Greektown; a city where the only culinary heterogeneity comes from Americanized versions of ethnic cuisines. Check out Baja Broadway. There are so many more excellent little taco shops and restaurants that are well worth the trip but I unfortunately didn't have room for here. If you're semi-adventurous, find the places that will welcome you and speak English to you. If you're really adventurous, try the places that just don't care, the ones that keep the Spanish speaking TV on all day. Chances are you'll have one of the best tacos you've ever had. *Buen provecho*.

SAP CORNER

Sexual Harassment on Campus Deborah Hillard, Psy.D Student Assistance Program

It is not uncommon for students to become the victims of sexual harassment. In fact, sexual harassment is widespread and according to the U.S. Equal Employment Opportunity Commission Office (EEOC), in Fiscal Year 2005, EEOC received 12,679 charges of sexual harassment, 14.3% of those charges were filed by males (http://www.eeoc.gov/types/sexual_harassment.html). Sexual harassment is a form of sex discrimination that violates Title VII of the Civil Rights Act of 1964.

In 1994, The Johns Hopkins University implemented the Sexual Harassment Prevention and Resolution Program to prevent and resolve issues of sexual harassment. Resolution is provided through timely response to complaints through formal and informal means through a network of confidential counselors who are trained to assist in the resolution of questions, concerns or complaints related to sexual harassment. Resolution processes may range from informal, one-on-one coaching to a formal investigation to determine if there are inappropriate behaviors in the academic or work environment and, if so, determine what corrective measures are appropriate (<http://www.jhuua.org/shprp/index.html>).

Students may also elect to utilize the University's sexual harassment complaint process. That process can be initiated by lodging a formal complaint with the University's Office of Equal Opportunity and Affirmative Action Programs (OEO). The Associate Director for Compliance and Conflict Resolution in The Office of Equal Opportunity and Affirmative Action Programs, Caroline Laguerre-Brown, will coordinate the investigation and resolution of the complaint with the affected parties, departments and/or divisions, and will prepare appropriate documentation of the measures taken to ascertain the facts and circumstances pertinent to the complaint. The Associate Director will also consult with the parties involved in the dispute and make recommendations for the resolution of the complaint to the affected departments and/or divisions,

For submission information, contact an editor:

Megan Lindsay (mlindsay@jhmi.edu),
Jaime Cheah (jcheah@jhmi.edu),
Sayaka Eguchi (seguchi@jhmi.edu),
Melissa Griesemer (mgriesemer@jhmi.edu)

<http://www.hopkinsmedicine.org/gsa/news.html>

Continued from page 9

and the office of the General Counsel. All investigations will be conducted in as confidential a manner as possible. The privacy of those filing complaints, named in complaints or acting as witnesses in an investigation will be protected to the greatest degree possible within the parameters of investigating the complaint.

FREQUENTLY ASKED QUESTIONS (<http://www.jhuua.org/shprp/index.html>):

What is sexual harassment?

The definition of sexual harassment is still evolving. Generally speaking, sexual harassment is behavior of a sexual nature, which is not welcomed, is severe or pervasive, and subjectively and objectively offensive and which creates a hostile, intimidating or offensive academic or working environment, which unreasonably interferes with your academic progress or working conditions.

Specifically, the University's sexual harassment policy defines sexual harassment as the following:

Sexual harassment, whether between people of different sexes or the same sex, is defined to include, but is not limited to, unwelcome sexual advances, requests for sexual favors, and other behavior of a sexual nature when:

- 1) submission to such conduct is made implicitly or explicitly a term or condition of an individual's employment or participation in an educational program;
- 2) submission to or rejection of such conduct by an individual is used as the basis for personnel decisions or for academic evaluation or advancement;
- 3) such conduct has the purpose or effect of unreasonably interfering with an individual's work or academic performance or creates an intimidating, hostile or offensive working or educational environment (<http://www.jhuua.org/shprp/policy.htm>)

What does all that really mean? Does it mean I can't tell a dirty joke or ask another student out?

Sporadic or isolated incidents of sexual humor do not constitute sexual harassment. Nor is there anything wrong with asking someone out on a date. Many people have met their spouses at school or work. But repeated requests for a date, once a request

is declined, may constitute sexual harassment.

Can a student sexually be harassed by another student?

Whether behaviors are exhibited by another student, staff or faculty member, or even a visitor to the University, if they are in your academic or working environment at Hopkins or a part of a University sponsored event, they may constitute sexual harassment.

But doesn't a person have any obligation to tell me that they are offended before they claim that I sexually harassed them?

People should be clear and direct in telling a person that their advances are unwelcome. However, not everyone is able to do this, most often, we hear, because they don't want to hurt the other person's feelings. We recommend that if a suitor has been turned down for one or two requests for a date, ask, "May I call you again?" or "Do you want me to try another time?" before repeating the request for a date. Open communication from both parties helps avoid misunderstandings or perceptions of sexual harassment from behaviors with only honorable intentions.

My academic progress is dependent upon a good recommendation from my professor or academic advisor. Can you promise me that I won't be retaliated against if I talk to a Designated Consultant about someone with the power or authority to affect my academic progress?

The University's policy is clear that retaliation is prohibited just as sexual harassment is prohibited. If any person feels s/he is being retaliated against as a result of speaking to a member of the SHPRP, s/he should immediately contact the Director-SHPRP.

If I ignore it, will it go away?

It will not. Simply ignoring the behavior is ineffective; harassers will generally not stop on their own.

I'm being sexually harassed, how do I make a report?

What support services are available?

Complaints of sexual harassment may be brought to Ray Gillian, Assistant Provost and Director of Equal Opportunity for the University, or Caroline Laguerre-Brown, Associate Director for Compliance and Conflict Resolution, I30 Garland Hall, Telephone: 410.516.8075, TTY: 410.516.6225. Also, a report can be made to the Deans of Student Affairs. Additional, confidential support services can be obtained by contacting the Student Assistance Program at 443-287-7000. More information about this topic can be obtained at <http://www.jhuua.org/shprp/index.html>.

Congratulations Class of 2006!

Masters of Arts

Catherine Leigh Delphia, Medical and Biological Illustration. The Anatomy of the Grey-Headed Flying Fox, *Pteropus poliocephalus*.; **Dustin Allen Dikeman**, Biochemistry, Cellular and Molecular Biology Training Program-Cell Biology. Alpha4beta1 Integrin Modulates Cell Migration in Response to Mechanical Stimulus.; **Jonathan James Geganto**, Medical and Biological Illustration. Visualizing a Therapeutic Use of Nonsense-Mediated Decay Inhibition for the Treatment of Pancreatic Cancer.; **Alison Victoria Grazioli**, Biochemistry, Cellular and Molecular Biology Training Program-Cell Biology. Alpha4Beta1 Integrin Regulates Migration of Perivascular Mural Cells in Blood Vessel Remodeling.; **Kimberly Main Knoper**, Medical and Biological Illustration. Ultrasound in the Emergency Department: Development of an Interactive Teaching Tool.; **Nancy Lynn Medley**, History of Medicine. Women's Biography in the Practice of Franklin P. Mall's Human Embryology, 1900-1918.; **Lauren Grace O'Malley**, B.S., McMaster University, 2004; Medical and Biological Illustration. The Early Diagnosis of Familial Pancreatic Cancer: An Educational Animation for the Web.; **Lefei Sun**, Neuroscience. Dynamic Regulation of Glur2/3 Trafficking by PDZ Domain Proteins and Small-Molecule Modulators Targeting PDZ Protein Interactions.; **Ethan Madison Tyler**, Medical and Biological Illustration. Visualization of the Dental Anatomy of the Narwhal, *Monodon monoceros*.

Masters of Science

Edward Bentley Bunker, Health Sciences Informatics. Usability of a Prototype Data Visualization Interface for Public Health Practitioners.

Doctors of Philosophy

Erica Lynn Allen, Cellular and Molecular Medicine. Novel Involvement of Nuclear Hormone Receptors in Autosomal Dominant Polycystic Kidney Disease.; **Drew James Applefield**, Biochemistry, Cellular and Molecular Biology Training Program-Biophysics and Biophysical Chemistry. The Kinetic and Thermodynamic Effects of Factors Involved in Eukaryotic Translation Initiation.; **Joseph Corey Ayooob II**, Biochemistry, Cellular and Molecular Biology Training Program-Neuroscience. Axon Guidance Signaling Mechanisms: Functional Analyses of Plexin A and Plexin B, Two *Drosophila* Semaphorin Receptors.; **Byoung-II Bae**, Neuroscience. Role of p53 in Huntington's Disease.; **Gerard Marcel Joseph Beaudoin III**, Neuroscience. Hairless is a Nuclear Receptor Corepressor that Modulates Epithelial Progenitor Cell Differentiation.; **Mosi Kadin Bennett**, Neuroscience. Odor-Evoked Activity Alters Gene Expression in Olfactory Receptor Neurons.; **Katherine Wesley Bowman**, Biomedical Engineering. Oral Delivery of Polymer-DNA Nanoparticles for Hemophilia A.; **Scott Louis Brincat**, Neuroscience. Neural Coding of Object Contour Shape in Primate Posterior Inferotemporal Cortex.; **Andrew John Callegari, Jr.**, Cellular and Molecular Medicine. UV-Light Induces a Post-Replication DNA Damage Checkpoint.; **Matthew Joseph Caples**, Biochemistry, Cellular and Molecular Biology Training Program-Molecular Biology and Genetics. Characterization of the Nef Protein from a Neurovirulent Simian Immunodeficiency virus, SIV/17E-Fr.; **Dipayan Chaudhuri**, Neuroscience. An Examination of the Mechanisms Regulating Calmodulin-Mediated Enhancement of the Neuronal CaV2.1 Channel.; **Jaime Hing Ming Cheah**, Biochemistry, Cellular and Molecular Biology Training Program-Neuroscience. Behind the Iron Curtain: Dexas1 Mediates Glutamate-NMDA Induced Neuronal Iron Uptake.; **Lingfeng Chen**, Biochemistry, Cellular and Molecular Biology Training Program-Cell Biology. Regulation of Actin Polymerization During Chemotaxis in *Dictyostelium Discoideum*.; **Amy Ellen Chew**, Functional Anatomy and Evolution. Biostratigraphy, Paleoecology and Synchronized Evolution in the Early Eocene Mammalian Fauna of the Central Bighorn Basin, Wyoming.; **Richard William Cho**, Cellular and Molecular Medicine. Activity Regulated Proteolytic Cleavage of NPR (Neuronal Pentraxin Receptor) Induces Clustering and Endocytosis of AMPA Receptors.; **Nicolas Christoforou**, Cellular and Molecular Medicine. Mouse Embryonic Stem Cell Derived Cardiac Progenitor Cells.; **Maria Luisa Cochella**, Biochemistry, Cellular and Molecular Biology Training Program-Molecular Biology and Genetics. The Molecular Basis for High Fidelity tRNA Selection on the Ribosome.; **Grace Ann Cornblatt**, Biochemistry, Cellular and Molecular Biology Training Program-Physiology. Characterization of a Transcription Factor *tfap2a* and its Role in Craniofacial Development in Zebrafish, *Danio rerio*.; **Anthony Ralph Cukras**, Program in Molecular Biophysics. Small Ribosomal Protein S13 Modulates Translocation and Initiation in the Ribosome.; **Jordan M. Cummins**, Cellular and Molecular Medicine. A Rationale for Two New Therapeutic Targets in Colorectal Cancer: HAUSP and XIAP.; **Cynthia Louise DeRenzo**, Human Genetics. Exclusion of Germ Plasm Components from Somatic Lineages by Localized Protein Degradation.; **Sayaka Eguchi**, Cellular and Molecular Medicine. The Role of Histone Modifications in the Reversal of Abnormal Gene Silencing in Cancer.; **Qiaojun Fang**, Biological Chemistry. Protein Structure Prediction by Emphasizing Local Side-Chain/Backbone and Side-Chain/Side-Chain Interactions.; **Yi Fang**, Biological Chemistry. Peroxisome Membrane Protein Import and Exosome Biogenesis at Plasma Membranes.; **Anthony Zahi Faranesh**, Biomedical Engineering. Gadolinium-doped Biodegradable Polymer Microspheres for Magnetic Resonance Imaging Guided Drug Delivery.; **Craig Anthony Fletcher**, Pathobiology. The Adhesion Molecule Leukocyte Function-Associated Antigen (LFA)-1 is Involved in HIV Transmission in Primary T cells.; **Anand Narayan Ganesan**, Cellular and Molecular Medicine. Reverse Engineering the L-type Ca²⁺ Channel in Cardiac Myocytes.; **Mayra García**, Cellular and Molecular Medicine. Suppression of HIV-1 Replication by Measles Virus.; **Joshua Aaron Granek**, Biochemistry, Cellular and Molecular Biology Training Program-Biophysics and Biophysical Chemistry. Computational and Experimental Analyses of Transcriptional Regulation as a Function of DNA Sequence.; **Ali Deniz Güler**, Biochemistry, Cellular and Molecular Biology Training Program-Biological Chemistry. Electrophysical Characterization of the Heat-Gated Ion Channels: TRPV1, TRPV3 and TRPV4.; **Rebekah Lynn Gundry**, Pharmacology and Molecular Sciences. Characterizing the Albumin-Enriched Fraction of Human Serum: Proteins, Associations, and Biomarker Discovery.; **Luis Felipe Gutiérrez**, Biomedical Engineering. X-Ray Fused with MRI (XFM) for Guidance of Catheter-Based Interventions.; **Brent Yamato Hamaoka**, Biochemistry, Cellular and Molecular Biology Training Program-Biophysics and Biophysical Chemistry. Signal Transduction in the *C. elegans* Sex Determination and *D. melanogaster* Hedgehog Developmental Pathways.; **Yingsong Hao**, Biochemistry, Cellular and Molecular Biology Training Program-Molecular Biology and Genetics. Stabilization of Cell Polarity by the RING Finger Protein PAR-2 in the *Caenorhabditis elegans* Zygote.

Makoto Hara, Cellular and Molecular Medicine. S-Nitrosylated Glyceraldehyde-3-Phosphate Dehydrogenase Initiates Apoptotic Cell Death by Nuclear Translocation Following SIAH1 Binding.; **Michelle Lynn Harris**, Cellular and Molecular Medicine. Granzyme B as an Indicator and Generator of Altered Antigen Structures in Autoimmunity.; **Stuart William Hicks**, Biochemistry, Cellular and Molecular Biology Training Program-Cell Biology. Golgin-160: Insights into Golgi Structure and Function.; **Hao Huang**, Biomedical Engineering. Study of Cortico-cortical Connectivity and Characterization of Developing Human Fetal Brain Anatomy by Diffusion Tensor Imaging.; **Yanhua Huang**, Neuroscience. Glutamate Transporter Function at Excitatory Synapses.; **Lee Daniel Kapp**, Biochemistry, Cellular and Molecular Biology Training Program-Biophysics and Biophysical Chemistry. Determining the Roles of the Identity Elements of Eukaryotic Initiator tRNAs.; **Amir Hossien Kashani**, Neuroscience. Calcium Regulation of LM04-Mediated Transcription and its Role in Thalamocortical Development.; **Jung-Whan Kim**, Pathobiology. Oncogenic and Hypoxic Alterations of Cellular Metabolism.; **Erika Ann Kretzmer**, Neuroscience. An Examination of the Spiral Ganglion Neurons of the Cochlea Following Chronic Use of a Cochlear Implant.; **Daniel Jason Krosky**, Pharmacology and Molecular Sciences. Inhibitors of Uracil DNA Glycosylase Based on Enzymatic Mechanisms of Extrahelical Base Recognition.; **Tomasz Kulikowicz**, Biochemistry, Cellular and Molecular Biology Training Program-Pharmacology and Molecular Sciences. Type II Topoisomerases of the Protozoan Parasite *Trypanosoma brucei*.; **Ihid Carneiro Leao**, Pharmacology and Molecular Sciences. Vesicular Trafficking and Cholesterol Homeostasis: HIV-1 Connection with Niemann Pick Type C and Rab9 Proteins.; **Hyosang Lee**, Biological Chemistry. The Identification of Two Novel Ion Channels, TRPV3 and TRPV4 and the Elucidation of Their Roles in Temperature and Pain Sensation.; **Sarah Jung-Ha Lee**, Neuroscience. Controlling Mitochondrial Division: An Evolutionarily Conserved Function of Fis1.; **Soo Hee Lee**, Biochemistry, Cellular and Molecular Biology Training Program-Biological Chemistry. De Novo Fatty Acid Synthesis by Microsomal Elongases in Trypanosomes.; **Ken-Yu Lin**, Biochemistry, Cellular and Molecular Biology Training Program-Molecular Biology and Genetics. Identification of a New Mechanism for Tumor Immune Evasion.; **Shin Lin**, Human Genetics. Disease Marker Association Analysis.; **Ivan Vladimirovich Litvinov**, Cellular and Molecular Medicine. The Role of Androgen Receptor Signaling in Normal Prostatic Epithelial Differentiation in Prostate Cancer Proliferation.; **Yanan Liu**, Biological Chemistry. Study of Kinetoplast DNA Replication in *Trypanosoma brucei*.; **David Maag, Jr.**, Biochemistry, Cellular and Molecular Biology Training Program-Biophysics and Biophysical Chemistry. The Molecular Mechanics of Start Site Selection During Eukaryotic Translation Initiation.; **Elizabeth Anne Manning**, Pharmacology and Molecular Sciences. Augmenting the Potency of Breast Cancer Vaccines by Modulating Immune Tolerance and Targeting the Tumor Microenvironment.; **Lifang Mao**, Neuroscience. The Roles of GluR2/3 C-termini and Their PDZ Domain Interacting Proteins, GRIP and GRIP2, on AMPA Receptor Trafficking.; **Heather Ann Marton**, Biochemistry, Cellular and Molecular Biology Training Program-Molecular Biology and Genetics. The CTR9 Component of the PAF1 Complex: General and Position-Dependent Effects on Transcription by RNA Polymerase II.; **Tonya Maria Matthews**, Biomedical Engineering. Investigations and Modeling of Efferent Inhibition in Chicken Short Hair Cells.; **Rowena McBeath**, Cellular and Molecular Medicine. The Effect of Cell Shape on Stem Cell Signaling and Lineage Commitment.; **Shawn Allan Motyka**, Biochemistry, Cellular and Molecular Biology Training Program-Biological Chemistry. An RNAi Library for Identifying Mitochondrial DNA Replication Proteins in *Trypanosoma brucei*.; **Jennifer Gladys Mullé**, Human Genetics. Characterization of the Susceptibility Locus for Schizophrenia on Chromosome 13q32.; **Reza Nezafat**, Biomedical Engineering. Efficient Acquisition and Reconstruction Methods for MR Flow and Angiography.; **Li Pan**, Biomedical Engineering. Fast and Quantitative Assessment of Regional Myocardial Function Using Magnetic Resonance Imaging.; **Ethan Samuel Patterson**, Human Genetics. Identification of Genes Regulated by SOX17 During Mammalian Endoderm Differentiation.; **Fay Fei Peng**, Biomedical Engineering. The Regulation and Mechanics of Actin-Based Motility.; **Obdulio Alberto Piloto**, Cellular and Molecular Medicine. Anti-FLT3 Immunotherapy for the Treatment of Acute Leukemias.; **Yingfeng Qiao**, Pharmacology and Molecular Sciences. Chemical Rescue of a Mutant Enzyme in Living Cells.; **Adam Cain Resnick**, Neuroscience. Inositol Polyphosphate Multikinase is a Nuclear PI3-Kinase with Transcriptional Regulatory Activity.; **Ashley Evan Ross**, Biochemistry, Cellular and Molecular Biology Training Program-Molecular Biology and Genetics. Regulation of V(D)J Recombination at the Levels of Recombinase Activity and Locus Accessibility.; **Nidhi Gupta Saran**, Biochemistry, Cellular and Molecular Biology Training Program-Physiology. Cerebellar Gene Expression and Sonic Hedgehog Signalling in a Mouse Model of Down Syndrome.; **Blanka Sharma**, Biomedical Engineering. Engineering Stratified Tissues for *In Situ* Cartilage Regeneration.; **Seth Aaron Smith**, Program in Molecular and Computational Biophysics. Development of Magnetic Resonance Saturation Techniques to Detect and Quantify Macromolecular Pathologies Afflicting the Brain and Spinal Cord.; **Sathya Ravichandran Sriram**, Cellular and Molecular Medicine. The Role of Parkin Biochemistry in the Pathophysiology of Parkinson's Disease.; **Chih-Ying Su**, Neuroscience. Molecular Components of the Two Antagonistic Phototransduction Pathways in a Single Parietal-Eye Photoreceptor.; **Thomas Edward Sussan, Jr.**, Biochemistry, Cellular and Molecular Biology Training Program-Physiology. Tumorigenesis, Tumor Suppressors, and Proto-Oncogenes in Down Syndrome.; **Harry Eugene Taylor**, Molecular Biology and Genetics-Program In Immunology. Functional Antagonism Between Members of the TFII-I Transcription Factor Family.; **Angela Hsiang-Hsiang Ting**, Cellular and Molecular Medicine. Epigenetic Gene Silencing in Human Cancers: The Roles of DNA Methyltransferase 1 and Double-Stranded RNA.; **Caryn Denise Tong**, Biochemistry, Cellular and Molecular Biology Training Program-Pharmacology and Molecular Sciences. Directed Differentiation of Dendritic Cells from Mouse Embryonic Stem Cells.; **Xuemei Tong**, Biological Chemistry. Function of Keratin 17 in Epithelial Tissues.; **Becky JoAnne Tu-Sekine**, Biochemistry, Cellular and Molecular Biology Training Program-Biological Chemistry. Investigation into the Regulation and Function of Diacylglycerol Kinase Theta.; **Patty Peiyu Shih Vernon**, Cellular and Molecular Medicine. Insights into the Molecular Mechanisms of Host-Mediated Restriction of Alphavirus Infection.; **Melissa Sue Vining**, Biochemistry, Cellular and Molecular Biology Training Program-Cell Biology. Organ Positioning in the *Drosophila* Embryo Requires Complex Signaling Pathways and Tissue-Tissue Interactions.; **Tao Wang**, Biological Chemistry. Molecular Genetic Dissection of *Drosophila* Phototransduction.; **Magdalena Maria Weidner-Glunde**, Biochemistry, Cellular and Molecular Biology Training Program-Pharmacology and Molecular Sciences. SP100-HMG, A KSHV LANA Interactor Involved in Chromosome Tethering and LANA Association with Nuclear Bodies.; **Shenqin Yao**, Biochemistry, Cellular and Molecular Biology Training Program-Molecular Biology and Genetics. Identification of a Novel Hedgehog Receptor from a Systematic Survey of the *Drosophila* Genome.; **Srinivasan Yegnasubramanian**, Pharmacology and Molecular Sciences. DNA Methylation Changes During Prostate Carcinogenesis and Disease Progression.; **King Fai Evelyn Yim**, Biomedical Engineering. Design of Scaffolds for Human Stem Cell Expansion and Differentiation: Influence of 3D Structure, Topographical and Biochemical Cues.; **Michael Scott Zastrow**, Biochemistry, Cellular and Molecular Biology Training Program-Cell Biology. A-Type Lamins and Nuclear Architecture.; **Lilei Zhang**, Human Genetics. PLP2 and Susceptibility to ER Stress and Hypoxia.; **Larry Scott Zweifel**, Neuroscience. The Neurotrophin Signaling Endosome and Sympathetic Nervous System Development.