



The Restriction Digest

G.S.A. Newsletter

a publication of the
Graduate Student Association

Johns Hopkins University School of Medicine

Volume 17

Number 3

April 2007

GSA Notes

By Kristina Krasnov

Winter 2007 has undoubtedly arrived in Baltimore...brrrr.... As the long, cold, and largely snowless months have been upon Hopkins for a while now, you may find yourself restlessly stuck in lab or at home. Don't despair! If this is your dilemma (or you need an excuse to try something different), here are some fun things you can do in the coming weeks to ease the winter blues:

February:

To get a new appreciation for your cell phone, go to see the Contemporary Museum's exhibit on Art & the Mobile Phone (running from January-April). For more info on this or their other exhibits, visit <http://www.contemporary.org/>.

You, too, can be 'fired with passion' upon visiting the Asian Arts & Culture Center in Towson for their "Fire with Passion: Contemporary Ceramics of Japan" exhibit (run-

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Tech Corner

By Jonathon Trow

Every January, a group of geeks gathers in Las Vegas to drool over the latest bleeding edge electronics at the Consumer Electronics Show (CES). In this issue I'll talk briefly about some of the interesting, and perhaps even useful, gadgets that debuted this year.

The first item is probably the most like something out of a sci-fi movie; it's called Powercast and the creators think it might solve the problem of short battery life in consumer electronics. The concept is simple; it transfers power wirelessly using radio frequency signals. The Powercast transmitter can be put into any device that plugs into the wall (a lamp for instance), and the receiver can be included within any consumer electronic device that runs on AA or AAA batteries. When within a fairly short range of the transmitter, a device containing the Powercast receiver will be slowly charged. The idea seems useful. It could mean wireless keyboards and mice that never

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Bitchin' Kitchen

By Renee Domergue

So, it's pretty clear by now that I like to eat. What may be less clear is that I, fortunately, also enjoy working out. Well, "enjoy" might be overstating it a bit. I am not deluded enough to think I am working on an Alessandra Ambrósio or Marissa Miller body here. It's more that I am averse enough to being totally round to force myself to sweat several times a week. And hey, there is always mental power in physical power as well.

But January, for gym rats such as myself, is always an interesting month. Why? The New Year's resolutions. The cardio equipment area is like a safari feeding ground, people are wandering around wondering what the hell to do next, and somehow the locker room is so crowded that I end up forcibly smacking myself in the face while attempting to take off my sweater. Ok. I'm the first to admit that when I transferred from the Cooley Center to the School of Public Health gym, I did it too. I

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ning from February-May), <http://wwwnew.towson.edu/asianarts/events.html>.

Check out the Baltimore Tattoo Museum in Fells Point (bet you didn't even know we had one!), <http://www.balimoretattoomuseum.net/>. This museum exhibits tattoo artists' work for a 'different' yet enlightening experience.

March:

March Madness Happy Hour, March 15th, WBS Student Lounge. Come watch the NBA playoffs, grab a snack and a beer, and socialize with friends.

Catch a show at the Center Stage Theater, <http://www.centerstage.org/>. Student tickets are available!

Attend "Telomerase: From Graduate Studies to Lasker Award", an insight into Dr. Carol Greider's career. The talk is scheduled for March 30th, 3-5 pm in WBS Auditorium.

Want a chance to get out of Baltimore? Take a trip to Washington, D.C. for the 95th Annual National Cherry Blossom Festival. To check out the events schedule and the blooming time frame, visit <http://www.nationalcherryblossomfestival.org/>.

April:

Do something out of the ordinary, see a Shakespearean play! The Baltimore Shakespeare Festival runs from March 30th thru April 22nd. Visit <http://www.baltimoreshakespeare.org/> for more info.

Attend the Pioneers in Science Lectureship given by Dr. Martin Markowitz, a prominent AIDS researcher. The talk is scheduled for April 17th, 3-4:30 pm in Mountcastle Auditorium.

Stressed with work or classes? Need a chill pill? Visit the Cylburn Arboretum (<http://www.cylburnassociation.org/>) for various peaceful horticultural activities. You can also check out the Howard Peters Rawlings Conservatory & Botanic Gardens (http://www.ci.baltimore.md.us/government/recnparks/special_facilities.html) for their palm house, orchid room, Medi-

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Dinosaur Docs

By Georgina McKusick

My advisor recommended that I attend the 2006 Society of Vertebrate Paleontology (SVP) meeting in order to further my connections within the field of mammal paleontology and to hear about the latest research and techniques. I conned my fiancé into making the 11-hour drive from Baltimore to Ottawa, Ontario with our puppy in the backseat of the car. It poured for the entire 11 hours, making our frequent doggy pit-stops unpleasant, but we made it into Canada without too much trouble.

The next morning I walked to the meeting bright and early, in my most professional outfit and ready to learn. I encountered some of my dinosaur-studying colleagues from the Hopkins Center for Functional Anatomy and Evolution and learned that my advisor had been bumped from his flight and was stuck in Chicago. I had to fend for myself at my first SVP meeting! So I sought out the only mammal paleontologists I knew - the two Belgians who were part of our field crew in India this past spring, the group of paleontologists from Stonybrook we meet in Wyoming's Big Horn Basin every July, and a few graduates of my program. These people all study mammal fossils from the late Paleocene to early Eocene, and we make a very eclectic and esoteric group. When I met my fiancé for lunch, he said he'd been observing some of the vertebrate paleontologists smoking outside and they "didn't seem so bad." I had yet to be swayed either way by the throng of fossil enthusiasts, though I was impressed by the varied quantitative techniques being employed by all the speakers in the first symposium.

My advisor showed up in the afternoon session and began introducing me to everyone he knew. Being rather shy and soft-spoken this was difficult for me, but necessary in order to navigate the political world of mammal paleontology. The meeting then became a blur of introductions, \$7 beers at poster sessions, and trying not to stuff crudités into my mouth before meeting famous paleontologists.

At the Auction Benefit, I began to seriously suspect
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terranean house, tropical house, desert house, and interesting flower collection. Both places are located in Baltimore.

May:

Now that it is warmer, take the opportunity to visit the Baltimore Zoo (<http://www.marylandzoo.org/>). Hey, you love animals, right? And it's fun for the whole family!

Attend the Alicia Showalter Reynolds Lectureship entitled "Cell Fate Determination of the Vertebrate Retina" by Dr. Connie Cepko of Harvard SOM. Lecture is scheduled for May 22nd, 2:30-4 pm in Mountcastle Auditorium.

You can also look forward to the various entertaining activities that are part of Graduate Student Appreciation Week, the GSA Poster Session, the annual white-water rafting trip, and other fun spring events.

Until next time!

Kristina Krasnov
GSA president

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that paleontologists are, in fact, crazy. On a stage at the front of a packed hall, characters from James Bond movies auctioned off items including books and posters, an SVP thong (\$120), and a life size model of the skull of a newly discovered dinosaur (\$9000). The stifling heat of so many paleontologists talking and laughing in one room, and the absurdity of Pussy Galore auctioning off my advisor's newly published book (for more than twice list price!), required imbibing many over-priced vodka tonics.

After the auction I found myself at the hotel bar - which had renamed its signature cocktails "Purple Dinosaur" and "Fossil" in our honor - and chatted into the night with the distinguished paleontologists and fresh-faced recent doctorates all crowded around our tiny table. I had a fabulous time. I stumbled back to my hotel with many reprints and new ideas for my dissertation project that desperately needed to be written down before the vodka got the better of me.

The next morning the first few talks were sparsely attended as groggy paleontologists crowded around the coffee stations, but by mid-morning it was business as usual. The last night of the meeting there was another party, though we couldn't stay long because we had to drive back to Baltimore the next day. On the way home it was raining again and there was terrible traffic when we finally got to the border of Maryland. I was also very tired, and honestly a wee bit hungover still. But I was satisfied with my first SVP meeting and pleased that my future colleagues are the kind of people will share a few beers with graduate students and dress up like James Bond to raise money to support the study of fossils.

Upcoming GSA Events

Tuesday, April 17th
Pioneers in Science Lecture by
Martin Markowitz, MD

Thursday, April 19th
Young Investigator's Day

**Go to
www.hopkinsmedicine.org/gsa
to check out our calendar
and keep abreast of upcoming events.**

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need new batteries, cell phones that charge automatically whenever you enter the room, and Christmas tree lights that don't need an outlet. The downside is that the Powercast transmitter is constantly using power to transmit signals, even if nothing is there to take advantage of it; not exactly a good way to conserve energy. Further, it can't be used for high-power devices, at least not yet. Success for this product will depend on the company convincing device manufacturers to include the receiver chip in their products, and so far Phillips is the only company to announce a partnership.

Next we'll journey to the realm of ridiculous ostentation. Sharp showed off a 108-inch LCD Hi-def TV. For those of you keeping score at home, that's about the dimensions of a queen size mattress. Unlike many of the super-large sets publicized at these shows, this one will be available to consumers. An exact price hasn't been announced, but monster sets in this range usually retail for upwards of \$70,000. So you might want to start saving now if you're getting the same stipend I am. (And if you're not, email me your secret, I want in.)

An oddity this year was the remarkable number of breathalyzer products. They all had the same common function; you blow into it to get a read-out of your blood alcohol content (BAC). This is presumably a good way to make sure that you are sober enough to drive after a night out on the town, but the array of different products was remarkable. There were coin-operated stations for installation in a bar, and car keys that won't let you drive unless your BAC is low enough. The options were endless. There was even one that attaches to your iPod; breathe in and in 5 seconds it will read out your BAC to within .01. Plus it doubles as an FM transmitter for your car stereo. (So if you're too drunk to drive, you can listen to some tunes in the parking lot.)

Happening at the same time as CES, but further west in San Francisco, was Apples' MacWorld. The big announcement from Apple was, of course, the iPhone. It is, in effect, a combination cell phone and iPod. It will be available with either a 4GB or 8GB hard drive, will function as a video iPod, and comes equipped with Wi-Fi, Bluetooth, and a 2-megapixel camera. Instead of the standard keypad, the device uses a 3.5-inch touch screen for input and has proximity sensors to turn it off when it is close to your face. It also has sensors that detect whether the device is being held vertically or

horizontally and flips the image on the screen accordingly. The phone runs OS X with iTunes, the Safari web browser, and has integrated Google maps functionality. One downside is that Cingular is the only service provider. The iPhone won't be available until June 2007 and the announced price is \$499-599, depending on how big of a hard drive you want. It is likely, though, that the actual price will drop between now and summer.

I hope you've enjoyed this little look at what the future holds for the world of consumer electronics. Whether it's a breathalyzer/iPod or a big-screen TV you can sleep on, I think there's something for everyone in 2007.

SAP Corner

Sleep Hygiene Student Assistance Program

- *Do you find yourself tossing and turning?*
- *Does your mind race and go through every thing that happened during the day, or think about what you have to do tomorrow?*
- *Are you easily disturbed by night noises?*

Sleep disruption is common, especially during times when you may feel emotionally overwhelmed. Anxiety, relentless replaying of the day's events, and heightened emotions can significantly interfere with your sleep. Lack of sleep robs you of needed rest, making management of your daily routine more difficult. Bringing sleep patterns under control to attain a consistent, stable sleep schedule is very important for your emotional and intellectual well-being.

Poor sleep habits, or hygiene, are among the most common problems encountered in our society. We stay up too late and get up too early. We interrupt our sleep with drugs, chemicals, and work, and we over-stimulate ourselves with late-night activities such as television. Nothing is more frustrating than not being able to sleep. Paying attention to sleep hygiene is the most important thing you can do to maintain good sleep patterns.

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Below are some essentials of good sleep hygiene. Many of these points will seem like common sense. But it is surprising how many of these important points are ignored by many of us. There are several important factors that influence our sleeping patterns. The two most important are your personal sleeping habits and your sleeping environment.

Some tips on healthy sleep hygiene:

Fix a bedtime and an awakening time. Do not be one of those people who allow bedtime and awakening time to drift. The body gets used to falling asleep at a certain time, but only if this is relatively fixed.

Avoid napping during the day. If you nap throughout the day, it is no wonder that you will not be able to sleep at night. The late afternoon for most people is a “sleepy time.” Many people will take a nap at that time. This is generally not a bad thing to do, provided you limit the nap to 30–45 minutes and can still sleep well at night.

Avoid alcohol 4-6 hours before bedtime. Many people believe that alcohol helps them sleep. While alcohol has an acute sleep-inducing effect, a few hours later, as the alcohol levels in your blood start to fall, it has a stimulant effect.

Avoid caffeine 4-6 hours before bedtime. This includes caffeinated beverages such as coffee, tea, sodas, as well as chocolate, so be careful.

Avoid heavy, spicy, or sugary foods 4-6 hours before bedtime. These can affect your ability to stay asleep.

Exercise regularly, but not right before bed. Regular exercise, particularly in the afternoon, can help deepen sleep. Strenuous exercise within 2 hours before bedtime, however, can decrease your ability to fall asleep.

Tips on a healthy sleep environment:

Use comfortable bedding. Uncomfortable bedding can prevent good sleep. Evaluate whether or not this is a source of your problem, and make appropriate changes.

Find a comfortable temperature setting for sleeping and keep the room well ventilated. If

your bedroom is too cold or too hot, it can keep you awake. A cool (not cold) bedroom is often the most conducive to sleep.

Block out all distracting noise, and eliminate as much light as possible. If there is a high level of noise outside of the house or apartment, white noise machines or soft music can help neutralize some of these external distractions.

Reserve the bed for sleep. Don't use the bedroom as an office, workroom or recreation room. Let your body know that the bed is associated with sleeping. And avoid falling asleep on the couch or recliner.

If you have noticed ongoing sleeping problems, in addition to other disruptions such as changes in your weight or appetite, depressed or anxious mood, or difficulty with attention and concentration at work or in your leisure activities, depression or other mental health factors are a possible source of the problem. Contact your personal physician or schedule an appointment with the Student Assistance Program for confidential help in identifying the source of your sleep disruption. For more information about this topic, please feel free to contact the Student Assistance Program (SAP) at (443) 287-7000 or visit our website at www.jhu.edu/sap.

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**Next submission deadline:
May 1, 2007**

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walked down that staircase to nowhere. There is nothing down there but a glass door. No way to play that off. Just have to turn around and walk back up. (But honestly, what the hell is it there for anyhow?) You just have to accept that starting to work out at the gym notoriously involves some awkwardness.

I'm all for encouraging good health, and I sincerely hope everyone keeps up the habit, but let's make it easier for everyone involved and talk a little bit about gym etiquette. After discussing this situation with a few other regular gym-goers, we have a list. And yes, this list is based off of real events.

1. Proper attire required. I'm not saying you have to bust out the under armor, but the leg press isn't for your Kenneth Cole dress shoes. Injuries aside, take it seriously enough to bring clothes with you.
2. Don't steal my machine. There is a sign-up sheet for a reason. And, girl, don't play with me. You know I know you're stealing my time. A sheepish grin will not prevent me from getting pissed off.
3. Have TV etiquette. Don't watch it over my shoulder.
4. No exchange of body fluids at the gym. Don't cough on me, and don't make out with others. 'Nuff said. Really.
5. Excessive grunting is not attractive. Work hard, but not so hard that I worry you are going to pop something.
6. In addendum to number 5, work hard (or be "hardcore"- depending on who you talk to). It's not so much annoying as sad to see people just standing around at the gym. Saying you spent an hour at the gym doesn't count for much if 45 minutes was spent talking to someone.
7. Don't be naked in the locker room longer than necessary. Not that I'm against nudity, and hey, I'm glad you like your body, but when you stretch on a bench naked, not only are you taking up space, but frankly, you are making everyone else uncomfortable. Where am I supposed to look?

As for me, I generally don't make resolutions as I try to not wait until a new year to make changes in my life, but this year I made a few. One is a mega-resolution to forgive myself for a few regrettable decisions of the past year—definitely still working on that one. (I'm painfully perfectionistic.) But another, more do-

able, resolution is to appreciate the caring people in my life more. So, if I'd be permitted a moment of sapiness rarely displayed, this resolution is the result of having lost or nearly lost several people dear to me in the past few months. Some of these losses were a direct result of not taking care of the body, so continue that resolution to take care of yours, even if it makes for a crowded gym.

Our Talented Alumni!

By Jocelyn Lynch,
Johns Hopkins Medical & Surgical Association and the Alumni Office

An acclaimed medical institution like Johns Hopkins begets renowned alumni. But did you know that we also produce several award-winning alumni?

The Albert Lasker Medical Research Awards have celebrated scientists, physicians, and public servants whose accomplishments have made major advances in the understanding, diagnosis, prevention, treatment, and even cure of many of the crippling and killing diseases of our century. The Lasker Awards have come to be known as "America's Nobels" and is the most coveted award in medical science. We are very proud that some of our Hopkins alumni "family" members have had the honor of being recipients of this prestigious award. Here are a few:

Alfred Blalock, M.D and Helen B. Taussig, M.D. – 1954
for Clinical Research

Received a joint award for distinguished contributions to cardiovascular surgery and knowledge.

These two doctors are best known for their development of the "Blue Baby" operation. Dr. Taussig developed a theory that cyanosis was due to constriction (tightening) of the pulmonary artery. She interested Blalock in her theory about cyanosis. Together they experimented on hundreds of dogs to perfect an operation in which a branch of the aorta is joined to the pulmonary artery. This creates a bypass of the defective portion and as-

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sure an adequate flow of blood to the lungs. In 1944, Blalock and Taussig performed the first “blue baby operation” on a 15-month-old girl. Two more successful operations followed. The operation became known as the “Blalock-Taussig Shunt.”

Vernon B. Mountcastle – 1983 for Basic Medical Research

For his classic studies of the cellular architecture of the brain, revealing how the organization of nerve cells makes it possible to process information.

In the 1950’s, Dr. Mountcastle demonstrated, for the first time, how the sensation of touch is received in the brain and abstracted into perception. Dr. Mountcastle and his colleagues found that the nerve cells of the sensory cortex are arranged in vertical columns, extending from the surface of the cortex down to its depths. He discovered that the somatosensory nerve cells along the column responded to degrees of touch-pressure stimulation in different ways, making it possible for the brain to calculate the nature of these stimulating objects. Because he was the first investigator to go beyond the simple observation, description, and classification of brain functions, and to seek the fundamental question, “How does the brain process and perceive the information gathered by the senses,” Dr. Mountcastle is the intellectual progenitor of the many researchers at work in neuroscience today.

Victor A. McKusick – 1997 for Special Achievement in Medical Science

It is rare in the complex world of modern medicine for one man to have essentially founded an entire branch of medicine. It is rarer when that field comes to occupy such a central place in the mainstream of clinical medicine. Such is the case with Victor McKusick, universally recognized as the father of medical genetics, a preeminent teacher of teachers, and a great physician. As a young doctor at Johns Hopkins in the late 1940s, Victor McKusick was training in cardiology, even though his true intellectual love was genetics. During his young professional life, scientists at Rockefeller proved (through studies of pneumococci) that DNA is the substance that transmits hereditary information from cell to cell. Not long after that, James Watson and Francis Crick reported that DNA is a double helix, giving the molecules of heredity a structural shape. But there was no such thing as medical genetics. Dr. McKusick helped invent it.

Carol W. Greider -- 2006 for Basic Medical Research
The 2006 award recognizes Carol Greider, the Daniel Nathans Professor and director of molecular biology and genetics in the Johns Hopkins Institute of Basic Biomedical Sciences, along with Elizabeth H. Blackburn, Ph.D., of the University of California, San Francisco, and Jack Szostak, Ph.D., of Harvard Medical School. The three predicted and discovered telomerase, an enzyme that maintains the length and integrity of chromosome ends (telomeres) and has drawn intense interest from researchers studying the role of telomeres in everything from aging to cancer. Each time a cell divides, its chromosomes become a little shorter. As cells age, their telomeres shorten. The consequent loss of telomere function will cause some cells to stop dividing or die and others to undergo chromosome rearrangements that can lead to cancer.

“Carol Greider’s profoundly important work, its impact on science and its increasing implications for human health exemplify the Johns Hopkins mission in advancing knowledge for the sake of our world,” says Edward D. Miller, M.D., the dean of medical faculty and CEO of Johns Hopkins Medicine. “We are pleased that the Lasker Foundation has chosen to honor her and we offer her our heartiest congratulations.”

GSA Trip to the Maryland Food Bank



This February the GSA presented the Maryland Food Bank with a check for \$2400, raised at the Beer and Jazz Benefit co-sponsored by the Graduate Representative Organization and Peabody.