The G.S.A. NEWSLETTER

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

VOLUME 6 NUMBER 2 OCTOBER/NOVEMBER 1996

Why you should care about... Jobs in Science

by Tara L. Riemer

This is the first in a series of articles discussing my opinions on issues of concern (or that should be of concern) to scientists or graduate students in the sciences. My objective is to convince you that during your graduate career, you should pay attention to more than just research! I am developing an internet page with links to related sites, so if a topic catches your eye, stop by http://www.bme.jhu.edu/~triemer/issues.html to start surfing. Feel free to drop me a line (triemer@bme.jhu.edu) with comments or to suggest a future topic.

Are Ph.D. programs producing too many Ph.D.s? Are there jobs for these graduates? These questions have been raised in countless recent articles in the scientific and academic press (for these and other references, check the web page). There has been a 44% increase in the number of Ph.D. degrees granted annually in the biological sciences over the past twelve years, which translates into a 3% growth per year. So it is quite true that Ph.D. programs have been turning out an ever-increasing number of doctorates. But are there now too many for the available jobs?

For many years, these new, naive, bright-eyed researchers were soaked up into burgeoning industries and academic departments as new fields such as molecular biology pushed the limit of our knowledge beyond what could have been ever imagined forty years ago. Although the number of academic positions has increased, the percentage of all Ph.D.s in academic positions has steadily decreased over the past several decades (57% in 1973 to 45% in 1991). However, during the same time period, the percentage in business or industrial jobs grew from 25% to 36%. For many years, these percentage shifts basically canceled out. Unemployment rates among those with doctorates remained very small (1.6% in 1993), especially when compared to the general population (6%) or to all professional workers (3%).

Unfortunately, the hard statistics regarding employment and unemployment end in 1991 or 1993. Common belief now is that the scientific explosion is over and that jobs, especially academic positions, are impossible to get. Graduates are spending more years in postdoc positions while awaiting that first job offer. But even without the current numbers, I think that there are several lessons about your future to be learned from the past. First, not every Ph.D. will become faculty. This has always been the case and has been an increasing trend over many years. As I love to say, if all Ph.D. graduates were destined for academia, in a steady-state system, each professor could train only one Ph.D. student in his/her lifetime... a student to replace themselves! Second, that large percentages of Ph.D.s have historically worked in areas outside of academia. And lastly, that unemployment is a fact of life in the "real world" and that Ph.D. unemployment was almost shockingly low through 1993.

So what is the meaning of this situation to you, as a graduate student of The Johns Hopkins University School of Medicine? In my opinion, it means welcome to the real world. Welcome to the world that many of your peers discovered years ago, where jobs are hard to find, and your first choice of employer is not guaranteed. In this world, the more flexible you can be about the job you seek out, the more successful you will be in landing that job. Your degree from a top medical school is not necessarily going to cause your dream job to be handed to you on a silver platter. For most, the job search is going to be yet another challenge.

Well, you say, I must strive for a faculty position regardless of availability, since that is what I am supposed to do and what I have been trained to do! I would have to disagree. Many graduate students see academia as the only career track, as it is the one taken by their advisor and all

con't on p. 6, Jobs

GSA Meetings

2nd Tuesday at 2 pm in Hunterian G-5

Dec 10
Ski Trip Update

Dec/Jan
Holiday Happy Hour

Jan 14
Graduation Info and Planning Session

NEXT WAVE IS REDESIGNED, EXPANDED, IMPROVED!

by Wendy Yee

Science's Next Wave, the Web project from Science magazine that provides career guidance to young scientists (undergraduates through young faculty) has been completely redesigned and expanded. The new design appeared on the Web on Friday, October 18 at http://www.nextwave.org

Come visit us and see not only our new, cleaner design (which offers much easier navigation), but also several new or radically transformed departments including:

--"Tooling Up," a regular monthly column presenting nuts-and-bolts career advice for young scientists venturing outside the world of academia to look for jobs. The first column, premiering on Oct. 18, tells you "How to Write a Winning Resume."

--"Signposts," a greatly expanded section of links and Web resources for young scientists in search of jobs. Among other features, Next Wave staff will be reviewing Web sites, tell you which ones have the best career advice--and which ones you can skip.

--"In the Loop," our news section has been dramatically improved and augmented, with a new "Newsbriefs" section and frequently updated feature stories.

Of course, we're keeping our popular "Going Public" discussion forums, and our "New Niches" alternative career features. Come and check out the Next Wave's new look.

News and Noteworthy

by Ed Hsiao and Teresa Zimmers

The GSA Newsletter is proud to highlight some of the scientific achievements of our students, postdocs, and faculty. Please send submissions of recent events, publications, awards, and happenings to the GSA Newsletter, c/o Teresa Zimmers, PCTB Rm. 607.
(email=tzimmers@welchlink, fax=955-083)
or contact any editor.

Just a few of the recent publications from JHMI:

• **Catharine Wolkow**, **Robert DeBoy**, and **Nancy Craig** have shown that Tn7 has a transposition preference for plasmids that can conjugate between bacterial cells. Their work suggests that Tn7 is capable of recognizing actively-conjugating plasmids, hence increasing the efficiency of the transposon's spread within a bacterial population. (Genes and Development **10** (*1996*), p. 2145-2157).

• **Prasad Jallepalli** and **Thomas Kelly** report Rum1 and Cdc18 link inhibition of cyclin-dependent kinase to the initiation of DNA replication in *Schizosaccharomyces pombe*. Their data suggests that Cdc18 inhibition by cyclin-dependent kinases helps ensure that DNA replication occurs only once during each cell cycle. (Genes and Development **10** (*1996*), p. 541-552).

• **Daniel Isaac** and **Deborah Andrew** cloned and characterized the *trachealess* (*trh*) gene of *Drosophila*. *trh* appears to be expressed throughout embryogenesis and is required for the formation of the trachea, salivary ducts, and filzkoerper. (Genes and Development **10** (*1996*), p. 103-107).

• Recent work by **Jeffery Porter**, **Keith Young**, and **Philip Beachy**, indicates that the Hedgehog (Hh) protein undergoes an autocleavage reaction that results in a cholesterol-modified N-terminal domain. The Hh family of proteins are key regulators of embryonic pattern formation, with both short-range and long-range effects. The newly-discovered cholesterol tag appears to limit the diffusion of the Hh amino-terminal fragment. In addition, cholesterol modification may account for some of the developmental defects seen when cholesterol biosynthesis is perturbed. (Science **274** (*1996*), p. 255-259)

And News from elsewhere...

con't next column, News

Book Review

by T. M. Gant

The Beauty of the Beastly: New Views on the Nature of Life
by Natalie Angier

The Beauty of the Beastly, a collection of 41 essays by former *New York Times* science writer Natalie Angier, is the perfect right-before-bed book. Not because it puts you to sleep—quite the opposite—but each 4-8 page piece stands on its own: no need to mark your place, no reason to stop in the middle because you just can't keep your eyes open. She addresses a variety of subjects, from dolphins, aye-ayes (the world's most endangered primate), and the benefits of vegetables, to chaperones, telomeres, and transcription factors. Along the way she tackles such subjects as female's choice in mates (a cross-Kingdom perspective), the "Anatomy of Joy," and the bizarre sexual habits of more organisms than there's room for here (which gets back to being the perfect right-before-bed book). Most of the work in this book is derived from articles published in the *NYT*'s *Science Times* section from 1989-94, but it has been sufficiently revised that regular Times readers will not feel gypped. The mix of stimulation, information, and entertainment is precisely what your tired mind needs—it's fun reading, but educational enough that you may be able to rationalize reading this instead of your journal club article.

The title refers to Angier's penchant for the overlooked, the repulsive, and the underappreciated aspects of nature. As she notes in her introduction, "The beauty of the natural world lies in the details, and most of those details are not the stuff of calendar art." Accordingly, she writes of dung beetles, scorpions, roaches, pit vipers, and parasites; only the most unsympathetic reader will be able to resist her enthusiastic reporting, which transforms the most lowly organisms into principle players in the web of life. By placing disgusting organismal traits in the context of the survival-of-the-fittest conditions that have spawned the traits, Ms. Angier gives her readers the same sense of delight and respect she obviously feels about all aspects of the world we live in.

For example, she tells of the scarab, who swiftly buries the waste of messy animals like horses, cows, and humans: "we are all beholden to the dung beetle, nature's original recyclers, without which our planet would be beyond the help of even the most generous Superfund cleanup project." Apparently, such beetles clear away millions of tons (millions of TONS!) of droppings each day, world-wide. This may not be the stuff of pleasant dinner conversation, but it's interesting anyway.

Ms. Angier is an admitted anthropomorphizer, and a shameless one at that. Not only does she describe animal behavior in terms of human actions and motivations, she does the same with molecules. For example, she likens proteins which interact with DNA to molecular musclemen, who "vigorously massage it [DNA], twist it, and, on occasion, reinvent it before the blueprint of the body can make any sense at all." This is a writer communicating science to the public, and metaphors and similes are used freely to make unfamiliar concepts as comprehensible as possible to the non-scientist. Some readers may be irritated by this, but try describing your research project to your relatives sometime—you'll quickly realize why Angier uses these devices.

According to the book's cover notes, the author has won the Pulitzer Prize, the Lewis Thomas Award, and the AAAS Journalism Award. Such accolades are all very well, coming from discriminating and knowledgeable judges. What these honors don't convey is that, educational value notwithstanding, The Beauty of the Beastly is simply a good read.

News, con't from previous column

The **1996 Nobel Prize for Physiology or Medicine** was awarded jointly to Dr. Peter Doherty and Dr. Rolf Zinkernagel for their work on cell-mediated immune responses. Their work demonstrated that activation of cytotoxic T cells requires simultaneous recognition of both foreign particles and self molecules. Subsequent research has led to better understanding of the structure and function of MHC molecules. (Nature **251** (*1974*), p. 547)

GSA Newsletter Editors

Edward Hsiao	*ehsiao*
Catharine Johnson	*cejohns*
Alan Meeker	*ameeker*
Carolyn Sevier	*csevier*

***fax** 955-0831 attn. Ed Hsiao, PCTB 607*
***snail mail:** Ed Hsiao, GSA Newsletter PCTB 607, 725 N. Wolfe St. Baltimore, MD 21205*

To Friendship

by Howard Friedman

"To friendship," she hears as he casually lifts his ice water and forms a boyish grin. A silent pause then she dryly repeats, "to friendship."

Finishing his sip, the grin gradually washes away and the softly painted crow's feet return to their hiding. He concentrates on wiping the cool dew off the glass' brow then peers up. She waits for him to speak.

"Nice place they've got here," glancing around at the half-filled restaurant. An elderly couple smile at him from the opposite table. His eyes find their way back to her.

"I've only been here a couple of times. It's the best on the island," she returns.

Another pause in the conversation. He straightens the silverware. The silence overwhelms him. "I'm glad they finally got married, seemed like it'd never happen"

"She waited patiently and it didn't take him long to ask," she countered. He senses the hint of anger within the sarcasm. "After all, what's nine years of waiting for a good man like him." She smiles like a child licking ices on a sweaty, summer beach. "I want a wedding like that someday."

"Me too," he mindlessly agrees. His thoughts drift to the latest fight with his girlfriend. Was it his fault again? Nah, she's just a pain. Realizing he's been silent for too long, he inquires, "so, when will you be visiting the states."

"Soon I hope. I only get off two weeks for vacation . . . things aren't like they used to be." Her stare is strong, penetrating his brown eyes. She sees him casually caressing his drink. Her mind concentrates on his subtle movements.

"I always love coming down here . . . lets me relax a little."

"You should come down more often," she replies while pursing her painted lips. "Five years is a long time to not visit."

He's lost in his own world. Why am I happy here? Probably cause it means I'm not working. It has been a long time. "But we've seen each other since then. Remember the time you were in New York. We walked around the city and I showed you what little I know."

"Of course I remember, two summers ago. You took me everywhere. I loved it!" she says excitedly. Her mind drifts. They walk together in the city park stopping to feed the pigeons by the tree lined pond. Later on, he's coming home from work and she's waiting to hug him at the door.

She's changed since we first met. More mature. More of a woman.

"Remember you took me to that place in Chinatown? I loved it there!"

"Of course I do." He wonders if that red head at the wedding is available. After all she lives close by in the states and things are getting dry with the girlfriend.

"I still have the fortune from your cookie. I carry it in my purse."

"Must have been a good fortune," he mutters. Immediately he realizes that he wants that moment back, wants to say something stronger, more profound, something to touch her. But the moment is gone and can't be retrieved. "I mean I just lost yours a little while ago." What about her? I never really considered her. That's not true, I did but then it seemed it would never work. Who knows, Andy seemed happy? I could do the letters and the phone calls, waiting patiently to see her every few months for a couple of days and then after a few years maybe live together. His mind churns with vision of future greatness. He sees himself getting off the plane and she runs to greet him. That night they make love by sandy ocean's shores. Elegantly dressed, she charms his friends while sipping a martini.

"Thank you for dinner," she says softly. Her eyes not lifting off the table. "I guess I'll see you in another few years."

"Maybe sooner." Reaching for his wallet he asserts, "let me get the check."

"That's OK. I like to pay my way. I'll be back in a minute, I just have to go to the ladies room."

Lustfully he watches her walk as she reaches for a handkerchief.

The pen is mightier than the pipet...

Look out for the special Literary section in the Feb/March issue of the GSA Newsletter!

Please send any poems, short stories, creative writing, black and white art or photograph, or any other artistic work to the GSA Newsletter! Submissions are (tentatively) due March 4, 1997, but we'll take submissions any time!

Alicia Showalter Reynolds Memorial Lecture

Dr. Sirley Tilghman, a Howard Hughes Investigator at Princeton University who works on imprinting and DNA Methylation, and is an active supporter of women in science, has been invited to speak at a GSA sponsored lecture in honor of Alicia Showalter Reynolds. The details have yet to be finalized, but look for a date in late January.

1996-97 ANNUAL GSA SKI TRIP

Set aside **Jan 17-19** (MLK weekend) for the ANNUAL GSA SKI TRIP to Friar Tuck Inn and Resort in Catskill, NY, with skiing at Hunter Mountain and Cortina Valley. Current plans are to leave 5pm Friday and return late Sunday. Trip includes: bus transportation, two nights hotel lodging, 2 breakfasts, 2 dinners & lots of other goodies (open bar), and free transportation to ski areas. Ski rental is an additional $20 (for the whole weekend). Discounted lift tickets are available, but are not included in the tour price. Cost: $179(4 per room), $199 (3 per room), $209 (2 per room), children (2-12 yrs old) $109 each.

For more info, see fliers around the SOM complex or contact:

Kellie Cummings 104 biophysics x5-8286 email: kbc@welchlink

Tina Tenenhaus 818 PCTB x5-3750 email: ctenenha@welchlink

$50 deposit due Nov. 25; balance due Dec. 15 Makes checks payable to Kellie Cummings

Barefoot in the Park

By all accounts the GSA picnic was an unqualified success. Organizers of the annual event estimated the crowd of Hopkins students to be somewhere in the "tens of thousands," while park police cited a more modest figure of 332. Regardless, those who did attend were treated to beautiful weather and activities including volleyball, soccer, and ultimate Frisbee. Certain to be mainstays of future picnics, the shiny new Wood Basic Science model Webber grills came through their inaugural burn-ins with flying colors. Thanks to all the organizers (headed by Holly Berkovits) whose diligent efforts made this year's picnic go off without a hitch! Special thanks to Carolyn Sevier and Amy Tam who, drawing upon their experience from last year's "Exercise in Picnic Organizational Hell," provided a comprehensive list of do's and don'ts for setting up the affair. Mark your calendars now for next year's picnic, see you there!

Career Symposium for Biomedical Scientists

Many young scientists are interested in exploring their career options: the future of research funding is uncertain, and positions in academia are limited The Second Career Symposium for Biomedical Scientists, held on Monday, October 14 in the Turner building, gave students and postdocs an opportunity to meet with scientists both in academia and in other fields to discuss the opportunities and challenges of their positions.

Dave Jensen, of Searchmaster's, Inc., started off the day with strategies for "getting in the door" of a company or organization. As the manager of a company which places hundreds of people each year (mainly in industry), Mr. Jensen emphasized the importance of making personal contact. He noted that while people may not be receptive to a direct job request, they will generally be quite willing to give you information about the kind of work that is going on and even the name of another person in their institution who may be hiring soon. A resume can then be sent directly to the pertinent lab manager, rather than going through the "human resources barrier." He also pointed out that many people are more responsive to e-mail than to calls or letters, as they can answer these in their own time, with minimal effort. Mr. Jensen had many other insights into the job-getting process; he writes extensively for the Bio-Online Career Center at http://www.bio.com/hr/search/search_1.html.

The symposium featured three panel sessions, focusing on academic careers, industry and biotech careers, or alternative careers. In each panel, four to seven scientists working in that area talked about what their job entails—security, lifestyle, pay, opportunities for advancement, rewards, and risks—in response to audience questions. The academic panel included a scientists at various levels in both primarily research and primarily teaching schools, as well as a scientist who works at the National Cancer Institution at NIH. The panelists from industry or biotech companies represented a biotech company (Guilford Pharmaceuticals), a big pharmaceutical company (Procter and Gamble), and the mid-sized company Oncor. Don Doering, the Vice President of Aquapharm, Inc., had a unique perspective not only due to his experience running Aquapharm, but also due to his experience as a consultant to venture capitalists. Much of the discussion in this panel centered on issues of scientific freedom, job security and

con't p. 6, Symposium

New GSA Representatives

Parking Rep	Tara Riemer	triemer@welchlink.welch.jhu.edu
Univ. Health	Laura Korb	lkorb@welchlink.welch.jhu.edu
Department Reps:		
Cell Biology	Tracey Gant	tmgant@welchlink
BME	Eric Sobie	sesobie@bme.jhu.edu
	Tonya Matthews	tmm1@bme.jhu.edu
	Dennis Barbour	dbarbour@bme.jhu.edu
Immunology	Laura Korb	lkorb@welchlink
Human Genetics	Nancy Jensen Biery	njensen@welchlink
Biological Chem.	John Neely	jneely@welchlink.welch
CMM	John Neely	(see above)
Pharmacology	Alan Meeker	ameeker@welchlink.welch...
	Renee Speck (1st yr)	rspeck@welchlink....
Neuroscience	Joe Hurt	khurt@welchlink
Biophysics	Lesley Brown	blesley@welchlink

REPS STILL NEEDED FOR THE FOLLOWING DEPARTMENTS:

Art as Applied	Functional Anat.
Hist. of Science	Physiology

Volunteer News:
GSA community service

Our first series of events were met with much enthusiasm. Thank you for your participation!

Our Daily Bread

Thanks to those who helped to serve lunch at Our Daily Bread on Sept. 15th: Jutta Beneken, Holly Berkovits, Rachel Dumont, AM Egloff, Kalpana Gupta, Eleanor Hoff, Alex McPherron, Tina Tenenhaus, and Tim Worrall. Our Daily Bread, a soup kitchen in Mt. Vernon, serves meals daily. For more info call 659-4000.

Maryland Science Center Camp

Our participation in the Maryland Science Center (MSC) Camp In on Nov. 1 was also a great success! The MSC was host to 300 3rd through 6th graders for an overnight of classroom workshops and exhibit exploration. Special thanks to our graduate student volunteers: Holly Berkovits, AM Egloff, Kathy Hyland, Jen Lewis, Shonda Leonard, Tuhin Roy, and Ann Sheehy. Response to this camp in was so positive that we'll be doing this again in a few months. Watch for more info. in your GSA newsletter.

Upcoming Volunteer Opportunities:

• If you are interested in volunteering independently at the **Maryland Science Center**, call Lisa Wycoff at (410)545-5955.

•For those who are civic-minded but busy, **Hands on Baltimore** makes volunteering easy. They offer scheduling flexibility and a diversity of services to fit your interests. For more info. call (410)547-8810.

Further questions or comments? Please contact Ann Marie Egloff (amegloff@welchlink.welch.jhu.edu).

WHERE DOES IT ALL GO?

On the Alan Mason Chesney Medical Archives and the Preservation of Scientific Data

by Jutta Beneken

The other day, I was staring at yet another protein gel, trying desperately to explain the pattern of erratic bands. As I was taping it into my notebook, I realized that this particular gel wasn't going to be one for posterity. It would soon get lost among its countless companions on previous pages and may never, unless by chance, be looked at again. It occurred to me that some people (and I believe that they probably forward those good-luck chain letters I usually discard) actually have worthwhile data that they enter into their notebooks every night. When the time is right, they scan it into an Adobe Photoshop file, make it look nice, wave their magic wands, and voila! they have themselves a published piece of data.

Even though it may be hard for young scientists to imagine life without electrophoresis, automated sequencing, Adobe, PCR, or any other three letter acronym, these gadgets certainly haven't been around forever. As we all know, that doesn't mean that science before 1983 didn't exist. In fact, the 1940's and 1950's boast such an incredible array of significant developments in the biological sciences, from the first high-quality electron micrograph of a bacteriophage by S.E. Luria in 1942 to the elucidation of the three-dimensional structure of hemoglobin by Max Perutz in 1959, that you can't help but ask "how did they do it?" and "where are all those data now?" This, of course, made me wonder where **my** data will be fifty years from now, and if anyone will **ever** make sense of those gels I have in my notebook.

I decided to pursue this thought, and I followed it all the way to the Alan Mason Chesney Medical Archives of the Johns Hopkins Medical Institutions at 2024 E. Madison street. When I got there I realized that what I had been following was really the smell of fresh coffee from the Daily Grind, and those scones looked awfully good, too. Anyhow, I remembered my mission and ventured into what I expected to be vaults of old patient records, but I was very quickly set straight in my thinking.

You will have difficulties finding old patient records at the 2024 E. Madison location, but the Archives do have holdings of hospital records, as well as personal papers and correspondence of faculty and other individuals associated with the Medical Institutions. Their extensive biographical collection contains information about almost everyone who ever had a connection with the Hospital, the School of Medicine, the School of Nursing, or the School of Public Health. They also have an impressive collection of architectural drawings and photographs, all of which document the development of the Medical Institutions and the "Hopkins Tradition" from the middle of the nineteenth century to the present day.

The Archives were dedicated in 1978 in honor of Alan Mason Chesney, a Johns Hopkins Med alumnus and former dean of the School of Medicine from 1929 - 1953 who was instrumental in locating and preserving early records of the School of Medicine and the Hospital. I was introduced to the Archives by archivist Nancy McCall, who graciously allowed me to gain an insight into the general scope as well as some particular projects supported by the Archives.

con't p. 6, Archives

Dzung Nguyen is a 2nd year pharmacology student in Dr. James Hildreth's lab. "I have a BS in pharmacy and I love to write music on guitar and draw cartoons."

Archives, con't from p.5

I explained to her that my motivation came from an inherent interest in the history of science and a curiosity for the collection of scientific data.

With the great medical tradition of Johns Hopkins in the limelight, the basic sciences are often overlooked. This is quite apparent in the underrepresentation of Johns Hopkins basic science research in the holdings of the Archives. The boom of scientific discoveries since the early part of this century make it physically impossible to save all of the generated data. Today's archival programs are faced with having to be selective in what they collect and preserve. At an institution such as Hopkins, the priority of acquisition between patient and research records is largely determined by the value and importance of the research data. Selected records have a role in verifying research findings, or they may be used for ongoing scientific studies and pedagogical purposes.

One particular project supported by the Archives is the preservation of research data from Curt P. Richter, who was the director of the Psychobiology Laboratory at the School of Medicine from 1922 -1988. The Archives co-sponsored the First International Cyberconference on the Psychobiology of Curt P. Richter with the Department of Psychiatry and Behavioral Sciences at the School of Medicine in July of 1996. The purpose of this cyberconference was to determine how the six decades and 1,115 cubic feet of research data collected by Richter and his colleagues (logbooks, animal activity charts, photographs etc.) can be preserved and how this could serve as an example and a case study for the selection and preservation of primary data from other research laboratories.

The case of Curt P. Richter certainly raises questions and concerns about what to do about scientific records from laboratories that are closing or faculty that are retiring. The archivists at the Alan Mason Chesney Medical Archives are very responsive to student input, especially from students in the basic sciences. An important aspect of their work is to collaborate with administrators and scientists to develop methods for the selection and preservation of significant research data. If you have an interest in the history of science and would like to help establish a link between students and the Archives, please feel free to get in touch with me (jbeneken@welchlink...) or Nancy McCall. Below are a few internet addresses that you may want to check out.

Alan Mason Chesney Medical Archives
Home Page:
http://www.med.jhu.edu/medarchives/awelcome.htm
First International Cyberconference on the Psychobiology of Curt P. Richter Page:
http://www.med.jhu.edu/confer/pbl/ricabout.htm

Symposium, con't from p.4

opportunities for mobility within a company, and what companies look for in job applicants.

The Alternative Careers panel gave students and postdocs the chance to find out about less traditional job paths. One scientist, Savio Cheng, had spent many years in academia prior to accepting a job at Aetna, where he assesses the validity of new medical technology. Two people from the U. S. Patent office discussed the variety and challenges of their job; like Dr. Cheng, they enjoyed the opportunity to be constantly learning about new science. Kawai Lau, who got his Ph.D. from Hopkins in 1994, is also now attending law school part-time. Two other scientists on the panel are working in the government, one in the Public Health Service, another in a one-year White House fellowship position. Two other Hopkins' graduates were also on this panel: Mark Paalman, an Editor/Science writer at *Online Mendelian Inheritance in Man* (OMIM), and Lorraine Amory Soisson, a technical consultant to the U.S. Agency for International Development (USAID). All the panelists emphasized that getting a Ph.D. is a good qualification for many jobs: problem-solving skills, independent thinking, creativity, and perseverance are valued in many positions that do not necessarily involve benchwork.

Over 200 students and postdocs (and at least one faculty member) attended the Career Symposium.

Jobs, con't from p. 1

professors they know. Some feel that any other aspiration would be viewed as "unacceptable" by their scientific peers. The fact is that you are not getting a degree in "academic research," but in science. Each graduate student should make a conscious, informed decision about his/her future career goals. Strive for that faculty position if that is what you desire, but not simply because it is the default career path. If you choose to head another direction, do not do so blindly, but instead become educated about the range of career options and the pros and cons of each.

Even if traditional academic jobs are becoming scarce, I believe that the general trend of low unemployment among science Ph.D.s will continue. After all, we are intelligent, enterprising, problem-solving people! However, I also believe that getting that first job may be difficult. The key is to be flexible. Define what types of careers you would be interested in pursuing. and then pursue them with a vengeance!

***from your Parking Rep.*:**

If any graduate student has a complaint or commendation to make about the parking lot shuttles or drivers, please forward them to **Tara Riemer, GSA Parking Rep** at **triemer @bme.jhu.edu**. Appropriate comments include especially courteous drivers, especially uncourteous drivers, and missing or extremely late shuttles. Please be prompt in submitting comments about a specific shuttle so that problems may be corrected.

by Oliver Kerschel

Happy Holidays!!