



BB&S Bulletin

January/February
2005

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MGH Builds New Research Center

Wendy Winckler (G5)

The Boston scientific community has recently experienced a growth in cooperation and collaboration across disciplines, departments, and even institutions. Examples of this increase in scientific exchange include the new Systems Biology Department, the Harvard Stem Cell Initiative, and the Broad Institute of Harvard and MIT. In keeping with this spirit, MGH is building a new research complex that will further the objective of collaborative science in Boston.

Construction is underway on a new research facility nestled between the cute cafés on Charles Street, the shops of Faneuil Hall, and the Charles River Esplanade. This new complex is part of a larger Cambridge Street 'makeover' organized by the redevelopment agency Mass Development. Adjacent to the main MGH, the new MGH building will house current research groups from both the main campus and MGH East/Charlestown Navy Yard, and also new investigators. The new building is being erected over the existing 185 Charles River Plaza, which currently holds MGH Training, some Radiology offices, and a shopping plaza. This \$285 million project, led by developer Jonathan Davis, will create over 400,000 square feet of new space. Most of the 6 new stories being built will be devoted to MGH research, but the development will also include some additional retail stores,

including shops, restaurants, and a Whole Foods grocery store. The building is expected to be complete in 2005, and the labs will move in by the end of next summer.

The new research center's planning group examined the existing MGH research program, focusing on priorities not currently addressed by research groups. Their goal was to set up an environment that would foster the "kind of science that would have the greatest impact on medicine in the future," says Daniel K. Podolsky, leader of the planning task force. Existing departments, such as MGH's Molecular Biology Dept., will continue to thrive in the new building, but will be joined by four new "centers" that reach across traditional departmental lines and put researchers from different fields in close proximity.

One of these divisions is the Center for Human Genetic Research. This group will take a multi-disciplinary approach to human genetics, including clinical genetics, DNA and tissue banking, and genotyping. Their mission is 1) to define the phenotypic variation in patient populations, 2) to find genes underlying the phenotypic variation, 3) to characterize in humans and model systems the mechanisms that lead from genotype to phenotype, and 4) to use

see 'MGH' on page 2

The Realities of Publishing: Quantitative vs. Qualitative

Mike Boyce (G6)

"The editors and reviewers of many low-impact journals cannot provide the quality reviewing process one gets with Nature, Science, Cell and a few (very few indeed) other established magazines... Let's face it... one can publish just about anything if one goes far enough down the list of impact factors."

- Svetlov, V (2004) "The real dirty secret of academic publishing." *Nature* 431 897.

To: David Baltimore, President, California Institute of Technology
From: Mike Boyce, G6 PhD student
Re: Application for postdoctoral position

Dear Dr. Baltimore,

It has long been my dream to work for the greatest, most influential and best respected

see 'Publishing' on page 3

Valentine's Day for One

Kristina Roberts (G3)

Valentine's Day is right around the corner! Time to start thinking about making dinner reservations and buying chocolates, roses, or jewelry for that special someone. That is, unless you're ... uh ... single. If you're unattached this Valentine's Day, you may instead be thinking about hiding under a pile of candy conversation hearts, unable to face yet another sappy diamond commercial. Did you spend last Valentine's Day tied to your lab bench, completing an all-night experiment while trying to convince yourself how lucky you are to be single? Did you throw yourself a pity party, sobbing over a romantic movie while dining on a gourmet Celeste Pizza-for-One? This year can be different! Here are a few fun ideas to help you make it through:

1. Say Goodbye to the Single Life. It may seem counterintuitive, but Valentine's Day is actually the perfect time to meet someone new. While couples are off enjoying romantic, candlelit dinners, singles are hitting the bars in search of other singles. Why not get out of the lab and join them? If you're feeling particularly bold, bring along a handful of kiddie Valentines signed with your name and phone number. Who can resist SpongeBob SquarePants saying, "Gee whiz, I think you're really swell"? You'll be receiving calls in no time!

2. Be Someone's Secret Admirer. Send someone you've been watching from afar a Valentine's card signed

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MGH, continued from page 1

these results to provide better diagnostic capacity, disease management and effective treatments to the patient population. This center, directed by BBS professor James Gusella, will bring together faculty, postdocs, and graduate students currently based at MGH East, MGH main, and Longwood on one floor in order to foster frequent communication and collaboration.

Also included in the new building is the Center for Integrative and Computational Biology. Directed by BBS professor Brian Seed, this group will focus on the development and application of systems and equipment to analyze complex genetic, protein, and cellular information. The Center for Physiologic Genomics will study the relationship of genomes to physical function, the development of model organisms, and proteomics. Finally, the Center for Regenerative Medicine and Technology, led by David Scadden, will investigate stem cell biology, tissue engineering, and the development of sensory and imaging technologies.

In addition to existing Harvard/MGH labs, the new building will also be home to several new faculty members whose work embodies the new center's focus on cross-disciplinary research. One such recruit is Vamsi Mootha, an assistant professor in the Systems Biology Dept. He is a recent winner of the prestigious MacArthur Fellowship

simply "Your Secret Admirer". Enjoy knowing that you've put a smile on their face and a little mystery into their life, but don't expect anything in return (no sitting around hoping they'll guess it's you!). If you want to be extra sneaky, send your card to one of the nation's love-themed post offices (such as Valentine, VA or Romance, AR) for re-mailing with a special Valentine Postmark. Google "valentine postmark" for more info.

3. Plan a "Bring a Friend" Dinner. Enjoy dinner out this Valentine's Day and expand your social circle at the same time. It's easy: invite your single friends to dinner and ask them each to bring another single friend. Be sure to choose a restaurant where your rowdy group won't be disturbed by starry-eyed couples kissing over their shared plates of spaghetti. For example, head to Chuck E. Cheese's where dinner can be followed a few games of Skee-ball and Whack-A-Mole. You may not get a diamond this Valentine's Day, but at least this way you can trade your tickets for some beautiful plastic jewelry at the end of the night.

4. Host a Valentine's Day Movie Marathon. Don't sit at home alone crying over movies that end "happily-ever-after"! Get your single friends together for a Valentine's Day Movie Marathon. No romantic comedies tonight: pick up a few bottles of wine and a handful of love-gone-wrong flicks. Think Fatal Attraction.

Award, which recognizes individuals for their originality, creativity, and future potential. As a member of the Center for Human Genetic Research, Dr. Mootha plans to use cross-platform experimental systems along with computational strategies to improve understanding of the composition and biogenesis of mammalian mitochondria.

BBS students that will move to the new building are generally enthusiastic about the change. Denise Chun, a G3 in the Kaplan lab, is "looking forward to the whole building being wireless- oh, and the "Whole Foods" store that will be in the building!" Nitasha Manchanda (G6) from the Gusella lab at MGH East says: "The main consideration for everyone in my lab is the change in commute. Most people who drive in from the suburbs prefer Charlestown. On the other hand, T users who connect to the Partners Shuttle can't wait to move to the main campus so they never have to step on that bus again!" Others are excited that many of their collaborators will now be under one roof—sparing them the trek back and forth between MGH, MIT, and Charlestown for meetings. Soon they will just walk down the hall!

The new complex and centers at MGH will help meet the scientific and medical challenges of the 21st century by promoting cross-disciplinary and interdepartmental projects. The centers will address some of the hottest subjects in biology, including stem cell research, genomics, and proteomics.

biologist of our time. However, the restraining order forbids me from contacting Dr. Varmus directly so I would like to apply for a postdoc with you. While I understand that admission to your group is extremely competitive, I hope that you will be favorably impressed by my graduate school CV, which includes 38 first-author primary research publications, plus my blog. Below I have included a selection of abstracts from my most recent papers for your consideration. If you agree, I would be eager to arrange an interview with you at your office in San Francisco. (I assume “Pasadena” is a typo on your web site, as I have never heard of such a place.) I look forward to your reply.

Cell Science and Nature (2004) **67** 292-302

Apoptosis is critical for the normal physiology of all metazoans but our understanding of cell death regulation remains shamefully incomplete. In a yeast two-hybrid screen for proteins that interact with human caspase-2, we identified a novel gene which we designate mitogen-induced kinase-like eukaryotic protein, or MIKE. MIKE has no homology to any known protein in any organism, underlining its uniqueness. Co-immunoprecipitation experiments revealed that MIKE interacts with sepharose beads and caspase-2 but no other proteins within the cell. Overexpression of MIKE in a variety of cell lines caused nothing in particular. Interestingly, similarly negative results were obtained with dominant-negative and siRNA approaches to antagonize MIKE activity. Endogenous MIKE is present in all cellular compartments examined, which is surprising, given that the protein is functionless. We conclude that MIKE can be safely ruled out as a regulator of apoptosis in humans.

Proceedings of the Eastern Moldavian Academy of Life Sciences (2004) **6** 10045-10051

Historically, cancer research has been hampered by its dependence on either *in vitro* tissue culture systems, which do not faithfully reproduce all features of *in vivo* tumor biology, or on mouse models, which require mice, which are expensive and unpleasantly moist. Here we establish a novel system using a previously uncharacterized genetic model organism to evaluate the tumorigenic potential of oncogenes in Goldfish snack crackers. We introduced cDNAs encoding *myc* or activated *ras* into bags of pizza- and pretzel-flavored Goldfish. To our surprise, the transfected Goldfish displayed increased breakage and disintegration compared to untransfected controls, though some of this was caused by cramming the bags into the electroporation apparatus. However, the effect of these known oncogenes was specific, as they had no effect on Gummi Bears or a bear-claw danish. Aggressive treatment with established anti-cancer agents such as paclitaxel and doxorubicin failed to reduce oncogene-induced Goldfish breakage but did make the bags soggy and toxic. We conclude that Goldfish snack crackers, which are

inexpensive, genetically tractable and tasty, provide an ideal system for the discovery of new anti-neoplastic agents.

Journal of Data Not Shown (2004) **45** 21-27

Embryonic stem (ES) cell research may revolutionize the treatment of many clinically important diseases but has failed to accomplish all that much up to this point and don't you think it's about time? One major obstacle is knowing how to differentiate ES cells into the specific tissue needed by a particular patient. We have bypassed this difficulty by developing a protocol that uses small molecules, siRNAs and mass spec (data not shown) to teach ES cells what mature cell type they should become while they are still in culture (data not shown). Using this method, ES cells were successfully transformed into functioning dopaminergic neurons (data not shown), pancreatic beta islet cells (data not shown), hair follicles (data not shown) and an entire cleaning lady (data not shown), allowing us to meet diverse patient needs. In a preliminary clinical trial, ES cell-derived tissues cured patients suffering from Alzheimer's (data not shown), Parkinson's (data not shown), erectile dysfunction (data not shown – pervert) and ADHD (data whatever whatever). In one preliminary study, ES cell-derived tissue brought a patient back from the dead and then did her taxes (data not shown) but further repetitions are needed. Patent pending.

Biannual Annals of Cytokine Eschatology (2003) **162** 1221-1229

Dude, so, this one time, I was doing like seven Western blots all at once, right? I know, seriously. And it was taking like six hours and I was going to be in lab all night, which basically sucks because “American Idol” was on. Yeah. Anyway, so I finally finish, I do the ECL, I grab a cassette and some film, run down to the dark room and – guess what – the film developer is low on fixer and was MAKING THAT ANNOYING BEEPING SOUND THE WHOLE TIME. I almost lost it, it was so annoying. And then my loading controls were way off.

Ranger Rick (2003) **84** 10-11

You can make your own bird house! See the instructions on page 23 – get an adult to help you with the saw and hammer. Soon you'll be living next door to your fine feathered friends!

Biological and Not Necessarily Biological Research Communications (2003) **30** 4

Terra chips, root beer, 3 tomatoes, orange juice, pork chops, frozen squash, coffee (hazelnut??), toilet paper, charcoal brickets, Bubble-Yum.

Top 10 Reasons to Date a Fellow BBS Graduate Student

By Jessica Dermody (G4) and David Bellovin (G5)

You have to admit that when you came to graduate school not only were you looking forward to the excellent science you would be exposed to, but also the opportunity to meet a new group of people. Which means that you may also consider these new acquaintances as prospects for more intimate social interactions. While some people have come to graduate school with their own partner, many of the rest of us have decided to pursue a relationship with a scientific colleague. Here we've broken down the top 10 reasons why dating a fellow BBS student is more beneficial to our lifestyle than picking from the local bar.

10. You can talk about what you work on.

Face it, trying to explain how you've isolated a new antigenic peptide binding to the major histocompatibility complex using flow cytometry may not be the best way to start off a first date with the attractive accountant you met at Jillian's last weekend. Granted, if you're talking about work on the first date you might already have some problems, but what about in the future? At least dating another biology graduate student allows for you to reach that all-too-important "want to hear what my protein can do?" stage of a relationship.

9. Playing in the same league.

As bad as this sounds, it is usually true. Most of us were not exactly the most popular kid in school, but being surrounded by people of your intellectual equivalent does level the playing field when it comes to approachability. Not to mention the ease with which you can start a conversation by saying "Do you have any suggestions on how to get my frogs to mate?"

8. Increased scientific exposure.

Yes, you have an idea of who your friends' PIs are, but now you have the opportunity to go to another PI's house and really make that connection. Your significant other will unintentionally help you round out your scientific network. Who knows whom you'll be asking for reagents or recommendations once you've decided to leave your beloved Harvard.

7. Understanding what you're going through.

On those days where you've probed your blot with about 30 different dilutions of that new antibody, with none of them working, and all you want to do is vent, it's nice to have a significant other who has been there before. TACs and PQEs can also be a burden to us BBS students, but it certainly helps to have a partner who knows what all those pesky acronyms stand for.

6. You are both financially inept.

One of the most notable aspects of being a graduate student is the limited funds. We do earn enough money to buy food, yet we're a little closer to the poverty line than

most of us are used to. This means you're not going to be buying that expensive gold jewelry your new accountant girlfriend is expecting for her birthday. Luckily, your graduate student girlfriend will understand and appreciate the cubic zirconia ring you propose with.

5. Location, location, location.

Just think about the convenience and accessibility of meeting and dating those who work around you. With the sheer number of other graduate students whose labs are located on the same campus as you, there are plenty of people to choose from. Once you make the plunge, this proximity will make it easier to take those daily breakfast, coffee, lunch, coffee, dinner, dessert, and beer dates.

4. A great source of inside information.

We like to refer to this as the BBS grapevine. Should you decide to date someone in the BBS program whom you don't know as much about as you would like, you can always refer to your fellow graduate students for any inside tidbits on your intended. Once you've learned every scandalous, and perhaps not so scandalous, detail of the person you're interested in you can easily move to the next level of asking them out on a date to Starbucks or The Pig (since that's all you can afford).

3. New class every year.

Each year there is a new group of BBS students for you to interact with; people who have hopefully not heard about your daring exploits. And if you don't get to the new class quickly enough this year, take heart that there will be another group next year.

2. He/she won't get upset at your 12-hour days.

One of the most important building blocks of a relationship is being flexible. We all have days where we work 12 or even 14 hours before we finally have some free time. Not to mention the numerous Saturdays and Sundays spent toiling away towards getting your box checked. Dating a fellow graduate student who understands the demanding hours you will be working makes life just a little bit easier, as long as you are willing to spend just as many hours waiting for your partner's experiment to finish.

1. A private room at the BBS retreat.

Should you and your significant other be serious enough, you can request your own private room during the BBS retreat. This is most beneficial for those couples that can't seem to escape their roommates, and for that one lucky BBS couple that gets the honeymoon suite at the Provincetown Inn. Plus, it's always nice to have someone else foot the bill at a hotel, even when it is fall in Provincetown, there's a chilly wind and you're surrounded by 300 of your closest friends and colleagues. Could you ask for a more romantic setting?

Community Service Profile: Mentoring for Science

Sarah Rebecca Walker (G4)

What is the program you work for and what type of service(s) do they/you provide?

Mentoring for Science is a program offered by the Office of Diversity and Community Partnership at Harvard Medical School. This program is for underrepresented 8th and 9th grade students from Boston Public Schools who are interested in science. Students work one-on-one with their mentor, usually a graduate student or post doc, exploring areas of biology through laboratory exercises. Students and mentors meet as a group and carry out common lab techniques such as PCR, DNA isolation, and DNA digests. In the past, 8th graders have studied microbiology while 9th graders have focused on molecular biology.

Are there any requirements such as training?

There are no specific training requirements, other than a desire to be a good mentor. However, this program is geared towards mentors who have experience with science, typically medical students, graduate students, post-doctoral students, and faculty.

Where is your program located and what are the time requirements?

Mentoring for Science is an after-school program that takes place in teaching laboratories in the T-MEC building at Harvard Medical School. This program runs for eight weeks from late January to April.



Mentors are expected to meet with their students once a week from approximately 2:30pm-5:30pm. 8th graders typically meet with their mentors on

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Kuroda, continued from page 5

always available to people in the lab. His influence highlighted the importance of mentoring as well as time-management, and has a profound effect on the way Kuroda runs her lab today.

Kuroda did her postdoc with Bruce Baker, whom she met at a *Drosophila* development course at Stanford. Kuroda was interested in X chromosome dosage compensation and set out to clone one of the male specific lethal mutations. Kuroda later cloned the *maleless* gene and found that the protein coats the entire X chromosome. Three years later, Kuroda started her lab at the Baylor College of Medicine with her husband Steve Elledge. Kuroda founded the Genetics 201 equivalent at Baylor, and recalls referencing the Xeroxed handwritten notes from Fred Winston and Ting Wu when she was planning the course. Kuroda and Elledge moved to Harvard last year, and she is now thinking about starting a course on RNA-mediated gene regulation.

Outside Activities: Kuroda spends most of her free time with her two kids. They have been exploring Boston since the move, and enjoy going on the duck tour, visiting

Tuesdays, and 9th graders meet their mentors on Wednesday.

What is the most rewarding aspect for you?

This program has given me the opportunity to share my love of biology with highly motivated junior high school students, and hopefully I have encouraged some of them to pursue careers in science. I have found this program to be so rewarding that I have participated in Mentoring for Science for the past three years and plan to continue with the program.

Why did you choose to work for this program?

The reason that I chose a career in science was because of the hands-on scientific opportunities that I had with laboratory experiments during my AP Biology course in high school. I felt that the Mentoring for Science program would allow me to help young students have some of the same educational opportunities that I had experienced.



Why should students/faculty work for your program?

Anyone who is interested in helping young students learn about laboratory science should participate. BBS students can also even fulfill their teaching requirement through this program. It is a fun way to gain teaching experience, and I find that it is a nice break from thinking about my own thesis.

How can others get more information about your program?

If you are interested in having a huge impact on an 8th or 9th grade student's future, join Mentoring for Science. For more information, contact Jabbar Bennett at (617) 432-1557 or via e-mail at jabbar_bennett@hms.harvard.edu.

the museums, and riding the T. The kids ask more questions than even the graduate students, and Kuroda spends a lot of time trying to answer them. Kuroda also loves to read. During graduate school, she was interested in the history of science and enjoyed titles such as *The Eighth Day of Creation* and *The Making of the Atomic Bomb*. She also enjoys fictions and mysteries, like books by Patricia Cornwall and Margaret Atwood. Furthermore, Kuroda is addicted to *The New York Times* and reads it daily. She also loves rock and roll, and her favorite bands include the Beatles and the Rolling Stones.

Advice to Graduate Students: Keep your eye on the big picture, but don't forget to enjoy even your simplest experiments. Appreciating the beauty of DNA on a gel, chromosomes under the microscope, or predicted ratios in a genetic cross will help you do the best experiments possible.

Her Favorite Trip: The hike Kuroda and Elledge went on along the Na Pali coast of Hawaii after she finished her Ph.D.

The Historical Figure She Most Admire: Marie Curie, because she is a fearless and dedicated woman who is ahead of her time.

Recent BBS Student Publications:

Arias, EE (G4), and Walter, JC. (2004). Initiation of DNA replication in *Xenopus* egg extracts. *Front Biosci.* 9:3029-3045

Arias, EE (G4), and Walter, J.C. (2005). Replication-dependent destruction of Cdt1 limits DNA replication to a single round per cell cycle in *Xenopus* egg extracts. *Genes Dev.* 19: 114-126.

Auty R (G7), Steen H, Myers LC, Persinger J, Bartholomew B, and Buratowski S. (2004). Purification of active TFIID from *Saccharomyces cerevisiae*: Extensive promoter contacts and co-activator function. *J. Biol. Chem.* 279, 49973-49981

Matangkasombut O, **Auty R** (G7), and Buratowski S. (2004). Structure and function of the TFIID complex. *Adv. Protein Chem.* 67, 67-92

Lu R, Limon A, **Devroe E** (recent grad), Silver PA, Cherepanov P, Engelman A. (2004). Class II integrase mutants with changes in putative nuclear localization signals are primarily blocked at a postnuclear entry step of human immunodeficiency virus type 1 replication. *J Virol.* 78(23):12735-46.

Cherepanov P, **Devroe E** (recent grad), Silver PA, Engelman A. (2004). Identification of an Evolutionarily Conserved Domain in Human Lens Epithelium-derived Growth Factor/Transcriptional Co-activator p75 (LEDGF/p75) That Binds HIV-1 Integrase. *J Biol Chem.* 279(47):48883-92

Chao MY, Komatsu H, **Fukuto HS** (recent grad), Dionne HM, Hart AC. (2004). Feeding status and serotonin rapidly and reversibly modulate a *C. elegans* chemosensory circuit *Proceedings of the National Academy of Sciences* 101(43):15512-17

Gilks N (G2), Kedersha N, Ayodele M, Shen L, Stoecklin G, Dember LM, Anderson P. (2004). Stress Granule Assembly Is Mediated by Prion-like Aggregation of TIA-1. *Mol Biol Cell.* 15(12):5383-98

Goodman AL (G5), Kulasekara B, Rietsch A., Boyd D, Smith RS, and Lory S. (2004). A signaling network reciprocally regulates genes associated with acute infection and chronic persistence in *Pseudomonas aeruginosa*. *Developmental Cell* 7(5): 745-54

Yuan H*, **Liddle FJ*** (G6), Mahajan S, and Frank DA. (2004). IL-6-induced survival of colorectal carcinoma cells is inhibited by butyrate through down-regulation of the IL-6 receptor. *Carcinogenesis* 25: 2247 - 2255

Loureiro RMB, **Maharaj ASR** (G2), Dankort D, Muller WJ, D'Amore PA. (2005). ErbB2 overexpression

in mammary cells upregulates VEGF through the core promoter. *Biochemical and Biophysical Research Communications* 326, 455-465

Macedo MF, de Sousa M, **Ned RM** (recent grad), Mascarenhas C, Andrews NC, Correia-Neves M. (2004). Transferrin is required for early T-cell differentiation. *Immunology* 112(4): 543-9

Rohde CM, **Schrum J** (G1), Lee AW. (2004). A juxtamembrane tyrosine in the colony stimulating factor-1 receptor regulates ligand-induced Src association, receptor kinase function, and down-regulation. *J Biol Chem.* 279(42): 43448-61

Schwabish, MA (G3) and Struhl, K. (2004). Evidence for eviction and rapid deposition of histones upon transcriptional elongation by RNA polymerase II. *Mol. Cell. Biol.* 24,10111-10117

Wingert RA (G6), Brownlie A, Galloway JL, Dooley K, Fraenkel P, Axe JL, Davidson AJ, Barut B, Noriega L, Sheng X, Zhou Y, Zon LI. (2004). The chianti zebrafish mutant provides a model for erythroid-specific disruption of transferrin receptor 1. *Development* 131(24):6225-35.

Wong SL, **Zhang LV**(G4), Tong AHY, Li Z, Goldberg DS, King OD, Lesage G, Vidal M, Andrews B, Bussey H, Boone C, and Roth FP. (2004). Combining biological networks to predict genetic interactions. *Proceedings of the National Academy of Sciences* 101(44):15682-15687

*These authors contributed equally to this publication.

Announcements:

Luigi Adamo (G1) was elected as a DMS representative in the Graduate Student Council executive committee.

Jake Begun (G5) and Gesa Niggemann would like to announce the birth of their son Luka on November 14th. He was a healthy 7 lbs 12 oz and had all his fingers and toes.

Forrester Liddle (G6) and **Isin Dalkilic** (G6) were married in Istanbul, Turkey on Sept. 11, 2004.

Nina Lu (G4) and Rhet Hunter were married on July 10th, 2004, in Portsmouth, Rhode Island. Nina has changed her name to Nina Lu Hunter.

Patricia Valencia (G3) and Mario Castellanos, a third year medical student at UT Southwestern in Dallas, TX, were engaged on October 25th, 2004. They plan to get married on February 11, 2006 in San Juan, Puerto Rico.

Faculty Profile: Lee Zou

Assistant Professor of Pathology

Maria Naylor (G2)

Research Interests: Investigating mechanisms by which DNA damage sensors initiate checkpoint response pathways; understanding interactions at the replication fork between proteins involved in replication, checkpoint, repair, and recombination.

Beginnings: Growing up in China, Zou spent his early years playing amongst the test tubes and lab equipment in his parents' biochemistry laboratories. This served to cultivate his interest in the sciences, and he later worked on mapping the rice genome and obtained his B.S. in biochemistry at Zhongshan University in Guangzhou province. He obtained his M.S. in biochemistry at Kansas State University, researching the role of nitrogenase in nitrogen fixation.

Graduate School and Beyond: Zou earned his Ph.D. from SUNY Stony Brook in Bruce Stillman's lab at Cold Spring Harbor Laboratories. During this time, he cloned Cdc45 and established its critical importance in replication initiation and checkpoint control in both yeast and mammals. As a post-doc in Steve Elledge's lab at the Baylor College of Medicine, Zou investigated the biochemical characteristics

of Rad17 and Rad9 required for checkpoint response, as well as the role of ATRIP in the recognition of RPA-bound single-stranded DNA. Zou joined the faculty at Harvard in fall 2004 and has already taken an active role as a professor for BCMP200. He is very much interested in any students who want to rotate in his lab!

Biggest Lab Goof-up: Zou once spent two weeks setting up a 2D gel, only to drop it in the dark room – an unsalvageable act.

Advice to Grad Students: Finding a good project and an advisor you get along with is of utmost importance; try not to become distracted or discouraged too easily.

Odds and Ends: Zou is very interested in architecture and art – fields he almost pursued instead of science. He cites James Watson's "The Double Helix" as an inspirational book, enjoys watching action/adventure movies such as "The Matrix," "Indiana Jones," and "Star Wars," and recommends the Peach Farm restaurant in Chinatown. He devotes most of his spare time to his wife, son, and cat (Tien-Tien). Former colleagues state that Zou was always helpful and considerate, and they never saw him upset. Only seeing "crappy" papers in print seems to visibly ruffle his feathers.



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