How Could We Claim Victory in Academia?

BY D. BLAHO & H. CHAPIN

Have you ever noticed that science departments in universities are largely made up of male faculty? Do you find this odd? Perhaps not, if you believe that science undergraduate and graduate students, as well as post-doctoral fellows, are also mostly men. But is that actually the case? The ratio of male to female students in my science classes in undergrad was not particularly skewed. A lot of the science graduate students are women as well, as anyone who observed the gender ratio of the BBS recruiting weekend knows. And when looking around labs, one usually does not see a drastic imbalance of women and men. So what’s going on? Are women really falling off or “opting-out” on the road to an academic career?

The typical academic career in the sciences has several milestones. As we all know so well, first comes the Bachelor’s degree, then a Ph.D. from grad school, followed by a post-doctoral fellowship. At this point one can apply for a tenure-track faculty position at a university, where one starts as a junior faculty member and can eventually end up as a tenured, full professor. According to the data collected by the National Science Foundation, the increase in the number of women earning a Bachelor’s Degree or a Ph.D. in science and engineering has been much greater than for men. For example, from 1970 to 2000 the number of women receiving a Bachelor’s Degree in science or engineering increased 252% (to 200,953) and the number receiving a Ph.D. increased 570% (to 9,393), while the number of men receiving either degree changed less than 3% (staying constant around 198,000 and 16,000, respectively). Yet this increase in the number of science and engineering degrees earned by women is not reflected by an increase in the number of women in a tenure track faculty position. For instance, at the University of California at Berkeley, the percent of women comprising new faculty appointments has remained around 33% between 1984 and 2006 (Academic Personal Records, 1984-2006).

So why are women leaving academia? Many probably realize that academia is not for them and change fields. Others may find that the benefits are not appealing and the job is too demanding and stressful. As any enthusiastic professor will tell you, such a career does have its advantages: the ability to create your own niche and become a renowned expert, the freedom to be your own boss, the possibilities for travel
With a 300+ year history, it’s no wonder that Yale’s collected its fair share of strange and unusual stories. Here are some tidbits gleaned from the annals of Eli’s past.

**The President’s Lucky Left Foot** Theodorus Dwight Woolsey, president of Yale from 1846-1871, had a lucky left foot. According to legend, every time he attended one of the Yale crew teams’ competitions, he would send off the boat with a tap of his foot. And every time, the team would win. Eventually the crew team started “abducting” President Woolsey to guarantee their victory. The legend continues even today, with the left foot of President Woolsey’s statue in Old Campus polished bright by countless undergrad hands rubbing it for a bit of extra luck. Source: Yale undergraduate tour.

**The Luckiest Man at Yale** When Cornelius Vanderbilt gave Yale the money to build a college dormitory in memory of his son, William Henry, he made a special stipulation: there would be one room, opulently furnished, that would be the guaranteed residence of any Vanderbilt attending Yale. The dorm was built and the promise forgotten until a strapping young Vanderbilt heir was admitted and insisted on being given the dorm room. Yale refused the young man’s request for a simple reason: Vanderbilt was a women’s dorm. The Vanderbilt family took it to court, Yale lost, and for the rest of the year that young heir was known as “the luckiest man on campus.” Source: Yale undergraduate tour; “Vanderbilt: New Digs, Old Stories.” Yale Daily Herald, 5 Sept 2003.

**Skulls and Bones** Everyone knows about Yale’s (not-so) secret societies, and the granddaddy of them all is Skull and Bones. Inspiration for two movies, scores of rumors, and hundreds of conspiracy theories, this society stands somewhere between an elite frat group and the Illuminati. But one rumor, at least, seems to have a bit of substance to it. Stories had circulated for decades to the effect that Bonesmen had robbed the grave of the Apache chief Geronimo and stolen his skull and thigh bones to put in their tomb. Just recently, a Yale researcher discovered a 1918 letter in Sterling Memorial Library claiming just that, adding the first real weight to the rumors.

Unfortunately for the Bonesmen, the graves where Geronimo was buried were probably unmarked. So while it’s possible the Bonesmen got Geronimo, it’s just as likely that their tomb is playing host to Nameless Apache Warrior #14. Source: “Letter Fuels Speculation that Skulls have Geronimo’s Skull.” Yale Daily News, 9 May 2006.

**Grave Offenses** Secret societies aren’t the only midnight excavators, it seems. While your average medical student is a far cry from Victor Frankenstein, they do need the occasional cadaver to dissect. And when volunteers are in short supply, sometimes they’ve just got to take matters into their own hands—or shovels, as the case may be.

Such was the case nearly two hundred years ago when a recent West Haven grave was found exhumed and the body gone. All fingers pointed at Yale Medical School, and after an intense search the missing body of 17-year-old Bathseba Smith was found buried in the basement. In the resulting furor the medical school was besieged by angry townsfolk for two days, and the students responsible slipped away. Eventually a medical assistant, Ephraim Colborn, caught the flak for the crime; he was prosecuted, fined, and jailed, and narrowly escaped being tarred and feathered. And you thought things get bad when the restriction enzymes run out. Source: “A Grave Offense.” The New Journal, November 2005.

**Yale Scenes on the Silver Screen** You probably heard about the new Indiana Jones movie featuring some scenery around Yale. Surprisingly, it’s only one of a handful of major motion pictures to take advantage of Yale’s picturesque location. Here’s the complete list, or as complete as IMDB (the Internet Movie Database) claims: All About Eve (1950), Mystic Pizza (1988), Mona Lisa Smile (2003), In Bloom (2007), Indiana Jones IV (2008).

Incidentally, the popular TV show Gilmore Girls wasn’t actually filmed at Yale, but at a cunning replica created in Burbank, California, out of plywood, plaster, and paint. (Add some pizza, and it’d be picture perfect.) Source: “Yale on celluloid.” Yale Daily News, 26 Oct 2006; “Faking it.” Yale Alumni Magazine, 21 Nov 2003.

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Special thanks to:
- Doro Blaho, MB&B, for our cover story and Faith Mercan, Pharmacology, and Stephane Budel, CMP, for the photos on page 5.
and sharing your work, and the availability of a flexible schedule. Yet as Philip Greenspun stated in his article entitled Women in Science, “the American academic scientist earns less than an airplane mechanic, has less job security than a drummer in a boy band, and works longer hours than a Bolivian silver miner.” Viewed in this light, taking the academic route may not seem too appealing to anyone. When we factor in that a woman’s childbearing years coincide with the post-doctoral and pre-tenure faculty years, it may seem even less appealing to women.

The exact years that a female scientist should spend establishing a research focus, starting up a successful laboratory in a competitive environment, and ensuring the necessary funding are often the same years when women decide to start a family. During this time it is immensely helpful to have a support network and the availability of mentoring and coaching not only by male co-workers but by more established female faculty. Mentoring allows incoming female faculty to receive crucial advice on how to lessen the burden and better cope while pushing through these treacherous years; yet such systems are often absent.

Thankfully most institutions have begun to take steps to make the academic track more appealing to everyone, especially women. The goal is both to attract and retain women faculty. Some universities, such as the University of California (UC) system, are actually using female faculty recruitment as a “competitive edge” by offering and constantly updating family friendly policies. Federal mandates state that a female faculty member can receive paid parental leave for 6 weeks after childbearing, and any academic appointee can receive unpaid parental leave for up to a year. Academics face the problem that taking time off can delay their career and chances of getting tenure, so many universities are now also offering tenure track extension. If one is a tenure-track faculty member with substantial responsibilities for a child under the age of 5, one can choose to stop the tenure clock for up to two years, providing extra time to work on a stellar publishing record, one of the many things evaluated when granting tenure.

Other proposed ideas to help women are focused on reentry into academic positions and dealing with the “two body problem” of having a working spouse. Re-entry post-doctoral fellowships, proposed by the UC schools, would help out female scientists who chose to take time off to have children during their post-doctoral work. This fellowship would help them to get back in the swing of things, get a few more publications, and become very competitive in the academic job market, increasing their chances of obtaining a tenure track position. Another idea proposes to assist new faculty in finding spousal/partner employment. The 2002 Women Faculty Forum (WFF) report on childcare changes at Yale showed that about 80% of female faculty and 40% of male faculty had a spouse with a full time career, so a program helping spouses/partners find jobs could really help scientists, especially women, starting out in academia.

Yale has already begun to make other concrete changes. Acting on proposals from the 2002 WWF report on childcare changes, Yale is expanding the number of available spaces and extending the operating hours of Yale’s daycare centers to include nights and weekends. This can specifically help women since they are usually the primary caregivers in a family. With so many changes taking place to make the academic career a more attractive and achievable one, could we claim victory in academia? Only time will tell. One thing is for sure, though: with dual career family households on the rise, family friendly policies will be of tremendous importance not only for most women in science but many men as well.

CONGRATULATIONS TO THE BBS TEAM ON WINNING THE GRAD-PRO INTRAMURAL CHAMPIONSHIP! SEE NEXT PAGE FOR A STORY ON THE BIOHAZARDS...

The Biohazards:
Back row: Mike Turner, Anna Trofka, Andrew Yim, Pavol Zelina, Ben Lanin, Khalid Fakhro, Dennis Mishler, Rafe Rosengarten.
Middle row: Jeanne Hansen, Mike Stulberg, Matt Jacobs-Wagner, Brett Stauffer.
Front row: Brian Dunn, Christine Jacobs-Wagner, Alex Delencastre, Tiana Lumtucker, Michael Kavanagh.
Not pictured: Julie Golomb, Jason Hanna, Jason Zellefrow, Steve Becker. (Photo courtesy of K. Fakhro)
THE WORLD GAME SPECIAL: BIOHAZARDS IN THE SPOTLIGHT
BY K. FAKHRO*

“The World Game Special” diverts its attention away from the International scene to bring great news from the BBS football team. The author will resume commentary on the World Game in the next issue of B.

What do Manchester United, A.C. Milan and the BBS Biohazards have in common? Surely the latter doesn’t negotiate multi-million dollar deals or have a trophy room, but then again, all it really takes to be champion is a thirst for glory!

Nearly two years since last tasting victory, the BBS co-rec. football team (Biohazards) delivered a series of magnificent displays, earning the prestige that accompanies the coveted Graduate and Professional Soccer Intramural Championship t-shirts.

The pinnacle encounter was in the semi-finals, with the Biohazards having to take on Hardwoods (Forestry). The two-time defending champions opened the scoring shortly after the re-start to make it an uphill battle for the Biohazards. However, the Biohazards leveled through Christine Jacobs-Wagner, who converted a great cross following an impressive build-up. The team kept the pressure high – relentlessly fighting for every ball and terrorizing the champions throughout extra time – eventually winning the shoot-out 5-3. It was Forestry’s first loss in the last one and a half years, and it was fittingly executed by the Biohazards who just a year ago were on the losing end of that same penalty shoot-out.

Biohazards were now going to meet Archifoot (Architecture) in the finals. Unlike their group stage encounter (which Archifoot won), the Biohazards dominated this entire match and were unlucky not to have scored earlier. However, just as the half was coming to an end, the Biohazards went ahead through Tiana Luntucker’s long-range missile from outside the box. Despite maintaining the lead, several good build-ups somehow refused to contribute to a more impressive score-line. In the dying seconds – and definitely against the tide of play – Archifoot earned a dubious free kick about 20 yards out. Despite the Archifoot foot won), the Biohazards dominated this entire match and were unlucky not to have

MADE WITH MOLECULES
BY J. WALLACE

Not everyone who gets a PhD ends up working at the bench. Raven Hanna, Yale alumnus and founder of Made With Molecules (http://www.madewithmolecules.com), has taken her interest in science in a whole new direction by creating jewelry in the shape of organic molecules. She graciously gave us an interview so we could find out more about what goes into a project like this.

B Magazine: First off, thank you very much for letting us have this interview. Designing jewelry isn’t really what most people expect to do with a PhD. When did you decide to do this?

Raven: Wait, you’ve never thought about doing that with the PhD you’re going to get?

B: Not quite.

Raven: Yeah, it came kind of as a surprise. If you would have told me when I was a grad student at Yale that I would be making jewelry for a living in however many years it’s been, I just would not have believed it. It kind of came about randomly.

After Grad school I went off and did a postdoc at UC Berkely and just felt burnt out. I didn’t take any time off between grad school and post-doc—which I definitely recommend that you do—and I was finding that as a scientist I was trained to become more and more specific, more specialized for my field. And I found that it was killing my love of science.

During my postdoc I started some general science books about other things and rediscovered my fascination with how the world works. At the time also I was revisiting my California friends and my love of art and being creative and stuff. So I just started doing all of these little side projects, and one of them happened to be making a serotonin necklace because I saw serotonin in a neurobiology book that I was reading for fun. I thought it was beautiful and wanted a necklace. I went to Google and nobody made it, so I found somebody on Craigslist who said he would teach me how to make jewelry. So I went in and learned how to make a serotonin necklace and started wearing it around, and people kept saying “You could sell those!”

The other thing is at the time I was thinking more and more about getting into science education, and that had to do with a lot of cross-country flights I was taking. You know how you talk to someone on the plane and they’d be like, “Oh, what do you do?”, and you say “I’m a student” and they say “Oh, what kind?” “I’m a grad student,” “You don’t look old enough to be a grad student.” “Yeah, I’m studying biophysics.”

And then people just sort of look at you like, “Wow, biophysics, that sounds hard. You must be smart.” And they didn’t want to hear anything about it! That made me really sad because what we’re uncovering today in the scientific world is just so amazing, people should be interested in it and they shouldn’t be automatically afraid of it. I feel like these projects I’m getting into right now are a way to make scientific things more friendly to a larger audience.

B: So when you were here at Yale, who was your thesis advisor and what did you work on?

Raven: I worked for Jennifer Doudna, who isn’t there anymore. When I arrived she was a new faculty, and by the time I left she had tenure. And then left and went to Berkeley. She was working on ribozymes, so I was working on getting the crystal structure of the group I introns, which I didn’t actually end up doing. But it was fun, and I made a lot of progress.

B: Do you have much of an artistic background, or is this something you picked up when you were in California with your friends?

Raven: Let me think. I have no formal artistic background; however, I’ve always done creative things—I’ve always loved projects. When I was first thinking of doing something with communications, the natural thing was for me to do writing, because I had written a lot when I was younger. In fact, at my ten-year high school reunion everybody was like, “You went into science? We thought you were going to be a writer!”

The design stuff, I don’t know. I don’t have training in it, but I really love doing it. I just feel that it’s such an immediate way for people to relate to a subject matter, which doesn’t happen often with science.

B: I’ve noticed you’ve started branching out from just the jewelry you have to various t-shirts and charm necklaces. As an idea comes to you, do you just add it, or do people suggest them to you?
Raven: Oh, both. I definitely have a sketchbook full of ideas. When I do one and it makes me happy, then I’ll put it up. But also I like suggestions from people, and it’s so much fun.

There was an article about me in Chemical and Engineering News. All the chemists read it, and then I started getting emails with subjects like “2,3-bromophenol” or whatever, and the email would say “I think you should do this molecule because it’s so great. It’s the one I work on and it’s my favorite.” And I love that. I love that scientists are so into what they do that they really want a representation of it that they can wear around and be proud of.

B: Do you make all the jewelry yourself?
Raven: Well, I now have a caster that casts the pieces for me, but I do the finishing work myself, like the soldering of the necklace and that sort of thing. I just like to get my hands on it.

B: Is this your primary business or something you do on the side?
Raven: As of last November, this is what I’m doing full time.

B: And do you have a favorite product?
Raven: Well, my favorite—and I don’t know whether this is my imprinting on my website or whatever—is the serotonin necklace. It’s the one that started it all, and I wear mine every day. I get lots of people coming up to me asking about it.

It’s still the most popular thing I sell, too. There’s just something special, I think, about those serotonin shapes. And also it’s a sort of common meaning in our modern lexicon. People have heard of it. They’re on an SSRI [Selective Serotonin Reuptake Inhibitor], or in all of the women’s magazines there’s articles about “How to boost your serotonin.”

Exhausted and disillusioned by this 1-1 tie, the Biohazards weathered extra time and got to penalty kicks. With uncertainty looming and pulses rising, it was the calm and collected Andrew Yim who, despite the massive pressure in this situation, picked up the gloves for Biohazards and volunteered his services in goal. Yim’s three spectacular saves secured a 3-2 win in the Championship game.

Congratulations Biohazards on a job well-done and best of luck for your next campaign!

The Biohazards (and BBS United – the rec team) practice and play pick up games twice a week; if you are interested in coming out for fun or to join the team, please contact dennis.mishler@yale.edu to be added to the e-mailing list.

*The author would like to acknowledge Dennis Mishler for providing valuable information for this article.*
**Cellular & Molecular Physiology**

Ethan Anderson (P. Darrell Neufer)

Development and Implementation of an *in situ* Model to Study Mitochondrial Oxidant Emission in Skeletal Muscle; Evidence for the Physiological Role of Uncoupling Protein-3 as an Antioxidant Countermeasure.

Stephane Budel (Steve Strittmatter)

Nogo-66 Receptor Dysfunction Increases the Risk of Schizophrenia.

**Computational Biology & Bioinformatics**

Valentin Dinu (Perry Miller)

Informatics Approaches to Translational Research: Management and Analysis of Clinical and High Density Genomic Data.

Yin Liu (Hongyu Zhao)

Statistical Modeling of Biological Interactions in Eukaryotes using Genomics and Proteomics Data.

**Cell Biology**

Rebecca Lackman (Pete Cresswell)


Alaron Lewis (Mark Hochstrasser)

ESCaping the Ring: The SUMO Isopeptidase Ulp1 and the Nuclear Basket are Localized by Esc1.

Cesar Fernandez (Sandra Wolin)

Characterization and Purification of an Sm-Like Complex Associated with the Small Nucleolar RNA snR5.

Sandra Maday (Ira Mellman)

Defining the Sorting Pathways to the Basolateral Membrane in Polarized Epithelial Cells.

Ana Pedraza (Graham Warren)

Structural Requirements for p115 Membrane Binding.

Parul Matani (Michael Tiemeyer)

Genetic and Biochemical Analysis of Signaling Pathways in the Development of *Drosophila melanogaster*.

Melanogaster.

Nanami Gotoh (Mark Mooseker)

Characterization of Myosin VI in the Kidney.

Huei-in Ho (Graham Warren)

Duplication of the Golgi Apparatus in *Trypanosoma Brucel*.

Brian Dunn (Peter Takizawa)

Myo4p is a Monomeric Myosin with Motility Uniquely Adapted to Transport mRNA.

Steven Becker (Norma Andrews)

The Differential Role of the Ca2+ Sensor Synaptotagmin VII in Macrophages and Dendritic Cells.

**Genetics**

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Genome Evolution Between *Drosophila melanogaster* and *Drosophila melanogaster*.

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Analysis of Meiotic Progression and the Novel P Granule Protein MEG-1 in *C. elegans* Germ Line.

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Genetic Analysis of Highly Specific Transmembran Helix-helix Interactions Between Artificial Small Transforming Proteins and the Platelet-derived Growth Factor beta Receptor.

Te-Wen Lo (Michael Stern)

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Genetic and Molecular Analysis of Drosophila Genes.

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**Immunobiology**

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CTLA-4 and the Immuological Synapse in Th1 and Th2 Cells.

Jared Odegard (Joe Craft)

Effector T Cell Development in Lupus.

Robin Herlands (Mark Shlomchik)

The Role of T Cells and Toll Like Receptors in the Activation of Autoactive B Cells.

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David Hall (Michael Snyder)

Arg5,6: A DNA Binding Metabolic Enzyme.

Jeffrey Barrick (Ron Breaker)

Discovering and Defining Metabolite-binding Riboswitches and Other Structured Regulatory RNA Motifs in Bacteria.
HERE!

CONGRATULATIONS TO ALL OF THE STUDENTS
(AND THEIR P.I.s) ON THEIR SUCCESSFUL
THESIS DEFENSES OVER THE PAST 12 MONTHS

Jennifer Kavran (Tom Steitz)  
X-ray Crystallographic Studies of Complexes with the 50S Ribosomal Subunit of *Haloarcula marismortui.*

Stephanie Herring (Dieter Söll)  
Pyrolysyl tRNA Synthetase Recognition of tRNAPyl in *Desulfotobacterium hafniense* and *Methanosarcina barkeri.*

Scott Boyle (Tony Koleske)  
The Identification and Characterization of Substrates of Abl Family Kinases.

Neil Voss (Peter Moore)  
Geometric Studies of RNA and Ribosomes, and Ribosome Crystallization.

Bon Koo (Andrew Miranker)  
Mechanistic Studies of Amyloid Fiber Nucleation and Assembly by Islet Amyloid Polypeptide.

Angela De Lucia (Nigel Grindley)  
Studies on the DinB Homologue from *S. acidocaldarius*; an Error Prone Y-Family DNA Polymerase.

Kelly Sheppard (Dieter Soll)  
RNA-dependent Biosynthesis of Glutamine in Bacteria and Archaea.

Jing Yuan (Dieter Soll)  
tRNA-dependent Amino Acid Transformation.

Michael Seringhaus (Mark Gerstein)  
Computational Prediction of Essential Genes, and Other Applications of Bioinformatics to Genome Annotation.

Jesse Cochrane (Scott Strobel)  
Structural Basis for Catalysis by the glmS Ribozyme.

Andrea Berman (Tom Steitz)  
Structural Studies of Terminal Protein-primed DNA Replication by phi29 DNA Polymerase.

**Molecular, Cellular, and Developmental Biology**  
Gillian Hooker (Shirleen Roeder)

Wrestling with Meiotic Chromosomes: A Role for Sumoylation in Meiotic Chromosome Synapsis.

Monia Nolde (Frank Slack)  
Post-embryonic Characterization of puf-l, a *C. elegans* Puf Family Protein.

Betsy (Maller) Schulman (Frank Slack)  
A Role for the Heterochronic Gene lin-41 During Vertebrate Development.

Naomi Nakayama (Vivian Irish)  
Spatiotemporal Regulation of Arabidopsis Petal and Stamen Differentiation.

Eunyoung Chae (Vivian Irish)  
The Role of the F-box Protein UFO in Regulation of the Floral Homeotic APETALA3 Gene.

Zareen Gauhar (Kevin White)  
Genomic Landscapes and Hormone Action in *Drosophila.*

Sharon Moulis (David Rimm)  
Nuclear Localization of Met, the HGF Receptor, in Cell Signaling and Breast Cancer.

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Analysis of Transcriptome in Rice and Arabidopsis.

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The Molecular Basis of Olfaction in the Drosophila Larva.

Yi Han (Ken Kidd)  
Genetic Variation and Linkage Disequilibrium in ADH Genes.

Michael McEvoy (David Wells)  
CPEBs-mediated mRNA Translation in Purkinje Neurons is Required for Cerebellar Long-term Depression and Motor Coordination.

Huajing Cai (Susan Ferro-Novick)  
The Molecular Mechanisms of TRAPP Mediated Vesicle Tethering.

Neal Mitra (Shirleen Roeder)  
A ZIP1 Separation-of-Function Mutation Triggers Meiotic Arrest with Synapsed Chromosomes.

Michelle Boehm (Frank Slack)  
A Developmental Timing microRNA and its Target Regulate Lifespan in *C. elegans.*

Montrell Seay (S.P. Dinesh-Kumar)  
Autophagy-Dependent and -Independent Roles of ATGs in the Coordination of Cell Differentiation, Cell Survival, and Cell Death.

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The Regulation of Adipose Mass by DeltaFosB Isoforms.

Anjali Nath (Joe Madri/Michael Snyder)  
Unraveling the Developmental Pathways of Cardiovascular Morphogenesis and the Pathogenic Mechanisms of Congenital Heart Defects Through Classical and Proteomic Approaches.

**Microbiology**  
Michelle Laskowski (Barbara Kazmierczak)  
A Novel Two Component Signaling Protein Regulates Expression of the Type III Secretion System and Cireunence of *Pseudomonas aeruginosa.*

Zandra Ruiz (Peter Tattersall)  
Disparate Roles for the Splice Variants of the Nonstructural Proteins, NS2, in Parovirus MVM Infection.

Erik Haghjoo (Jorge Galan)  
Functional Characterization of a Cytolethal Distending Toxin encoded by *Salmonella enterica serovar Typhi.*

Robert Watson (Jorge Galan)  
*Campylobacter jejuni* Interactions with its Host.

Qingqing Han (Richard Flavell)  
Role of Bct-rambo in Oxidative Stress Induced Cell Death.

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Balancing Act: Research and Relationships

BY N. Pagliaccetti

Scientists should know a thing or two about balance and equilibrium. But when it comes to balancing our time between lab and our loved ones, there's no easy equation to follow. How can you manage your time so that both your research and your relationships get the attention they need? We've asked three B staffers in different relationships to share some insight and advice for balancing life both in and out of the lab.

Nicole Pagliaccetti, Microbiology, engaged:
Planning a wedding during qualifying is not something I'd wish on anyone, but I managed to make the most of the situation with lots of help from my fiancé. Now that qualifying is over, I've tried to stay on a more regular schedule with lab work so that we can spend our evenings together. I have to plan my experiments accordingly to maximize the time that I spend in lab so that I can be home at a reasonable time in the evening. We try to have dinner together every night, which gives us a chance to talk about the day and enjoy some down time. We also try to make time for mini-getaways. It might be a day trip to Newport, a night in the city, or just going out for a fancy meal. These little vacations give us the chance to get away from work for a while and enjoy each other's company. Afterwards, I'm recharged and ready to head back to lab for another day of prepping RNA.

Jason Wallace, MCGD, husband and new father: Newborn babies are a lot like new research projects: you don't really understand them, you tend to make a lot of mistakes, and it takes a long time to see any results. For me, trying to juggle both lab life and home life has been doubly challenging since our daughter was born back in December. Both demand a lot of time and attention, and the only way I keep them in balance is by giving both equal priority.

That means I don't stay at home because the baby's being extra cute today, but it also means I don't stay late at the lab just because I found an interesting lead. (There are rare exceptions, of course, but they're only that: exceptions.) If I start sacrificing time with one for time with the other, both of them end up suffering because it starts throwing me, personally, out of whack. Keeping them both a priority is hard sometimes, but so far I seem to be managing. Probably more importantly, my wife agrees. (The baby was unavailable to comment, having just discovered that her toes are tasty.)

Catherine Mendenhall, Genetics, tips for long-distance relationships:
1. Get a schedule, but be flexible. It's nice to have a routine. Understanding that you will travel to your partner once a month, and your partner to you once a month, or whatever works for you, reduces stress and unpleasant negotiations. However, understand that life (and the PhD experience in particular) is so unpredictable that sometimes things will come up unexpectedly.

2. Text messaging is your friend. Long and/or sappy phone conversations in lab can be very annoying to people around you, especially if you like to talk several times a day. I used to turn the ringer off in the lab phone in a passive aggressive attempt to stop the constant communication between a baymate and his long-distance wife. It is also hard to speak to the phone while dissecting a mouse. So text messaging is the perfect medium - you can say a quick shout out to your loved one during a thirty second break and not mess up your PCR while doing it.

3. Make sure to have a life here, too. So many people just live for their relationships that are based elsewhere, not getting to know their classmates or nurturing friendships with them. Remember, this experience at Yale is a lot about work, but it is also about collaboration and personal growth. You are missing out on great conversations and friendships if you have never been to a First Friday at Five or the departmental happy hour.

4. Look for advice from other people. Lots of your classmates are doing long-distance relationships, too. Sharing in your experiences (and carpooling) can provide a support network.

5. Realize that this is only temporary. My Grandparents did long distance for 2 years while my Grandfather was in the Korean War. Meanwhile my Grandmother found out she was pregnant, gave birth, and raised a baby by herself in rural Kentucky in a house with no plumbing. Phones were scarce and mail took months. If they could do it, we can do it. And we need to stop whining.
At four-thirty on a chilly Tokyo morning, Alexis and I trekked across town to Tsukiji, the world’s largest fish market, just in time for the tuna auctions. The market was bustling with men and women selling crates of every sea creature imaginable from their icy stalls, with three-wheeled propane trucks buzzing around like wind-up toys, and with large knives and gaffs shooting sparks off sharpening stones. Thousands of slit-bellied, flash-frozen tuna were lined up for inspection. An eerie fog enveloped the workers who were thawing the colorless cadavers with water hoses. I could recognize most of the fish and shellfish on display, but one counter had me stumped. On a table, in a pool of dark liquid, were large slabs of red meat. Were these the less desirable cuts of tuna? Or perhaps some other exotic meat? Horse is quite popular in Japan but, of course, horses do not come from the sea.

Our appetites piqued, we made for a back-alley sushi counter. Not surprisingly, the sushi was the best I’d ever tasted. After washing down breakfast with cold beer, I returned to the hotel for a shower and a short nap. Alexis went to her office, and I spent the day exploring the city, keeping my eyes turned towards the next meal. We met for dinner in Shibuya, the brightest of the brightly neon-lit districts in Tokyo. A Japanese friend did the ordering, and as the chef’s sets streamed to our table, the realization dawned on me that the bloody slabs we had seen at the market on our table, the realization dawned on me that the bloody slabs we had seen at the market the morning were not fish at all. They were whale!

The Japanese government defends its right to hunt whales in the name of preserving culture and tradition. Yet Japan’s whaling heritage is of fairly recent origin and largely fabricated by the government to advance its economic goals. Until the turn of the twentieth century, the only whaling practiced in Japan was in remote coastal villages which hunted in-shore, small-type whales. The impetus for whale hunting on a grand scale came in the early 1900s when a Japanese business man brought Norwegian commercial whaling practices to the archipelago. Whale became a food commodity, but even then, it was widely unpopular. As Japan flexed its imperialistic muscles in places like China and Korea, whale meat was canned and sent to the front as soldiers’ rations. After World War II, this Japanese version of Spam became a staple of the poor as the nation rebuilt. To this day, whale is often pushed on children in school lunches and targeted to peasants as cheap food. Only prime cuts of sashimi and various organs are considered delicacies and are sought after by the rich. Indeed, there is little unity around whale as a cultural or national food icon.

Japan hunts whale under two scientific research programs—one in the Antarctic called JARPA and one in the North Pacific called JARP—both crafted by the Japanese government in cahoots with whaling companies and okayed by the International Whaling Commission. The IWC was founded in 1946 to coordinate the conservation of whale fisheries and to regulate the whaling industry. Landlubbers may view this arrangement as an example of the fox guarding the hen house. Japan recently proposed more than doubling its annual harvest of Antarctic minke whales from 400 +/- 10% to 850 +/- 10%, and adding 10 fin and 10 sperm whales to the Antarctic haul. The new North Pacific plan calls for maintaining the annual allotment of 220 common minke, 50 Bryde’s, 100 sei, and 10 sperm whales. Promoters of these reckless harvests claim whale hunting helps scientists monitor the oceans’ ecosystems, model interspecies competition for fisheries management, better understand whale stock and population structure, and improve management of whale stocks. The IWC has the authority to reject proposals for research hunts and to call for hunting moratoriums, as it did when it banned all commercial whaling in 1986, though it has no ability to enforce its rules or rulings. Ultimately it is up to national governments to comply on the basis of self-interest.

Are there legitimate scientific goals that cannot be achieved without killing whales? Why are non-lethal methods such as biopsies, censuses, and photography and videography, insufficient? Three kinds of data can be gathered only from a dead whale: (1) age, which is estimated from deposits in the ear; (2) stomach contents, and therefore feeding habits and potential impact on other fisheries; and (3) female reproductive potential estimated from ovary health. Rarely if ever does the IWC Scientific Committee unanimously agree on the merits of a proposed research hunting permit. Even when it does pass a plan based on scientific rigor, the larger and more elusive question remains—is the data worth killing whales?

To me, the question is a no-brainer. Cetaceans (the Order that encompasses whales and dolphins) are uniquely majestic animals. They are highly intelligent and communicative. Before engine noise from ships filled the oceans, whale sonar could travel thousands of kilometers under water, enabling whale populations in distant reaches of the oceans to talk to one another. Whales are beautiful creatures. Some individuals reach vast sizes and extraordinary old ages, a condition known in the

continued on next page
LIFESTYLES OF THE POOR & ACADEMIC
SUMMER IN NEW HAVEN: IS THERE ANYTHING TO DO?
BY J. DUKE

Classes are out, the undergrads have deserted campus long ago, and along with them many of the activities available through Yale and the Graduate School. Of course now is when we all have free time, so what is a neophyte to New Haven to do? From one first year, to any who are willing to listen, here are some of the things that I have found interesting in New Haven and the surrounding areas.

Aside from general recreation and hiking trails the New Haven parks are full of entertainment. Music on the Green has hosted four free concerts featuring Los Lonely Boys on July 14, Patti Austin on July 21, Soul Asylum on July 28, and Reginal Belle on August 4. The Elm Shakespeare Company will be holding performances in Edgerton Park on the corner of Whitney and Cliff Street near the New Haven / Hamden town line. The current season consists of Alexandre Dumas’ The Three Musketeers on August 9 – 12, 21, 23, 25, 29, 31 and September 2 accompanied by Shakespeare’s As You Like It playing August 16 – 19, 22, 24, 26, 28, 30 and September 1. All plays start at 8 pm and are free but donations of $5 for students or $10 for adults is suggested. Both events are best enjoyed with a blanket, chairs and a picnic.

If you are not up for art in parks, summer is a great time to browse the collections of Yale and New Haven’s museums, which most of us were probably too busy to visit during the academic year. The British Art Museum is currently showing Paul Mellon’s Legacy: A Passion for British Art exhibition through the end of July with guided tours on July 29 at 2 pm. The Wildlife Photographer of the Year 2006 exhibition is showing at the Peabody Museum of Natural History through September 3. If you’d rather create your own art or need a creative outlet, the Creative Arts Workshop located on Audubon Street has a multitude of classes on all types of art ranging from bookbinding to pottery to photography.

If music, plays and art are not quite your cup of tea, then maybe check out some of the sporting events in and around New Haven. The New Haven County Cutters play at Yale Field through the Labor Day weekend. The Bridgeport Bluefish is another baseball team in the area slightly further away, but with 36 home games in July and August and many fan promotions, like 2 for 1 special on tickets on Tuesday nights, live music on Friday nights, and a fireworks extravaganza on Saturdays, who can resist? Tickets for both baseball teams range between $8 and $20. The Pilot Pen Open is hosted at the Connecticut Tennis Center at Yale from August 17 – 25 as the warm-up for the US Open and final event in the US Open Series. James Blake, Elena Dementieva, and Amelie Mauresmo have committed to playing in the tournament, with tennis greats of Lindsay Davenport, Justine Henin, and Marcos Baghdatis at the competition last year. The Graduate School hosts ‘Grad Night at the Open’ with discounted tickets to a night session. Even if you are not a fan of tennis, there are still plenty of other activities to enjoy at Open. If you are looking to sports activities to join, check out the New Haven Outdoor Adventure Club that hosts kayaking clinics and trips, rock climbing, and nature hikes throughout the summer; or flip through your previous B-magazine articles and venture out on some of the trails explored in the Trail Mix articles by Hannah Chapin and Elisabeth Wurtmann.

For me, nothing defines the summer better than enjoying a great glass of wine outside and relaxing. Wine is produced in each of the 50 states, so why not take advantage of the wineries in Connecticut to find interesting local varietals and a day of fun with friends. Fifteen wineries are located in Connecticut, with New Haven being in a prime location to start either the eastern or western winery tour routes (more information available at www.ctwine.com). Tasting rooms are generally open Fridays through Sundays with minimal tasting fees. Most wineries allow guests to walk through and explore the vineyards, but if you have a group of people, call in advance and schedule a tour winery to learn about the wine making process. By planning a tour in late summer to early fall you might get to see the most active time at the winery when grapes are being picked, pressed, and turned into juice and to start the fermentation process.

Hopefully, one activity mentioned here has sparked interest in exploring New Haven, but if it hasn’t, feel free to do some exploring on your own! #

Photo by R. Rosengarten.
From the top of the granite dome aptly named The Beehive, panoramic views let you take in the spruce forest and slotted gray schist cliffs that edge Frenchman Bay. The sight of that brilliant blue bay set against the deep greens of the rolling forest is alone worth the trip to Acadia National Park. But indeed, the entire park, which sits on Mount Desert Island just off the coast of northeastern Maine, is full of such highlights and a long weekend or week there is easily filled with numerous short hikes and excursions. The most famous peak on the island is Cadillac Mountain. Many routes to the top are possible, including a road, but take the long way by first going over Dorr Mountain before reaching the giant open granite ledges on Cadillac. The peak gives expansive views of the Atlantic Ocean, dotted with the myriad little islands that surround Mount Desert. Head down Canon Brook Trail off the peak of Cadillac, tracing your way along the bubbling, cold stream as it bounces down the mountain in waterfall after waterfall. The work of glaciers has left the island with a remarkable shaped landscape, most evident in the sinusooidally-curved hills known as The Bubbles that sit along Jordan Pond. In addition to being criss-crossed by hiking trails, the island also has forty-five miles of bicycle-friendly carriage roads built by the Rockefeller family complete with seventeen stone arch bridges.

One of the most beautiful aspects of Mount Desert Island is its coastline, a weaving ribbon of schist that fingers into the ocean in rippled layers. A notable stretch of this coast is the Otter Cliffs area. Just north of that point sits Thunder Hole, a spot where, when the tide is right, the surf pounds into a chasm of rock in explosive waves. Head a little north again to reach Sand Beach, which is home to barnacles and anemones living in tidal pools and is the best spot on the island to try a cool wade in the Atlantic. Another beach at the picnic area of Pretty March Harbor is good for a walk along a rocky beach that lets you see the views from the western side of the island. The coastline is extended up into the island by a fjord, Somes Sound, which can be seen by hiking Acadia Mountain or Flying Mountain, or by taking a boat cruise. Another way to get out on the water is to rent kayaks from Bar Harbor and explore around the rocky islands that dot Frenchman Bay, intriguingly named Sheep Porcupine, Bald Porcupine, and Burnt Porcupine Islands. Mount Desert Island is also speckled with large and small ponds; the sandy beach at Echo Lake and the rocky ledges of Long Pond are both wonderful places to swim.

Other spots worth a stop include the postcard-perfect Bass Harbor Head Lighthouse; the Mount Desert Island Biological Lab, which has public tours of its tanks of fish, crustaceans, starfish and the like gathered from local waters; and the Hinckley Yacht Company located in Southwest Harbor which is the birthplace of some truly beautiful sailboats. In the town of Bar Harbor, walk along the seawall to look out over the harbor and then wander around the little downtown with its art galleries, restaurants, and tourist shops, making sure to stop at Two Cat’s Restaurant for the granola and at Ben and Bill’s Ice Cream (the lobster ice cream is at least worth a sample spoonful before you pick from the two dozen homemade flavors or the bins of homemade candies). There are also several good breweries on the island, but Bar Harbor Brewing Company, on the north side of the island, offers the best tours and tastings.

The park has two large campgrounds, Seawall and Black Woods. These are car campgrounds, and while there are no true wilderness campsites on the island, the campgrounds do offer an excellent spot to pitch a tent and roast a marshmallow after a day of adventures.

As a side note: if you plan far enough ahead you can reserve spaces on Isle au Haut, an island southwest of Mount Desert which is mostly owned by the park. You take a small ferry from the town of Stonington, stopping first at the town of Isle au Haut before arriving at Duck Harbor Campground. There are a limited number of campsites available, ensuring that you will have no crowds to compete with for the stunning views and miles of trails. Also, the island’s most famous resident, Linda Greenlaw, has written a book about growing up on the island, giving you a perfect literary tie-in for your trip. You may even catch a glimpse of her lobster boat as she works the traps.

Photos: B’s intrepid Trail Mix writers and scenes of their trip to Mt. Desert Island (photos courtesy of Lynn Sherrer and Hannah Chapin)
The BUZZ

Keep your eye out for the 62 new BBS students who will be arriving in August.

Congratulations to Kathy Egan, INP, who married Devang Dave twice! on June 2 in a Hindu ceremony and then on June 9 in a Catholic ceremony.

Fatih Mercan, Pharmacology, and his wife Derya, welcomed Mehmet Emin into the world on July 11th. Both the baby and the mom are fine. Dad, of course, is exhausted.

Best wishes to Sven-Eric Jordt, assistant professor of pharmacology, and his wife on the May 28 birth of Hendrik Kai Jordt, 21 inches, 6 lbs 11oz.

Congratulations to Monica Vella-Angelastro, MCDB ‘04, on becoming the new Associate Director of Postdoctoral Affairs at Yale.

Fond farewell to Kim Bottomly, Professor of Immunobiology and deputy provost, as she begins her new job as President of Wellesley College. Compared to probing the mysteries of the immune system, this new gig should be a piece of cake.

Another farewell to Ira Mellman, professor and chair of Cell Biology and BBS’ first Director, who has joined Genentech as VP of Research in Oncology. Jessica Ma, 3rd Year Cell Biology student, will be going to Genetech to continue her research in Ira’s lab.

What, no op-ed this issue?

Hey, cut us some slack. We had nothing new to complain about.

B magazine’s “Short Story” Contest

Getting back to our roots, we selected a contest that would maximally spotlight BBS student creativity, while still offering the chance to submit bizarre entries. Congratulations to the winners of our very first short story contest. Your stories are short...and bizarre.

We gave you the opening. You did the rest:

"It was a dark and stormy night. I was alone in the lab when all of a sudden..."

1st Place

Jeff Tsao, MCDB

It was a dark and stormy night. And I was alone in the lab when all of a sudden I snap. I just wont take it anymore. The constant poking and prodding. The little pre-measured morsels of tasteless pellets. Their sick practice of forcing us to mate with sisters, mothers and hideous mutants. It’s enough to make a mouse go CRAZY. You’re not the boss of me hairless MONKEYS!!! Our time has come. Tonight I plan. Tomorrow I RISE!

2nd Place

Matt Cabeen, MCD

It was a dark and stormy night. I was alone in lab when all of a sudden I remembered the B magazine short story contest. I rushed to my computer to check the rules and get writing, but then I noticed that there wasn’t any prize, so I lost my motiva.

3rd Place

Dennis Mishler, MB&B

It was a dark and stormy night. I was alone in lab when all of a sudden I had awoken from a dream most fanciful. Still groggy, I grabbed a kimwipe to clean off the drool upon my arm. I walked down my bay into the main hallway, determined to lock up and leave as quickly as possible. However, upon reaching the lab door, I was thwarted. Someone had stolen the lock. I kid you not. Why would someone steal a freaking lock? Beside myself with utter dismay at the prospect of having to call this in and stay all night to guard lab equipment, I decided to flip a coin. Heads: I do the right thing, and stay all night. Tails: I go home, blaming whatever happens on one of the undergrads. Actually, screw the coin toss. I'll just blame it on the undergrads.

Honorable Mention

Jeff Tsao, MCDB

It was a dark and stormy night. And I was alone in the lab when all of a sudden I realize the floors are freshly waxed. I tell myself no over and over, yet sure enough I ease my feet out of my sneakers and onto the cool floor. My pulse races as I strip down to my white briefs for all to see. Soon, I am sliding on the KBT floors doing my best Risky Business impersonation a la Tom Cruise. I feel free and just for a split second all worries melt away. Then it happens. The door slams with my pants and keys locked safely inside. How am I going to explain this to the janitorial staff? Again.