The G. S. A. NEWSLETTER

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Johns Hopkins University School of Medicine

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Q & A with Geraldine Seydoux
By CMM correspondent Daniel Gorelick

A native of Paris, Seydoux attended college in Maine and then went on to graduate studies at Princeton. After publishing her first two papers in Cell and her third in Nature, she did a postdoctoral fellowship in Andy Fire's lab at the Carnegie Institute. Four years and another Nature paper later she joined the Department of Molecular Biology and Genetics, where she continues to use C. elegans to study how embryonic cells become either germline or somatic. She also lectures first year graduate students during the course in Fundamentals of Genetics. Last year she received a MacArthur foundation "genius" fellowship.

DG: Do you feel like a genius?
GS: I don't feel like a genius at all. I'm not. And my husband will tell you that too.
DG: What's the square root of 8278?
GS: I don't know.
DG: It's about 90.98.
GS: Thanks for that useful piece of information.
DG: How much is the MacArthur award?
GS: $500,000 over 5 years.
DG: Do you have to do anything to keep the money coming? Progress reports or anything?
GS: The funding is unstoppable. I don't have to tell them anything.
DG: Are there any spending restrictions?
GS: No. None.
DG: So you could buy a Ferrari?
GS: Yes.
DG: Are you keeping any of the money for yourself?
GS: No.
DG: You're not going on a celebratory vacation with your family? Or out to dinner or something?
GS: No.

Episode 2: Attack of the Clontech vendors.

By Derek Jantz

You are about embark on a journey through the clouded mind of Derek Jantz. What follows is part two of the semi-autobiographical career retrospective of a fifth year grad student. If you missed part one, you didn't miss much. I'm pretty sure it's available on the GSA website, though. This one's pretty exciting, so don't read on unless you're strong of heart, strong of mind, or bored of lab.

Year 3:

My third year began more or less like everybody else's—soaring high over the basic sciences courtyard on my trusty Nimbus 2000. The annual Quiddich Cup that year featured Academia vs. Big Pharma in a battle of egos that had been building for decades. As the Seeker for team Academia, I was entrusted with the task of finding and capturing the Golden Genome to secure a victory for the public sector. My vantage point high above PCTB gave me an unobstructed view of the field from which I could just make out the familiar shape of the Genome resting on a picnic table below, almost completely obscured beneath a pile of rejected patent applications. I yelled to Jon Lorsch, my closest teammate, but a med student had tied him up on the ground to demand more points on an exam. I turned to chase the Genome myself only to see Craig Ventor speed by on his jet black ABI Prism. And as Ventor held

Upcoming GSA Meeting: June 10th

*** 517 PCTB ***

Meeting are held on the 3rd Tuesday of every month at 3pm.

Upcoming Event

The Alicia Sholwalter-Reynolds Lectureship

Dr. Ruth Berkelman
Research Professor
of Epidemiology
at Emory University
June 4, 2002 2pm
Mountcastle Auditorium
1st Floor PCTB

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Congratulations to the GSA Poster-Session Winners!

First Place
Haining Zhong
Amar Sahay
Ton Khue

Second Place
Tina Saxowsky and Michael Erickson
Giovanni Traverso
Gerard Beaudoin

Third Place
Luisa Cochella
Kara Cerveny and Anding Shen

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DG: So what are you going to do with it?
GS: It's nice to have security for the lab. I'm just investing it now, so it can be used for a future project that doesn't get funding.
DG: You didn't even take your lab out to dinner?
GS: No.
DG: Will your graduate students get raises?
GS: I can't do it—there are restrictions from Hopkins.
DG: If you could?
GS: Sure.
DG: That's a safe answer.
GS: It's an enormous responsibility. I don't want to do something silly.
DG: Why not? They can't take the money away from you.
GS: My conscience.
DG: Why did you choose a career in science?
GS: It's the only thing I knew how to do in college. I was better at physics, calculus, and chemistry in college. I guess you naturally gravitate toward the things you're better at. The choice came down to biochemistry or organic chemistry. I chose biochemistry because it has to do with life.
DG: Why developmental biology?
GS: Princeton was very strong in that department—Eric Wieschaus was on my thesis committee! I liked genetics. I did an undergraduate summer genetics internship at Cold Spring Harbor. At Princeton I had just done a rotation in a *Drosophila* lab. Iva Greenwald, a new faculty member, cornered me and had me visit her lab to look at *C. elegans*. I saw a live one under the microscope. I mean, I could see the organism, but you could make out individual cells. I saw the cells dividing. I was moving the stage around trying to follow this worm moving around on a plate so I could see individual cells dividing. This is much more direct than seeing bands on a gel. There is an immediacy here. What I'm seeing is what is happening.
DG: Do you agree with Steve McKnight, then, that molecular biologists are pinheads?
GS: No. We need all kinds to further science.
DG: Which is the greater contribution to science: the balancer chromosome or the Qiagen mini-prep kit?
GS: Definitely the balancer chromosome.
DG: You're biased. The Qiagen kit makes life so easy.
GS: I did DNA preps way before Qiagen had a kit. The balancer chromosome made developmental biology possible—before that, it was too hard to look at lethal mutations—
DG: I know. I took Genetics. But—
GS: Mini preps were never that difficult. I'll stand by this publicly.
DG: You study worms. Is your ultimate goal to understand human development, or are you interested in worms for their own sake?
GS: I'm not a freak that loves worms for the sake of worms. I like to discover things…The chance to play detective. The discoveries we make about *C. elegans* development are interesting. I realize I have an obligation to the NIH, but that's not why I come to work in the morning. Of course, I wouldn't want to study something with no relevance [to humans]. I'm happy our genes have homologues in humans.
DG: You're stranded on a desert island with only one companion: Sydney Brenner or Eric Wieschaus?
GS: What is the name of that actor from A Beautiful Mind?
DG: You mean Russell Crowe?
GS: Yeah, he's my first choice. Wieschaus second. Brenner third.
DG: Do your kids keep worms as pets?
GS: No.
DG: Would you let them eat worms?
GS: No, although my son would like to. When I bring him into the lab he'd like to put the [worm] plates in his mouth.
DG: You know you shouldn't pigeon hole your kids into careers in science. There's much more out there.
GS: My husband is in the arts, he's a graphic designer, so we provide a good balance.
DG: Didn't he design the cover of the scientific journal *Genetics*?
GS: Yeah, but that's not his main focus.
DG: If all the Hopkins *C. elegans* researchers fought the Hopkins *Drosophila* researchers, who would win?
GS: If we fought them physically, in a battle?
DG: Yes.
GS: They would—there's much more of them. There are only three *C. elegans* labs, and two of them are at Homewood.
DG: What about if your lab fought just one of the *Drosophila* labs?
GS: We'd beat any single lab.
DG: Even Phil Beachy's lab? He's pretty big.
GS: Oh no, definitely no problem. We've got the gumption to win.
DG: If you were reincarnated as a developmental biology model organism, which would it be?
GS: Reincarnated? Which organism?
DG: You know, you can choose from the model organisms you named in your Genetics lecture. Zebrafish, *Xenopus* [frog], *C. elegans*, *Drosophila*, I'll even throw in the mouse.
GS: Definitely not the mouse. Zebrafish has a long lifespan.
DG: I don't remember your lectures that well, sorry.
GS: I pick the Zebrafish for aesthetic reasons. And because they live long.
DG: What's the most exciting new development in biology?
GS: The RNA world. I mean RNAi, noncoding RNAs, nontraditional RNA. You know, some of these small RNAs, 20 nucleotides even, are perfectly conserved across many organisms. They must have neat functions.
DG: What about RNA and translation?
GS: It's a great model system to learn about RNA's capabilities. But they're going to do other things.
DG: Like what?
GS: RNA is not just a transmitter of genetic material. It might regulate gene expression—maybe by binding to proteins, or by acting as a transcription co-factor. Maybe they're involved in membrane fluidity, who knows? I think RNA will turn out to have functions not normally assigned to nucleic acids. Of course, we'll figure this all out using genetics.

For more information on Dr Seydoux's wonderful world of worms, head to http://www.macfound.org/programs/fel/2001fellows/seydoux.htm

The pen is mightier than the pipet...

Please send any poems, short stories, creative writing, essays, photos, or black and white art to the *GSA Newsletter*!
Submissions for the next issue will be due **August 16th, 2002**

the Genome up to the cheers of team Big Pharma, I could clearly make out the *Speed Matters* bumper sticker affixed to his broom.

I woke from my dream with a start to find myself resting comfortably in the ladies' locker room at the Cooley Center. How I got there, how long I'd been there, and why I was wearing fishnet stockings were all unknown to me. Years of mouth-pipetting organic solvents, however, had impaired my ability to ponder more than one mystery at a time and at that moment I was more concerned with deciphering the meaning of my dream. I drew two conclusions from the message delivered by my cryptic subconscious: 1) the phrase "tastes like" should never again appear in my lab notebook, and 2) my long-standing habit of coercing friends into doing my lab work would not lead me to be successful—lofty goals like mine could only be achieved by hard work. Therefore, I resolved to find harder working friends. After a considerable search, however, I came to an unexpected conclusion about hard working people: they tend to be motivated by pride and personal ideals as opposed to stock options or goldfish crackers or anything else that I had to offer. I then made what turned out to be a particularly fateful resolution: *I was going to get my Ph.D. even if it meant doing a certain percentage of the experiments myself.* Mind you, I was fully aware at this point that years of using powdered acrylamide as a hair volumizer had impaired my ability to commit to any life-altering resolutions for more than a few hours—but *for the duration of those few hours*, my determination was unwavering.

First and foremost, I needed a thesis project and a committee to tell me how to do it. Choosing the project was easy, as there was only one that I deemed worthy of my many talents: *The Complete Reconstitution of Human Life from Purified Components.* Having previously demonstrated that it was possible to fully reconstitute a delectable bowl of shrimp flavored Raman Noodles from nothing more than noodles, a flavor packet, and hot water (Jantz, et. al. *GSA Newslet.* 10:2, 2-3) I felt that this was a logical next step.

Choosing my committee proved to be more difficult. I knew that only the top scientific minds at Hopkins would be of any use to me, but found that getting four top scientists into the same room at the same time required either several years advance notice or a subpoena. I didn't have several years, so I went with the latter. As it turns out, the phrase "misuse of research funds" can be very broadly interpreted, so much so that with only four anonymous phone tip-offs, I was able to schedule my first thesis meeting inside of a week. And while an arraignment trial is hardly the ideal environment for lively scientific discussion, I *was* able to score half a box of "Dept. of Corrections" pens.

The meeting itself was not particularly fruitful. My committee members seemed to lack focus after their sentences were handed out. Their autographed copies of my thesis proposal (destined to one day be a collector's item) lay forgotten beneath piles of legal pads and tear-stained letters to their children. Only then did I realize the horrible truth of what I'd done—these people were going to *jail* because of me. That meant I'd have to assemble a *completely different* committee the following year. What a terrible inconvenience. So, as three of the country's top scientific minds (and Jon Lorsch) were carted off to prison for spending taxpayer money on such frivolous excesses as aluminum foil and distilled water, I wondered how exactly my classmates had gone about organizing *their* thesis meetings.

I should pause for a moment to describe to you my thesis proposal, as it truly was a literary work unequaled in the scientific community. Its cover was derived from a virtually indestructible fabric hand-woven from the tail feathers of the now extinct New Guinea Runway Nesting Bird. Emblazoned across the front was a single exclamation point pressed from a sheet of gold leaf—the only title capable of capturing the essence of such an all-encompassing body of work. Chapter 1 was series of magazine collages describing, in detail, my early work on Asian pasta. That gave way to a three-act play recounting the history of the Peloponnesian war as a metaphor for PCR. Chapter 3 was a more or less random assortment of cool looking pictures from that month's issue of *Cell* which, when viewed from a distance, clearly resembled the profile of Jon Lorsch's cat. It came to a dramatic conclusion with a 16 page haiku written in the blood of a telomerase knockout mouse describing, in alternating cycles, my devotion to science and my love of Little Debbie Nutty Bars. All in all, even I had to admit that it was a triumph...but I realized only moments into Jon Lorsch's testimony that not a single member of my committee had read past chapter 2.

Crushed by my miserable thesis meeting, I returned to the quiet solitude of the lab—the one place where I knew no one would look for me. As I opened the door, however, I felt an ominous disturbance in the force. He was wearing a tie so I quickly identified this individual as either a med student or a sales rep—neither of which I was prepared to deal with. I turned to run, but too slowly. This sales rep was well versed in the dark arts and effortlessly blocked my every attempt to escape. He introduced himself as "Ted, Clontech Sales Manager for the Mid-Atlantic Region" and thrust a card stating the same into my shirt pocket before I could resist. If two years in the lab had only taught me one thing (which was a distinct possibility) it was that sales rep visual acuity was based on movement. I froze and began to hum softly hoping to be mistaken for a particularly sophisticated piece of lab equipment. Ted was clearly familiar with this ruse and showed no sign of backing down. Realizing that force was my only option, I assumed my Hidden Dragon stance and prepared to open up a carboy of 10X whoop-ass. Only moments into my attack, however, I came to the conclusion that *Street Fighter 2* must have taken a few liberties with the laws of physics, as the wall-hangings and floor sustained considerably more damage than did sales rep Ted. Bruised and exhausted, I slumped to a corner—and there I sat for the remainder of year three, subsisting only on trial size snickers bars, waking each day to Ted and his ceaseless tales of polypropylene wizardry.

Up Next: Part 3 – Taste of China Strikes Back (Year 4)

Help!!!

The GSA Newsletter is desperately seeking individuals to serve as editors and/or writers for the upcoming academic year. Minimal time commitment. No experience necessary. If interested please contact a GSA Newsletter editor:

Karen Pinco - kpinco@jhmi.edu
Emily Overholser - eoverhol@jhmi.edu
Soo Hee Lee - shlee@jhmi.edu

Congratulations Graduates!
For a list of graduating students please visit the GSA Newsletter website
http://www.hopkinsmedicine.org/gsa/news.html

From the GSA
By Joanna Zarach
GSA President

I would first like to congratulate all of the graduating students on their accomplishments and wish you all good luck in your future endeavors! Looking back at this past year, the GSA brought to the student community several new events such as Wine Tastings and the Graduate Student appreciation week. We hope that you have enjoyed all GSA sponsored events and realize that they would not happen without the hard work of your fellow students. I would like to thank this year's representatives and the executive committee for a job well done. I would especially like to credit the Vice-Presidents, Aurora Kerscher and Dan Cohen who did an exceptional job organizing all the events. I learned a lot while serving as the GSA President and I hope that more students enrich their experience here at Hopkins by joining the GSA in the future. Thank you for allowing me to play such a significant part in the evolving student life at Hopkins.

Congratulations 2002 Graduates!

Doctor of Philosophy

Jun Aishima
Shafinaz Akhter
Dan Eytan Arking
Jianwu Bai
Anne Marie S. Beckerleg
David Scott Bellows
Gwendolyn Knowlton Binder
Christopher M. L. Bouton
Pamela Lynn Bradley
Linda Bruett
German Cavelier
Timothy An-Thy Chan
Brenda Joan Chinnery
Hee Jung Chung
Carlo Colantuoni
Cynthia Suzanne Collins
Nicholas Kevin Conrad
Charles Elwin Dann
Christina Tenenhaus Dann
Mark Elliot Drew
Rachel Anne Dumont
Tarek M. Fahmy
Patricia Marie Finkenstadt
Amit Golding
Joseph Leon Greenstein
Ann Katherine Heinzer
Michael Thomas Hemann
Jason Daniel Hoffert
Catherine E. McCann Huang
David Wei Jiang
Jessa Bethany Jones
Ailong Ke
Nicole A. LaRonde-LeBlanc
Joseph Fenton Lawler
Kenneth Lee
Julie R. Leegwater-Kim
Patricia Marie Legler
Yizheng Li
Hong-Erh Liang
Jia Lu
Thomas Entse Lu
Linglei Ma
Deborah Lynn Mason
Douglas X. Mason
Stefan Adi Muljo
Venkatesh Locharla Murthy
Sara Isabel Pai
Theodore Charles Pierson
Mathew Tyler Pletcher
Lynn Janet Poole
Gregory Brian Potter
Amy Elizabeth Purcell
Pradeep Ramulu
Jason Edward Rao
Kimberly Jean Reese
Jean Baptiste Regard
Ina Park Rhee
Jason Wright Roos
David Francis Scollan
Mahmud Siddiqi
Insuk Song
Sarah Thornell South
Roberta Renae Speck
Virote Sriuranpong
Nicole Lynn Stricker
Rebecca Isabel Tinker
Danielle Beth Ulanet
Andrew Paul VanDemark
Jiou Wang
Qianfei Wang
Song Shung Wang
Tianhong Wang
Zefeng Wang
Mathew Johannes Wawersik
Xueying Wei
Jun Xia
Rong Xue
Jiong Zhang
Ning Zhang
Yi Zhang
Haining Zhong
Charles Leo Zimliki

Master of Arts

Seth Andrew Axelrad
Megan Elizabeth Bluhm
Jennifer Barton Burch
Ann Geralyn Canapary
Frances Ruth Homber
Alan Barry Hoofring
Olivia Y. Hwang
Farheen Rahman
Jennifer Leeja Shafer
Judith Anne Stoffer
Sarah Lauren Williamson
Hongmei Yang