



Pre-Vet Club Newsletter

End of year party

On May 30, 2009, Dr. B hosted our annual celebration to honor this year's official graduates: Willie Phan, Lisa Rincon, Stacey Kang and David Sender (all Bio majors). Graduates painted



new tiles for Dr. B's tile collection, and a great time was had by all. Congratulations and best of luck to the graduates!!! Students who will start Veterinary School this fall ('09) include:

Willie Phan – UC Davis, Lisa Rincon – UC Davis, David Sender – U of Illinois, and 07' graduate Kate Farrell – UC Davis. Stacey Kang hopes to continue working with Macaques in the Shenoy lab for 1 more year and is applying to vet schools this fall along with Co Term 5th yr senior, Andrew Wicklund, current senior Mary Thurber, '09 graduate Lori Westmorland, and maybe a few others (to be determined...). Good luck to you all!!

Dr. B





Interview Advice

[This might be helpful to folks applying this year...](#)

Hey David,

Congratulations on getting interviews! Here is what I remember from visiting Tufts and Illinois: Tufts was one of my more laid back and relaxed interviews. It was with 2 faculty members who were both really friendly. We all introduced ourselves and they explained a lot about their positions at the school and the research they were doing, etc. They started out asking me questions about my application (about my vet experience and how I liked Stanford, how I ended up out there when I was from MD, basic things like that) and as I answered them the interview definitely started to feel more like a conversation and just flowed pretty naturally. One of the questions that I remember was about what my response would be if a client came into my clinic and asked me to euthanize his healthy puppies simply because he didn't want to deal with them, which I think is a question that I was asked in another interview also. The interview was my longest, I think somewhere between 30 and 45 minutes, but probably my least stressful. Going on the tour and to a few of the info sessions was fun too, I remember that everyone there was super friendly.

The Illinois interview had 2 parts to it. There were 5 interviewers in the room, and for the first part they went around and each asked me a question, which I'm pretty sure were from a list that they asked every person being interviewed. I wish I could remember exactly what the questions were but they related more to life experiences than veterinary stuff. I think one of my questions might have been about a leadership experience I'd had. This part definitely felt very formal, no one provides any feedback or says anything in response to your answer except, "OK, thank you." The second part of the interview was more like a normal interview would be and they were able to respond to my answers and ask follow up questions, although I have to admit that I remember less about this part. I do remember that they asked me if there was any question that I wish they would have asked, so maybe you could have something in mind in case they ask that again. I think I said that I wished they had asked about my previous vet experience, so that way I was able to talk to them about my work with the monkeys and in the clinic.

As for general interview advice, I would really say just be relaxed, be yourself and show them that you're excited about veterinary medicine. Before my interviews, I browsed through the AVMA website and tried to learn about current issues in the field and looked up basic veterinary information like puppy vaccination schedules because I was afraid that I would be asked something that I didn't know, but I was never once asked anything that was meant to test my knowledge at any of my interviews. Learning about current issues is probably still a good idea, but just don't stress about it. I really felt at all of my interviews that they were just trying to get to know me. That said, I think it would be a good idea to have some stories ready about leadership experiences, tough decisions, "moral dilemmas" (I was asked this question at the VA-MD interview, where I am now, and it stumped me because I had just talked about a tough decision and couldn't think of anything to say!), and maybe some favorite or interesting stories about working in the clinic or with Chris and the monkeys. It's also a good idea to know a little about the program at the school that you're interviewing with and what you like about it. Several schools, including Tufts I think, asked me what it was about their school that made me apply and want to attend there. Overall, I was asked several questions about past life experiences, a few moral questions (multiple about euthanasia like the one I mentioned earlier), and otherwise just questions about my application and past veterinary/academic experiences. Also, they always ask you if you have any questions for them at the end, so I would usually try to come up with a question or two beforehand to make sure I seemed interested in the program. And remember that they're trying to sell themselves to you too!

Let me know if there's any other questions that I can answer for you! I know that this is such a stressful time, but try not to let it get to you too much. Good luck!

Best,

Heather (Graham) Stanford '08, Currently 2nd yr at VA-MD Regional College of Veterinary Medicine



Big Horn Sheep Capture

By Kat Tomalty, Stanford BS '04, MS '06

currently 2nd yr at UC Davis Veterinary School in combined DVM/Ph.D program



This spring break ('09) I was lucky enough to participate in a field course on restraint and capture of wild ungulates and small carnivores. In addition to learning about chemical restraint and tracking methods, we had the opportunity to participate in a Big Horn sheep capture near Bishop with the California Department of Fish and Game. Despite the protected status of this species and a slow but heartening increase in numbers, there are fears that respiratory diseases transmitted from domestic sheep may be endangering this population. The goal of the capture was to attempt to identify any pathogens which may be infecting this population, as well to tag individuals to assess how population numbers had changed from the 200 or so individuals estimated a few years ago.

For 4 days we got up at the crack of dawn and caravanned with Fish and Game veterinarians and biologists to the day's staging site. We would set up and wait for the helicopter pilot and crew to radio in the location of the first sheep. Because of the risk of aspiration with anesthetized Big Horns, only physical restraint was used. The helicopter crew would capture a sheep using a net fired from a specialized gun and then package the sheep into a "sheep bag" which was then delivered to us at base camp. Once the sheep arrived, we mobilized in small



teams of a sample collector, a medical monitor, a head restrainer, and a body restrainer. We worked quickly to measure weight and body measurements, to take fur samples for genetic tests, nasal and oral swabs for culture, fecal samples, and blood samples. Each sheep was tagged in each ear and fitted with a radio collar. Abdominal ultrasound was performed to assess reproductive status of the females as well as body fat stores. When we were finished, we would package the sheep back into its bag and helicopter would return it to the mountain.

This was an absolutely incredible experience. Working hands with these magnificent animals to help inform successful management was the highlight of my year. When I am sleep deprived, studying for 5 finals, and

running solely on coffee (as I am right now!) it is experiences like this that keep me inspired and excited for the future.



Pre-Vet Student Correspondence from Around the Country...

**Here are some emails that I have received during
the past year from former Stanford Pre-vets**

Dr. B,

I have no pictures for you (sadly images of me sitting inside a classroom 40 hours a week would probably not be inspiring, and that is all I do at the moment). My summer plans are exciting however. I am working with two other Penn students to provide pre- and post-exercise ECGs, auscultation and bloodwork on Standardbred racehorses at a very nice local racetrack. The Pennsylvania Racing Commission is funding our work (overseen by the cardiology vets at New Bolton Center), and it should be one of the first substantial studies of



arrhythmias present in Standardbreds. The other news of note is that the Penn Equine Club (of which I am an officer) won the award for best "non-lecture experience" for our joint injection lab with cadaver limbs. Hope all is going well in California!

Laura (Faulkner) Stanford '07, Currently 3rd yr at University of Pennsylvania Veterinary School

Hey Dr. B!

I'm so glad you wrote - I have been meaning to write you an update for a long time. Sorry I missed the end of the year party (I work Saturdays), but definitely keep me in mind for future gatherings!

I am working at a small animal clinic (dogs, cats, and the occasional rabbit) in Boulder Creek, CA. I'm a full-time associate, working with one other veterinarian (who owns the practice). I'm not sure it is the right thing for me... I decided to take a job right after school because my husband (got married in December!) wants to go back to school to study geology (he is an RVT). But I really miss being in an academic setting. A big part of me wants to go back and do research. I was wondering, how did you decide to go back to school? You did private practice when you first left vet school, right? The other part of me feels like, in this economic climate, I should be just happy to have a job.

My family is doing well - my parents moved to the Santa Cruz mountains while I was in vet school, so now their dogs have plenty of mountainside to run on! And they actually have a couple of goats now too! My husband and I still have Ella (my harrier) and three cats (Nic, Lucy, and Mama).

Anyway, hope all is well with you and your family. I'd love to hear how things are going and any advice when you get a chance. Also, if you need me to talk to any pre-vet students or write anything for your newsletter, I would be happy to. I am so happy that the prevet club is still going strong!

Talk to you later,

Catherine (Josling DVM) Stanford '03, UC. Davis Veterinary School '07

Dr. B~

The newsletter looks great! It's good to see that the prevet club has been growing and doing more events.

Sorry I haven't been in touch more. I've been doing pretty good up here at WSU. I'm in the very last semester of classroom stuff and eager to get into clinics to actually put it all to use. I've kind of dabbled with the idea of doing a residency in something like soft tissue surgery or internal medicine, but after so much school, I think I'm ready for a break and just want to do general private practice at least for awhile.

I'd love to write something for a future newsletter. Last summer I did a couple of externships abroad, one in Loreto, Mexico with a group called World Vets doing spays and neuters, and one I set up through the WSU to a vet school in Bangkok Thailand. They were both amazing experiences and it'd be fun to share them and get other students connected with those kinds of resources. How often are you planning to do newsletters?

Hope all is well down in the bay. How are your son and Gimli?

~Erica (Maland) Stanford '05, Currently 4th yr at WSU Veterinary School

Hi Dr. B!

I'll be presenting a poster at the ACVP conference in San Antonio and I saw on the ACVP conference website that you'll be hosting your usual mystery neuro cases -- I look forward to seeing you there!

Things are going well for me - 3rd year makes me feel so much more like I might someday be a real vet. I spent all day yesterday in the small animal ICU (3rd years get to go on clinics once a week for 8 weeks spread out throughout the year), which makes being in the classroom learning all the academic stuff seem that much more applicable.

I forget if I responded to your email about Myc - I'm sorry to hear he passed, but it sounds like it was his time. What a great cat he was! Euthanasia is a really hard thing to deal with. But I think it's a blessing that we have the ability to not force our beloved pets suffer unnecessarily. Our oncology clinician/professor made a pretty pointed statement when she said something to the effect of: "I think there's an inner circle of hell for those . people that won't euthanize their terminally ill, suffering animals because they want to keep the animal around for their own comfort and can't bear to say goodbye." Whenever I get to that point where I have to deal with



ethanasia personally or as a veterinarian advising a client, I think I'm going to remember that statement Anyway, it'll be great to see you soon!

Emily (Matz) Stanford '06, Currently 4th yr at Texas A & M Veterinary School and a recipient of a US Army Veterinary Corps Health Professions Scholarship

Hello Dr. B,

I'm sorry I've been out of touch. The internship thing is, as I expected, extremely busy. I already had a day where I was up for 22 hrs straight after just 2 hrs of sleep, with a really busy overnight shift the night before! But you know what - I'm seeing a lot of cool things and so even when I'm grumpy from sleep deprivation I can still say that (so far) I am actually enjoying emergency work. The whole thing is coming fairly naturally so far. I enjoy seeing clients and patients and coming up with a plan and getting the cases turned around. The techs I've worked with so far are really helpful and on top of everything, and the two hospitals I shuttle between for the internship are posh, beautiful, spacious, luxurious almost. I really am lucky to be here.

I was absolutely terrified of emergency before starting this internship. Now I've just had 3 or 4 nights of it and I'm really enjoying it. On my first night of emergency we had 12 cases! At Tennessee a busy emergency night was just 5 or maybe 7 cases!! Fortunately I was on duty with other interns so it was somewhat manageable... I shudder to think what it will be like when we're on shifts completely on our own trying to deal with case loads like that. I've heard of emergency shifts with up to 16 or 18 patients! Eep! Here are some of the cool cases I've seen so far on emergency:

1 hbc (hit by car) cat, agonal - euthanized by yours truly

1 abdominal mass dog, agonal - euthanized

1 animal control cat, resp dz/crusty - euthanized

1 bleeding dog, long pt/ptt, suspect rat bait, money case so couldn't do the diagnostics needed to rule out liver dz. Limited ultrasound showed a possible abdominal mass and fluid in chest. Owner couldn't afford plasma transfusions that the dog badly needed. Died at home next day.

2 dystocias - gave oxytocin and it actually worked -- three live pups in one case, one live one dead in second case; i did the U/S to assess fetal heart rate.

1 vomiting/diarrhea dog - went home on cirenina + famotidine

1 boxer that jumped out of a car two days ago, lame - o declined rads, went home with some tramadol/rimadyl after waiting in the office for several hours

1 possible heat stroke dog that wasn't hot but was just adr - gave iv fluids

1 CHF (congestive heart failure) dog, O2 cage. because we were so busy we couldn't give it lasix in time (ie before the owner got upset at the wait and decided to take the dog home against medical advice)

1 parvo puppy - home w/ sq fluids containing cephazolin, cirenina

1 poodle puppy that had been thrown by a child -- o couldn't pay anything, there was all this vacillating of what to do with it or if o could surrender the pup to animal control or to the hospital to allow us to care for it. it took hours to figure out what the o would do. so the poor thing basically died slowly while we could do nothing - no diagnostics, no tx except O2 and some pain meds (probably pulmonary contusions).

3 dog bite wounds -- one was a dachshund with a laceration over the back that stretched from L to R elbows basically (~10 inches long?). it was a hideous wound. Fortunately he was really fat so the attacking dog didn't reach muscle or puncture the thorax. I helped the other intern suture the skin and I placed my first drain. Yay.

1 cat with blepharospasm - small central corneal ulcer - gave a drop of atropine and TAB, sent home w/ TAB.

1 lame poodle post trauma

1 possible syncopal dog - just gave fluids/monitored and he went home

2 vaccine allergy dogs - injectable Benadryl and dex sp, recommended benadryl at home for next few days.

1 hematuria dog - o didn't want any diagnostics, so I scripted antibiotics and warned that there could be an underlying or a more severe problem.



Most of the emergency shifts are at the clinic in Antioch. Because this region has been growing very rapidly (lots of new houses/expansion) it's been especially hit hard by the economy. The demographic is full of young just-hired people that are the first to be let go. So a lot of people can't spend money on their animals out here, which limits what we can do. What we do in Antioch, more than likely for a parvo puppy, for example is just send the puppies home with subcutaneous fluids and an injection of antibiotics and hope. I've seen many cases already where the owners can't pay for or are not interested in diagnostics. In these cases we have to treat or support a pet blindly, which is sad because simple tests like bloodwork and radiographs (tests that I used to just take for granted) would potentially give you the answer and let you give the appropriate and most beneficial care.

I did my first necropsy of my intern year at 3 am on my second overnight emergency shift -- I found a giant mat of cloth (sock? scrap cloth?) and some plastic in the stomach of an 11 yo FS dog that presented for acute vomiting and proceeded to rapidly decompensate in the clinic. It was one of those cases where at first the owners didn't want to do any diagnostics and just wanted some supportive care, so we put them on the back burner while we dealt with other critical things. When the dog became acutely agonal, BP 90, shocky, horrible we could proceed w/ diagnostics but the rads and u/s of course couldn't show the sock that I found on necropsy. I spoke with the owner of the dog after the necropsy. I talked to her for 15 minutes about the findings and pathophysiology of what happened to her dog, listening to her concerns and dismay that something could kill her dog so rapidly. At the end the owner said I was so knowledgeable and she asked me for all my information because she wanted me to be the general practitioner for all her other dogs!

Anyway, I forget what all else I should tell you. I should get to go to the ACVP (pathology) meeting in December in Monterey -- that will be a lovely mini vacation. And I should get a month of "externship" time which I'll try to use towards pathology (probably at CSU). I forget what else I should say... I think this internship thing will be okay. Hard, but okay.

Hugs to you both, let me know how you are,

Paula (Schaffer DVM) Stanford '05, UT College of Veterinary Medicine '09

Finally –

Valary Scharf DVM, Stanford '05, Texas A&M College of Veterinary Medicine '09, is currently doing a 1 yr-long small animal internship at The Ohio State College of Veterinary Medicine. Congratulations Val!!

What's Western University Like???

*By Monika Gramckow, Stanford BS/MS '05,
currently in her 4th year at Western University Veterinary School*

Hello Stanford pre-veterinary students! My name is Monika Gramckow and I was a Stanford '05 Human Biology graduate. I am currently finishing my third year at Western University. In our third year, we begin our clinical rotations and it consists of 16 two-week rotations in different fields of veterinary medicine. This year I have visited many veterinary practices across California including small animal clinics around Los Angeles; equine clinics in San Diego and Chino Hills; lab animal medicine at Loma Linda; pathology at Antech Diagnostic Laboratory; and zoo animal medicine at the Los Angeles Zoo just to name a few. Yes I have put a few miles on my car, but I have been learning a lot in the process. Right





now I am in Los Banos, CA at a large animal veterinary clinic learning all about the specifics of dairy farm operation and the role of a veterinarian. I have spent a lot of time over the past two weeks learning how to detect pregnancy and reproductive status via rectal palpation. No it is not the most glamorous rotation, but I am learning so much. That is the one thing about veterinary medicine, you get to do so many different things, and I already have had so many experiences that I will remember for years to come.

I figure I should tell you a little about Western University since it is not a “traditional” veterinary school. Perhaps my most difficult challenge in veterinary school so far was adjusting to Western’s curriculum style. The majority of your

learning (notice how it is learning and not teaching) is centered on clinical cases. The school calls this Problem Based Learning. This is not a new concept, for example Cornell’s veterinary school used to be case-based and Harvard’s Business School is currently case-based. You are probably wondering what case based learning is. Basically what this means at Western University is that in the first two years of veterinary school you are given a series of 64 one-week cases that generate “learning issues”, lectures and discussions among your fellow classmates and faculty. The third and fourth years are then clinical rotation years. Third year rotations are set up by the school and then in your fourth year you get to work with your faculty mentor to set up 8 four-week rotations. Since I want to go into equine medicine, the majority of my fourth year is going to be in private equine veterinary clinics all over California. Some of my classmates are going to be traveling all over the world next year to visit highly renowned veterinary practices or schools in places like Australia, Italy and even Germany.

Don’t get me wrong, veterinary school is going to be hard work and long hours and it isn’t just about traveling to different places. Just to give you a little glimpse, my first hit by car patient on my Emergency Medicine rotation last month required me to stay there until 4 am the next morning caring for my patient, but in the end watching that boxer walk out the clinic with the opportunity to be adopted made the time and effort worth it.

This is only a very brief description of what school has been like at Western University. If you have any questions feel free to email me at mgramckow@westernu.edu.





Study Abroad in Australia

By Mary Thurber, currently a senior at Stanford (class of 2010)



I spent this past fall studying abroad in Australia, traveling the East coast of the country with an emphasis on coastal studies. One focus of our program was coastal forest ecosystems, and I enjoyed participating in transects and field projects in the rainforest of Lamington National Park, and the mangroves of the Daintree Rainforest. It was an incredible opportunity to work in and learn about the threatened Australian ecosystems. One of my favorite parts of the course was developing my own targeted research project: an analysis of the behavior of two species of nectarivorous birds – the Lewin’s Honeyeater and the Eastern Spinebill– in the rainforest. I learned that this type of research is critical in order to gain a better understanding of the intricate interactions between species, and that this knowledge can be applied to management of the rainforest in Australia.

During a later part of the program in Australia, we spent two weeks at the research station on Heron Island in the Great Barrier Reef. On Heron Island, we learned about the major threats to coral reef ecosystems – in particular,

global warming and ocean acidification. We participated in several field projects and were exposed to a range of marine topics, such as identification of fish and phytoplankton, quantification of corals’ zooxanthellae, and assessment of invertebrate biodiversity on the reef. Another focus of our studies was coastal resource management, and I was thrilled to finally learn how to protect and better manage the environment in order to sustain its invaluable wildlife and resources. The stimulating courses I took in Australia broadened my horizons and reinforced my concerns about the vulnerability of our planet, and helped me realize that I want to help maintain the Earth’s natural environment.

Summer Research at Stanford

By Dr. B

During the summer of ‘09, eight veterinary students from seven different veterinary schools participated in a NIH T35 funded program as research interns. This program, hosted by the Department of Comparative Medicine (DCM), provides 1st and 2nd year veterinary students a stipend and a chance to experience biomedical research in various laboratories throughout Stanford School of Medicine. Through the years, this summer research program, now in its 7th year, has seen a total of 43 students from 14 veterinary schools perform research projects in a total of 18 medical school laboratories. While at Stanford, in addition to working in their designated laboratory, the students attend a series of “career development luncheons” where they learn about the background of the faculty and staff veterinarians working in different areas in the DCM. Students also participate in weekly journal clubs, and attend seminars and workshops on topics including: experimental pathology, experimental design, graduate school preparation, mouse handling, rat dissection, and comparative medicine. The summer culminates with a research seminar in which each student presents on their individual summer projects. Some students will go on to present posters at national meetings on their summer projects and a few students have returned during their 4th year in veterinary school to



2009 Veterinary Student Summer Research Fellowship Program

Back row: David Smith (Colorado State University), Felicia Lew (Washington State University), Daylene Mills (Washington State University), Elle Glueckert (Michigan State University)
Front row: Kathleen Donovan (Cornell University), Kelly Lin (UC Davis), Lauren Wedig (Tufts University), Jennifer Holloway (Tuskegee University)

participate in a 4 wk long Lab Animal Externship. Summer research programs, like Stanford's, are available at many veterinary schools as well, and we encourage all students, whether pre-vet or already in veterinary school, to plan to try and take advantage of these types of opportunities. This year's students, veterinary school, and presentation topics were as follows:

1. Kelly Lin, UC Davis. "Sensitivity to sucrose reward in stress inoculated vs. non-inoculated squirrel monkeys" Mentor: David Lyons (Psychiatry & Behavioral Sciences)
2. Jennifer Holloway, Tuskegee University. "Axonal reorganization after a dorsal root lesion in the macaque monkey" Mentor: Corinna Darian-Smith (Comparative Medicine)
3. Lauren Wedig, Tufts University. "Irestatin, a novel compound, inhibits the IRE1-XBP1 signaling branch of the unfolded protein response" Mentor: Albert Koong (Radiation Oncology)
4. Elle Glueckert, Michigan State University. "Adhesion molecules mediate migration of T-cells into pancreatic lymph nodes in Type 1 diabetes" Mentor: Sara Michie (Pathology)
5. Felicia Lew, Washington State University. "Is axon reorganization epileptogenic?" Mentor: Paul Buckmaster (Comparative Medicine)
6. David Smith, Colorado State University. "Trafficking of reporter mesenchymal stromal cells to the bone marrow cavity implanted with UHMWPE" Mentor: Stuart Goodman (Orthopaedic Surgery)
7. Daylene Mills, Washington State University. "Detecting Helicobacter pylori CagA delivery by nuclear localization of cell signaling proteins" Mentor: Manuel Amieva (Pediatrics and Microbiology & Immunology)
8. Kathleen Donovan, Cornell University. "A summer of small animal imaging and whole mouse sectioning" Mentor: Edward Graves (Radiation Oncology)



Kid's Day, June 12, 2009

By Dr. B



Stanford's Bio-X program, a program that supports graduate research in fields involving biology, engineering, computers and physics, hosted an afternoon of fun for children of all ages. The Department of Comparative Medicine hosted a table where Dr. B displayed here collection of skulls, bones, brains and plastinated organs, and it was a huge hit with kids and parents alike. The children were thrilled to be able to touch the permanently preserved organs, visualize the complexity of the gastrointestinal system of a horse or a sheep stomach, and compare cow, pig, and dog hearts with how they imagine their own heart would look like. The goal of our display was to expose children to the similarities and differences between human and animal anatomy and to introduce them to the idea that animals can play an important role in research for both animal and human medicine. Emily Livermore (Stanford class of 2012) assisted Dr. B with the oversight of the display table during the entire afternoon. Thanks Emily – the kids loved it!!

Dr. B's traveling anatomy show was also utilized this summer when Dr. B gave lectures to two summer programs for high school students on "Careers in Veterinary Medicine" – The two groups were The Stanford Summer College, and Stanford's Medical Youth Science Program.

