Dr. B” (Dr. Donna Bouley DVM, Ph.D, Diplomate ACVP, has been appointed as the Kleinheinz Family University Fellow in Undergraduate Education, 2011! This fellowship is part of the Bass University Fellows Program created during the Campaign for Undergraduate Education (2000-05), and was designed to honor faculty who have demonstrated a sustained commitment, at the highest levels, to undergraduate education. Her selection was made in consultation with Provost John Etchemendy and Dean Philip Pizzo, in thanks for what she does to sustain and extend Stanford’s excellence.

This fellowship is for a five-year term, and carries with it the title, membership on The Bass Council of Fellows (named after Anne and Bob Bass, whose gift during The Campaign for Undergraduate Education made the program possible) and an account for her to use for enhancement of her teaching/mentoring. At the end of the 5 year appointment, Dr. B will become a permanent fellow of the Bass University Fellows Program. Dr. B intends to use the award money to supplement pre-vet students’ summer clinical shadowing or research opportunities.

*Dr. B receives plaque from Stanford’s Provost John Etchemendy*
Last year, a friend organized D.A.D. – Duck Awareness Day. The main goal was to spread awareness about Floating Duck Syndrome, an unfortunate malady that Stanford students suffer from where one appears to be calm and composed on the surface but is actually paddling frantically to stay afloat. It is usually caused by the pressures of academic work, extracurricular activities, and family problems coupled with the taboos of discussing the issues. Before she had mentioned it, I had never heard about it. Upon listening to her description, I laughed. That little paddling duck was me. I was relieved that I was not the only one, but I was also upset that no one talked about it. It got me thinking about my mother’s horse, Beep, and how a single nuclear scintigraphy scan revealed a broken neck that he had never shown symptoms for.

Then I thought that if I could make connections from my own stress to Beep’s, what would stop someone else from making the reverse connection? I started thinking about a photography project that would help me explore this. With the help of the Biology 196 series and grants from SiCA and VPUE, I was able to produce a six by eight foot mural that lays radiographs and nuclear scintigraphy scans over a photograph. The piece is now on display in the lobby of Wallenberg Hall.

Deciding to use radiographs and nuclear scintigraphy scans in the final piece was not a decision I made. It was forced on me. Thanks to Drs. Vidal and Spriet, I had access to millions of images. MR images, CT scans, radiographs, nuclear scintigraphy scans, and ultrasounds were at my disposal. Unfortunately, the nature of MR images, CT scans, and ultrasounds is such that they show cross-sectional areas of anatomical structures, not full-side views.
Being limited to radiographs and nuclear scintigraphy scans turned out to be a blessing. It allowed me to really see how the equine skeletal structure deals with stress and how these diagnostic tools allowed those stresses to be identified. A seemingly normal right front leg was radiographed. The scan showed thickening of the splint bone and a fungi-like growth on the fetlock. That thickening was then interpreted as a healed splint fracture, and the growth as the beginnings of ringbone. An x-ray of a healthy horse’s abdomen revealed a bowling ball sized enterolith that needed to be removed surgically before it became an impaction in the intestine. The line of demarcation between the inside of the horse (what he feels) and the outside (what he shows), fuzzy as it is, was set in my mind. It was this ‘line’ that ultimately led me to the conclusion that it would be best to keep the anomalies of the diagnostic scans in the final piece.

For more information regarding Biology 196, and my project, please visit http://www.stanford.edu/~suemcc/TSR/

Pre-Vet Expo III coming soon!
Saturday May 19th, 2012
Mark your calendars!!
My name is Erica Lozoya, and I graduated with the Stanford Class of 2010 (O’Ten, what what!) with a B.S. in Biology. Like most of us, I always dreamed of becoming a veterinarian, but it wasn’t until the end of my freshman year of college that I decided I was going to pursue that dream. Per Dr. B’s guidance, I was able to briefly shadow several small animal veterinarians in Menlo Park during my sophomore year, but the rigors of school and other unrelated issues prevented me from attaining hands-on experience before graduation. Given the competitive edge that veterinary experience affords you as a future vet school applicant, I decided to commit at least one year post-graduation to working as a veterinary technician. I started out working for a private small animal clinic, but because of limited manpower and funds, I was ultimately relegated to a receptionist position. It was during the 2010 holidays that I first heard of Banfield from a friend. I quickly learned that Banfield is a nationwide organization of small animal hospitals in partnership with Petsmart and headed by Mars Incorporated. What I found most attractive about Banfield was the fact that upon hire, your particular region’s headquarters will train you for two weeks before allowing you to work independently as a veterinary technician (or in Banfield lingo, “veterinary assistant”). Given my limited experience and lack of veterinary technician credentials, I realized that training would benefit my success and overall experience. On a slightly unrelated note, there are merits to working for corporate versus working for a private clinic, including more flexible hours and coverable shifts, exposure to a wider range of diagnostic techniques and drugs, more opportunities to network with veterinarians (a.k.a. letters of rec), and a relatively more secure job (important in this economic climate!).

Needless to say, I’ve learned so much while working as a Banfield employee. As an organization whose hospitals perform most of their own diagnostics, Banfield has provided me much experience in screening blood for abnormal cells, analyzing fecal samples for parasites and urine samples for bacteria and crystallization, and examining ears swabs for evidence of bacterial and/or yeast infection. I’m very comfortable in basic tasks such as obtaining temperature, heart rate and respiratory rate, drawing blood for internal organ analysis, restraining cats and dogs, and
Erica Lozoya -continued-

placing catheters in both cephalic and saphenous veins. I’ve also obtained significant experience in proper anesthetic setup, including appropriate tracheal tube and breathing bag sizes, preparing specific medications for quick I.V. injection in the event of bradycardia or tachycardia, appropriate amounts of oxygen and anesthetic, appropriate fluid rate while the patient is under anesthesia, normal heart rates and percent oxygen levels for individual patients under anesthesia, and appropriate post-surgery monitoring of patients. The technique that I have most recently learned is that of proper dental prophylaxis, which has proven to be quite therapeutic at times!

I mentioned before that working for a large organization like Banfield as a veterinary assistant can be beneficial. The same holds true for a veterinarian. The starting salary for new veterinarians is fairly competitive compared to private clinics and can be topped off with performance bonuses. In addition, every hospital is allowed certain flexibility to work with financially strapped clients, therefore giving vets the opportunity to potentially save pets in need of expensive treatment. Banfield also plays host to hundreds of vet student interns yearly, exposing them to top-notch veterinary medical practice. Finally, should you choose to assume a more managerial role, there is opportunity to move up the ladder and become a regional medical director.

Overall, my experience with Banfield has been invaluable. I feel I made the right decision in taking the time to work in the veterinary field after graduating from Stanford. As a current vet school applicant, my resume is much stronger and more attractive given my hands-on experience as a veterinary assistant.

Erica Lozoya

Travels to Kenya
Claudia Chern

Last summer I had the chance to go to Kenya on a short term veterinary medicine mission through Christian Veterinary Mission (CVM). I worked with two vets and four vet students from the US and joined with Kenyan vets and a small team of UK vet students there. We provided preventative medicine care for the livestock of the Masai people in the Mt. Kenya area about three hours driving into the bush. Over the course of four days, we dewormed and vaccinated over 6,500 goats and sheep, cattle, and camels. Goats were dewormed and vaccinated for Contagious Caprine Pneumonia (CCP), while the other animals were just dewormed. I learned to wrestle goats and sheep, use a drenching gun to administer deworming solution, and give subcutaneous injections. We also set up a clinic for sick and injured animals,
where I saw a sheep that had been attacked by a hyena! There was a hole in its head and the top of the left mandible was showing, but the wound was two weeks old and healing cleanly without infection. The most common cases we saw were ORF, a zoonotic disease that causes lesions on the nose and mouth of young goats and sheep. It spontaneously resolves eventually, but we treated them with antibiotic injections and oxytetracycline spray. There were also a handful of cases of heartwater, which is a neurologic disease that causes the animal to turn in circles and fall down. Other interesting cases included a young goat with an umbilical cord hernia and a baby goat with a birth defect in the hind legs that made it stand plantigrade and only one was weight bearing. Overall, it was a really amazing opportunity to have hands on experience working with livestock overseas.

Claudia Chern (Stanford ’11, currently working as a Doctor’s Assistant for the SF SPCA)

David Sender (Stanford ’08), would be in his 3rd year of Veterinary School at the University of Illinois, but he is taking off this year to train for the 2012 London Olympics! David was a USA Men’s Senior National Gymnastics Team member since his freshman year at Stanford, has many collegiate and USA national titles, competed in Olympic Trials in 2004, was on the World Championship Team in 2006, and was destined for a spot on the 2008 Olympic Team - but an injury prevented him from competing at the Trials. We are very excited that David has found his way back in to a gym and will be trying to compete for a spot on the USA Men’s National Team again - and hopefully will compete at Olympic Trials in San Jose, CA. this June. Best of Luck David! We are all rooting for you!!And after all is said and done - you will make a great veterinarian too!
Wendy Kalkus

I was lucky enough to intern with the Navy Marine Mammal Program the fall of 2011. This internship focuses on animal care and training for sea lions and dolphins. They are taught to search for mines, deep-sea recovery, and swimmer detection. VERY COOL. There is a lot of amazing information about the program and access to the published research papers on their website: http://www.public.navy.mil/spawar/Pacific/71500/Pages/default.aspx

As an intern, I was assigned to rotate with three different crews during my 16 weeks in San Diego. I worked with a research crew, which explored bioacoustics and physiology, a training crew for young dolphins, and the “VetLab,” which included a fantastic team of techs and veterinarians that cared for the marine mammals. I’m assuming most people want to hear about my time with the vets but before I get into that at all, this is a fantastic opportunity for pre-vets who are interested in training or may even be considering an alternative career. You get a lot of exposure to the breadth and diversity of the sea lion and dolphin industry and all the possibilities besides being a vet. If you’re on the “I’ll go to vet school eventually” track this would be a fantastic place to spend a few years as a trainer or work on a Ph.D/masters.

My typical day started at 5:45 AM to do a “morning duty” which involved sorting fish or cleaning something. At 8:00 AM I joined my crew and I did whatever I could to help them, observe, and learn. In the middle of the day we’d “break out” the fish to thaw for the next day. Around 1:45/2:00 AM all the interns got together to clean buckets and went home at 2:30 to take a nap! There is a lot of manual labor involved…dolphins and sea lions are hard work!

I also took Biochemistry II at UCSD because I hadn’t fully decided where I wanted to apply yet and realized I needed another semester. It worked out well because the classes were in the early evening three nights a week. If you need to take pre-reqs still, this is potentially a pretty good time to squeeze one in, but it is an unpaid internship so it’s also tempting to get a part time job while you’re there. On the other hand though, San Diego is a wonderful place to explore and the internship is full time so it will wear you out! You’ll know what’s best for you…classes, money, or fun 😊.
Days in the VetLab ranged from crazy busy to struggling to find things to clean or restock so you feel helpful. There are lots of people to ask questions and advice, especially the army if you’re interested in the vet corps, the vets (of course) for aquatic medicine, and the techs for blood work and pathology. Even when I was with the crews other than the vets, I learned a lot about aquatic animal care. Dr. Sam Ridgway is the senior scientist there and knows everything there is to know about dolphins and the Navy Marine Mammal Program (since he’s been there from the beginning and pioneered dolphin medicine…no big deal). These animals get the best care and their health is monitored rigorously. It was amazing to have so many great resources available. I was able to a dolphin born, kidney stone treatment for dolphins, cataract treatment for sea lions, pneumonia treatment for dolphins, an abscess aspiration in a dolphin, a CT scan for a dolphin, potential Addison’s disease in a sea lion, skin problems, blood draws, urine and fecal collections, blow hole swabs, ultrasounds, and so much more! If you’re at all curious about aquatic medicine, this is the place for you. Especially if you end up going to vet school, they have an externship program for 3/4th years, so if you do your job well, hopefully you’ll be welcomed back for that!

You do get a lot of time handling the dolphins and sea lions but if you’re more interested in the educational side of the dolphin industry or interactions in the water, some of the other interns had done Dolphin Quest internships that they enjoyed. If that is something that interests you, I can put you in touch with someone who knows more about those aspects. The application process is very straightforward and the instructions are on the website. Feel free to email me if you have questions! While we’re not allowed to take pictures on base, I snuck in a shot with a dolphin at sea world 😊.

Cheers,

Wendy wkalkus@gmail.com

Wendy Kalkus continued
This past summer I had the amazing opportunity of travelling to Africa on a Stanford Alumni trip! The highlight of the trip was seeing and sitting with the mountain gorillas in northwest Rwanda, about 10,000 feet up on the slopes of the Volcanoes National Park. Visitation is extremely limited – only about eight people are allowed to see each gorilla family every day, for a maximum of one hour. This gives the gorillas privacy and prevents complete habituation. Before I actually trekked to see the gorillas (which was an experience I recommend to anyone with the opportunity), I was fortunate enough to have lunch with Dr. Jan Ramer, the regional veterinary manager for the Mountain Gorilla Veterinary Project. The ‘Gorilla Doctors’ have the incredibly difficult yet rewarding job of treating the mountain gorillas in this region and the other neighboring populations (Uganda and the DRC). This organization not only treats the mountain gorillas injured from human interactions (snares, gunshots, diseases, etc) whenever possible, but also uses a ‘One Health’ approach to medicine; in order to maintain the health of the gorilla population, they also educate and uphold the health of the humans and domestic animals that come into contact with gorillas. Seeing the behind the scenes
touring their facilities, and hearing stories about the gorillas definitely enhanced my experience of observing gorillas (less than 5 feet away!) over the next few days. If you are interested in work to save mountain gorillas and/or travelling to Rwanda and participating in the Mountain Gorilla Veterinary Project, I recommend checking out the website for more information: http://gorilladoctors.org. It was a once in a lifetime work, experience that I will never forget! Have a great start of the year!

Andrew Wicklund
Stanford BS ’10, MS ’10, currently 1st year at Washington State CVM
Hi Dr. B,

We're on winter break right now and I thought I'd say hi and let you know how second year is going. Vet school is going well. It's busier than first year and they've really upped the amount of material we're expected to cover for each exam. Overall, still a lot of memorization, but now more critical thinking and integration, which makes it much more interesting. The first years are on the new curriculum and seem to be enjoying the more case-based, block style of learning. They're in the classroom less while doing more "independent learning" with tests at the end of blocks. We are jealous of the time they get to spend in the VMTH though! My favorite class so far is probably pharmacology. Least favorite class: doctoring (due to the undoubtedly useful, yet nevertheless mortifying client simulations). They hired paid actors to act as clients who brought their pets (stuffed animals, which would have been easy to laugh at during the exam except we were all so nervous!) in with various complaints. You would go through an entire appointment with about 6 other classmates and 1 faculty member from the teaching hospital watching. Then they critique you. Spring quarter they bring in actors again and we have to go through a euthanasia appointment and be videotaped, yikes!

We just started general pathology last quarter and have systemic and clinical pathology next quarter. Our pathology professors are amazing and my goodness, you guys have to know A LOT. Dr. Lowenstine is essentially a walking encyclopedia. Also, none of us have ever seen someone zip through so many slides so fast in a 50-minute lecture. For our clinical skills course this quarter, I got to catheterize my first animal (a horse), which was fun!! Now if all my future patients were considerate enough to have inch-wide veins! As one of my electives, I took ultrasound and we actually got to scan 4 dogs each over the course of the quarter. The ultrasound screen looks less like a fuzzy TV now. :)

Hope you're having a wonderful holiday season!
Stacey
(Stanford '09, currently 2nd year at UC Davis)
I grew up on a farm in central Minnesota where I gained a lot of animal experience doing chores as well as showing cattle and sheep at my local county fair and the MN state fair. Even though it was a lot of work I really enjoyed working with the livestock and had my heart set on one day being a large animal vet. Following high school I attended the University of Minnesota for my undergraduate studies where I completed a Bachelor of Science in Genetics, Cell Biology and Development. After graduation I had a plan (A), which was attend vet school, and a plan (B), apply for graduate school. As it turned out I got an offer from a graduate program at Penn State University and decided to pursue a PhD in Pathobiology. My thesis research involved looking at differences in HIV-1 transcription in subsets of cells. After completing my graduate studies at Penn State I accepted a post-doctoral position at Stanford in the laboratory of Michael Cleary. In my current lab we use several in-vitro and in-vivo model systems to better understand the molecular biology of several types of leukemia. My particular project involves identifying direct genetic targets of a specific oncogene that is involved in childhood B-cell leukemia. Even though I do enjoy some aspects of research I still often thought about going to vet school. I began exploring careers options and realized that I might be a good candidate for laboratory animal medicine. I contacted several of the veterinarians in the comparative medicine department at Stanford and soon was observing procedures, spending time with the laboratory animal residents, and even helping out with mouse handling workshops. Finally, after a very busy year of volunteering, working, updating coursework and studying for the GRE, I applied once again for veterinary school and already have one offer from Cornell and an interview at the University of Minnesota lined up. I know that the next several years will be challenging but I am excited to start this new adventure in my life and look forward to a fulfilling career as a laboratory animal veterinarian.
Meet Jemima Whyte

Hi,

I’m Jemima Whyte and I just got accepted to Colorado State University vet school! I did my bachelor’s degree in molecular Biology and genetics at the University of East Anglia, England and my Ph.D in stem cells at University of Manchester, England. I am currently working as a postdoctoral research fellow investigating wound healing in mice in Jill Helm’s laboratory at Stanford University. I am thrilled to be accepted and greatly encourage anyone who is interested, even if your background is a little different, to pursue this fantastic career. All the best!

News Flash!!!

We have had a few folks who applied to Vet school this past October. So far we have
1. Wendy Kalkus (’11) has been invited for an interview at Tufts U.
2. Fallon Segarra (’12) has been invited to interview at U Penn, Auburn U and Virginia-Maryland.
3. Jemima White (a Post doc in Dr. Jill Helm’s lab) has been ACCEPTED to Colorado State and has an interview with the Royal Veterinary College in London (see “meet Jemima White” article).
4. Alicia Klatt, (a post doc in Dr. Cleary's lab) has been ACCEPTED to Cornell U and has an interview at U of Minnesota (see "Meet Alicia Klatt" article)