

Stanford University



Pre-Vet Club Newsletter



Now officially in our 5th year, the SUPVC strives to provide advice, opportunity and comradery for Stanford students interested in careers in veterinary medicine. The Department of Comparative Medicine and the Office of Undergraduate Education are proud to sponsor the activities of the club, and appreciate the need for the specialized mentoring required for those hoping to be admitted to veterinary school. We have ~ 15 Stanford grads currently in veterinary schools around the country, and encourage them to send feedback, emails and updates on their experiences.

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Pre-Vet Student Activities

Stanford University holds first-ever Pre-Vet Expo, a Conference for Students, Community Members interested in Careers in Veterinary Medicine
By Willie Phan (SUPVC secretary and Stanford class of '09)



On May 30, 2008, the Stanford Undergraduate Pre-Vet Club (SUPVC) gave the college and neighboring community much to think about. Sponsored by Stanford Undergraduate Education and the Department of Comparative Medicine, the SUPVC brought together accomplished veterinarians and current veterinary school students to discuss their experiences and offer advice regarding careers in veterinary medicine. Donna M. Bouley, DVM, Ph.D, (“Dr. B”) Professor of Comparative Medicine, Director of Necropsy Services at Stanford, and advisor of the SUPVC, along with Mori Afraz, a 2002 UC Davis graduate who works locally as a veterinary technician, orchestrated the entire event. Their goals were to provide information to anyone curious about veterinary medicine and to provide details to those already aspiring for a DVM but not quite sure how to begin.

Approximately 50 high school, college and post graduates were in attendance. The first segment of the Expo focused on the diverse career paths available to a DVM. The guest speakers included veterinarians that have practiced both internationally and within the U.S. The presenters made up an impressively diverse group that talked about the expectations, challenges, and rewards of careers in field and laboratory research, small and large animal private or corporate practices, rehabilitation work, and government jobs with the military. Quotes from some attendees document that this range of experienced professionals were influential in their career choice: (from Marloes) “I have always been wavering between wanting to be a Doctor Without Borders and being a vet. I wanted to be a vet because I have always loved animals but I also wanted a job that included my interests in humanitarian relief work and travel. I now know that as a vet, I could pursue both passions.” Regardless of the differences in



specialties, many guest speakers agreed that their decision to become involved in veterinary medicine was made later in life, and was accomplished in unconventional ways. For many audience members, that was encouraging news: (from Lisa) “It is extremely encouraging to hear that there are so many opportunities awaiting you after vet school and that you can kind of meander around and don’t have to have a definite path.”

The latter half elaborated on the application process to veterinary programs as well as the salient highlights and challenges of the veterinary college experience. The group of student speakers represented vet programs from North Carolina State University, Texas A&M, Colorado State, and University of California, Davis. Additionally, the student speakers possessed a spectrum of experience, ranging from newly admitted to recently graduated and entering Ph.D. programs. By having students from different schools speak frankly about their academic life, application tips, and undergraduate preparation, Dr. B hoped that attendees thinking about vet school will have a better idea of what to expect and what preparations they need to take to be competitive applicants.

Overall, the event was a great success. Attendees appreciated the opportunity to personally speak with vets and vet students during the lunch break, as well as the plethora of brochures and other materials offered at the various volunteer and information booths, located just outside of the conference room. Attendees remarked, “I think it’s great that there is finally a pre-vet conference in Northern California. There are so many pre-med conferences!” Although this was the first pre-vet conference held at Stanford University, Dr. B and her pre-vet advisees hope to continue hosting similar expos in the future. Dr. B would like to thank the following veterinary professionals, veterinary students, and for volunteering their time for this important event:

Veterinary speakers:

Ellen C. Codner, DVM, DACVD, DACVIM
Animal Dermatology Specialists
Adam Chambers, B.V.M.S., M.R.C.V.S
Bayhill Equine
Stephen Felt, DVM, M.P.H. DACLAM, DACVPH
Department of Comparative Medicine
Stanford University
Lawrence W. Young, RVT, LATg, CPIA
San Jose State University
Paul Buckmaster, DVM, Ph.D
Department of Comparative Medicine
Stanford University
Nicolette Zarday, DVM, MPH
Adobe Animal Hospital
Melissa Miller, DVM, MS, Ph.D
California Department of Fish and Game
Dave Daunt, DVM
Advanced Preclinical Solutions, Inc.



Veterinary student speakers:

Alicia Cawlfild NC Class of '05; Major: Biology
Vet student at North Carolina State University CVM
Tim Hui: Major: Stanford Class of '06; Major: Biology
Vet student at UC Davis CVM



Valery Scharf

Stanford Class of '05; Major: Earth systems, Oceans track
Vet student at Texas A&M CVM

Izumi Toyoda, DVM

UCD class of '03, Major: Neurophysiology & Biochemistry, Minor in art.
UC Davis CVM class of '07, Small animal track
Currently working towards a Ph.D in Neurosciences at Stanford

Melinda Lopez

Stanford Class of '05; Major: Human Biology
Vet student at Colorado State CVM

Kat Tomalty

Stanford Class of '06; Major: Human Biology
Will be a 1st year this fall at UC Davis, combined DVM/Ph.D program.

SUPVC volunteers:

Mori Afraz – co-organizer

Christina Alarcon

– Dr. B's technician and overall right hand person

Marloes Josepha Gertruda Sijstermans – T-shirts

Alyssa Tamayo – T-shirts

Claudia Chern – Posters

Lori Westmorland – Posters

Mary Thurber - PR

Willie Phan – PR

Lisa Rincon – Equestrian Club booth

Stacey Kang– Equestrian Club booth

Field Trip to the Oakland Zoo

By Laura Frankenfeld



One of the first outings of the Pre-Vet Club this year was an excursion to the Oakland zoo to hear Dr. Caitlin O'Connell-Rodwell speak. Her research dealt mainly with elephants' abilities to feel vibrations through their feet and the use of these seismic signals for communication. In one of her methods of studying this trait, she tested elephants on seismic plates and trained them to respond according to the vibrations they felt. Her work reveals how truly sophisticated and amazing these animals are, and her passion for them is quite moving. Although the research was stimulating and interesting, one of the most memorable parts of the lecture was Dr. O'Connell-Rodwell's passion for the animals. While reminiscing about her experiences with the elephants, she expressed great emotion and connection toward her subjects.

After the lecture, we were invited to tour the elephant barn up the hill. The barn was cavernous, and had many contraptions to facilitate the care of the animals. One included a hydraulic gate system that allows the elephants to enter a compartment for cleaning. This was one of the most amazing experiences, mainly because we were given the opportunity to see an elephant perform tricks less than 15 feet away from us. One of the more memorable tricks was the elephant lifting one of his feet on command. With such little experience around elephants, one forgets how large these animals truly are.

Aside from hearing Dr. O'Connell-Rodwell speak and seeing the elephant barn, we got to spend a day wandering through the zoo. The rest of our day was filled with other animals, including an abnormally active tortoise and a particularly vocal siamang. Whether we were learning new information or simply



observing the animals in their daily routines, the trip was extremely fun and was a great way to kick off the events of the Pre-Vet club.

An Unspoken Bond **By Alyssa Tamayo**

Over the summer, I volunteered at a non-profit organization known as Ride to Fly, which provides therapeutic horseback riding for disabled children and adults. My duties include grooming horses, tacking horses, and side walking during lessons. Most of the clients that I've worked with have a speech and/or hearing impairment(s). They begin the program with a shy demeanor. Each riding lesson is created to exercise the spirit as well as the body. Since riding involves giving a horse commands, the rider is encouraged to communicate. There's something about interacting with an animal that breaks the shell of a timid person. I am fortunate to have witnessed this special human and animal bond through Ride to Fly, and I look forward to volunteering this winter break.

How I Spent my Summer Vacation... **By Andrew Wicklund**

This summer I had the opportunity to volunteer at a local wildlife rehabilitation center in Washington State - The Progressive Animal Welfare Society (PAWS). While there, I was able to assist with exams and provide care for a variety of animals ranging from black bears and raptors to squirrels and raccoons. During the summer months, PAWS gets quite a few marine mammals, so I was actually able to work with seabirds and seals as well. One highlight was gently pushing a feeding tube down the throat of an injured harbor seal! With many new animals admitted each day, I was kept very busy feeding, medicating, and examining animals as well as the task of cleaning their enclosures. I also was fortunate to have the opportunity to observe some surgeries on the larger mammals. The most enjoyable part of my experience, however, was my participation in the animal releases. It was a great feeling to know that I had helped an animal so that it could return to its natural habitat. Spending time at the wildlife division of PAWS was wonderful! It brought into focus what I would like to pursue as a career - wildlife veterinary medicine. I look forward to continuing activities there during all my school breaks.

Undergraduate Research **By Claudia Chern**

I jumped on a project with Dr. Megan Albertelli, Staff Veterinarian of Comparative Medicine, fall quarter. We are using mice models to study a new cancer drug used hopefully to treat breast cancer tumors in the future. I'm working with Dr. Albertelli as well as a post doc and PHD student on the project.

So far the project has been a bit uneventful, as the initial batch of nude mice failed to grow tumors from injected cancer cells. The injections are placed on the right caudal lumbar area and need to be a certain size before we begin administering the drug. Because the tumors had not grown (at all) for almost a month, we decided to try again with another set of mice.

This turned out to be beneficial for me because I was able to observe the implantation of an estrogen releasing pellet, needed to optimize the breast cancer cells injected, and the injection of the cancer cells. It was a simple surgical procedure that involved anesthetizing the mouse, cutting a small opening under the skin between the shoulder blades, securing the pellet, and applying



one suture to close the site. Then the tumor cells, suspended in matrigel, were injected under the skin. The tumors have been growing well since then, and we are still waiting for them to reach a treatable size.

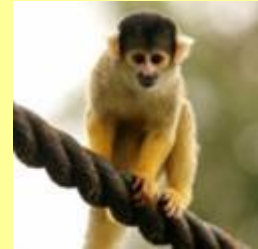
Monkeying Around... By Wendy Kalkus

“That’s their sound for ‘don’t leave with the treats,’”

“Oh! Look at that sexy dance! Aren’t you impressed? Let’s go see the escape artists...maybe one of the girls will do my hair for me.”

“Do your hair?!”

“Oh, they loooove to decorate it with poop.”



The above dialogue was my first introduction to squirrel monkeys., I joined a psychiatry lab and met the squirrel monkey colony in October this year. After some riveting training about blood borne pathogens, monkey B virus, and privacy files, I was finally allowed in the monkey house (which is tucked away in the medical center). I was originally taken in to score curiosity videos that the technician made this summer. This project involves testing anxiety levels in young monkeys and relating it to how likely they are to engage in novel situations. The idea is that monkeys who face some sort of challenge and feel stress early on will be less frightened and more resilient later in life. The squirrel monkeys were exposed to a new toy and video taped how long it took for them to approach (or not approach) that toy. Some of the monkeys were raised without stress, some were raised with normal stress levels, and some were given a drug to suppress anxiety all together, but I was blinded to the groups. My job is to watch the videos and mark the position of the monkey in the box in relation to the new toy.

Lately I’ve been able to do some things that are a little more hands on. I have learned how to hold the little squirrel monkeys while their blood was drawn for a weaning experiment and helped transfer the cute little guys for the “startle” experiment (to see how long/if the monkeys become accustomed to the repetition of a sound through tracking their body movements and hormone levels). Timing is very important in all the work to ensure that chemicals in the blood samples are directly related to the task, the time of day, or stage of life that is being investigated.

I came into this lab with very little research experience but the PI and her tech have been very helpful and understanding. This research assistant position has become the highlight of the quarter and I love it when the squirrel monkey beacon in the sky beckons me over to the med center...I mean, who wouldn’t want to be in a world where marshmallows are the primary form of currency and ‘Sugar Buns’ is just waiting for a chance to show off for you?

Ranching in Rural North Dakota By Lisa Rincon

Nestled in the middle of nowhere North Dakota is the small town of Bowman home to Dr. Blair Matheson. Dr. Matheson is a Stanford alum, doctor and rancher in this small cow town. He has ties to the Stanford Equestrian Team, Going Beyond Human Biology and Native communities. Every spring he extends an invitation to anyone interested to come out to his ranch over Memorial Weekend in late May. I personally have gone to B bar M Ranch for the past 3 years and am eagerly anticipating my return this spring. As a Hawaii native and cowgirl myself this lifestyle is very familiar to me and always a lot of fun. Last year I went with a group of 15 students with varied riding skills and ranch experience. The adventure began when we landed in the Dickinson airport which is barely the size of three dorm rooms.



The hour drive to Bowman consists of long straight roads and open range. As Dr. Matheson explains it, "It's not the edge of the world, but you can see it from here." The first day consists of rounding up the cattle on his 50,000 acre ranch and bringing them to the branding pen. The following day we normally go to a neighboring ranch and help out at their branding. There are many opportunities to get your hands dirty by roping, riding, giving injections or helping restrain the calves. The remaining days we are free to go ride the open range, play around on the ATV's and rope. If you at all interested or want more information please feel free to contact me at Irincon@stanford.edu.

Important Animals in our Lives

The "Perfect"Pet...

By David Sender

On July 21, I brought home my little bundle of joy. No, it wasn't a baby—a baby would have been easier to take care of. It was my new puppy, Scout. She is some sort of terrier mixed with who knows what. I was told she was about 8 months old when I first got her, which makes her right around a year now. I got her from Peninsula Humane Shelter. There was actually another dog that I went to look at that day after I saw it on their website, but when I saw the dog at the shelter, he was laying among a huge mess of torn up blankets, not doing a great job of looking innocent. I quickly decided that dog was probably not going to work out. Since I was already at the shelter, I figured I may as well look at other dogs. That was when I saw Scout (named Canela at the time). She was cute, seemed well-natured, friendly, and about as curious as most puppies. After buying her from the shelter, I brought her to the vet practice I work at the next day to have her checked out. She got a clean bill of health, and I got the warning that her real personality would show itself within the week. As to be expected, I blew off the warning, thinking I had found the perfect dog, and also as expected, the warning was exactly right. Scout has more energy than I have ever seen in a single being, and to top off her frustrating but very lovable personality, she has the attention span of a hyperactive fly! Fortunately, she does try pretty hard to do what you want, but it just goes against everything in her nature to show anything resembling patience. She's an extremely happy and agile pup that loves to jump around everywhere all the time (my gymnastics' team says she has "mad hops"). Although having her around is like constantly having to watch a very mobile two-year-old that loves to eat absolutely everything she finds, she is completely worth the trouble and a great companion.



Everything I Need to Know in Life I Learned from a Very Wise Friend...

By Lori Westmoreland

He is tall, handsome, brown, hairy, and weighs in at a nice solid 1200 pounds. It turns out I owe a big part of my Stanford education to a horse, Jack, lovingly referred to as Jack Attack. What, might you ask, could I have learned from a horse? Well, it is Jack Attack who always reminds me how to enjoy life and take care of myself:



1. Jack knows you need to eat healthily and heartily: copious amounts of apples and carrots with a little slobber do the trick!
2. Jack insists that dancing is very necessary: especially when scary squirrels and fence posts jump out of nowhere.
3. Jack is a firm believer in treating others with respect: he always stops if I fall off to make sure I am ok, or maybe he is checking behind us to make sure the attack squirrel isn't coming for round two...
4. Jack thinks cleanliness and comfort are high priorities: Jack suggests long mud baths for relaxation, and he finds that with careful application, beautiful brown fur-lights will leave all who try them with healthy manes.
5. Jack likes a good workout: he considers his job unfinished until you break a sweat. Jack doesn't reward laziness. If you want to canter you are going to have to work those legs!
6. Lastly, safety does not evade Jack: he gives all who enter the barn full body pat-downs. Illegal weapons include peppermints, carrots, apples, and hay cubes.

Clearly, without Jack Attack, my ½ ton friend and teacher, I might never have learned how to live life properly.



C-Myc Dundee (1989-2008) **By Dr. B**

It was with a very heavy heart that I had to announce the "passing" of my cat Myc (c-Myc Dundee – named in part after the oncogene c-myc, and after the star of the movie “Crocodile Dundee”) 1989-2008. Many of you have met him when you've been at my house. I got Myc when he was ~ 3 months old, in July 1989 - which means he was as old as some of you!! He was literally the first cat I ever owned! I got him to keep my old dog “Tuck” company, and Myc was such a gentle cat – he immediately rubbed up against Tuck (who didn't know quite what to do with him). He befriended not only Tuck (1976-1990), but proceeded to raise 2 more dogs (Brave Sir Robyn 1989-2002 and Gimley 2003 present), 3 more cats (Harvest Kitty - July 1995- Sept 1995, Queen Dusky - Oct 1995 – Dec 2003, and Snowey ((Who is not – she's black) Dec 2004 – present) and oh yes - my son Philip too (born Sept 1, 1990)! Myc was a grand cat - often assumed to be a Maine Coon Cat - (though I don't know if he was) - he was gentle, patient,



tolerant, liked to be around me or anyone who was at the house - yet never demanded attention. Like all cats - in their 2nd decade - he developed renal failure - and though it has been a very chronic process (he was 19.5 yrs old) - and he was compensating well for the past couple years - he started going downhill rapidly late in August. Despite his love of life and will to live - it became readily apparent that the line of "quality of life" had been crossed and his weeks of inappetence, ever worsening anemia (side effect of chronic renal failure), and inability to walk more than a few steps before sitting and resting - dictated the most difficult decision I had ever had to make - to have him put to sleep. My initial email to the pre-vets and Stanford alumni elicited some great responses on the comments I made regarding the practice of euthanasia, and I also appreciate very much all of your supportive feedback and compassionate words at that very difficult time. So let's all raise a glass this holiday season - in honor of Myc, and any other pets that may have brought joy into our lives - we are truly blessed by the animals we care for and who care for us!



C-Myc Dundee (1989-2008)

Veterinary School Information

Applying to Vet School By Willie Phan

Having recently completed my veterinary medical school submissions, I'd like to offer my two-cents to those interested in the application process. Similar to the Common Application when applying for undergraduate colleges, most vet schools have an electronic-based application available from the Veterinary Medical College Application Service (VMCAS). Each year, the online application is usually available in June and the deadline for submissions is the first week of October. Therefore, unlike medical school, the process is not on a rolling admissions basis.

In addition to the usual requirements (description of extracurricular activities, report of course grades, exam and GRE scores, personal background information, and a personal statement), the VMCAS application also requires at least 3 electronic letters of recommendations (eLORs). Most colleges recommend that 2 of the 3 letters be written by D.V.M.s. For 2008, the eLORs have a 5,000 character limit. In addition to writing a letter, the evaluator may also be asked to evaluate your character, skills, and competence at handling animals on a categorical ranking system.



Also like the Common Application for undergraduate education, individual vet schools may also require a supplemental application, available on their own institutional websites. When applying to vet school, be aware that supplemental applications charge extra fees in addition to the VMCAS application. The Association of American Veterinary Medical Colleges (AAVMC) website is a tremendously helpful resource for sorting out pre-vet requirements specific to each college, including international veterinary institutions. I also found that the book *Veterinary Medical School Admission Requirements (2008 Ed. For 2009 Matriculation)* provided a thorough summary of each school's admission statistics, specific course and application requirements, and special program information. This book costs approximately \$20.00—a drop in the bucket compared to vet school application expenses.

I hope those tidbits were useful. Good luck to those planning on applying. The process is not as daunting as it may seem!

Experience of Vet School

First Impression of Veterinary School

By Christina Alarcón, a first-year student at UC Davis.

Feel free to contact her with any questions at calarcon@stanfordalumni.org.

You know it's going to be intense. Everyone has told you that vet school is intense. But until you're there, you're never quite prepared for the intensity. My first quarter of vet school has flown by amidst lectures, labs, exams, studying, and fun. Yup, I said fun. Because for all its intensity and adjustment, vet school is also fun. I have never worked so hard at school and yet felt so good about it. It might be cliché to say that my classmates are wonderful and from a variety of backgrounds, that the faculty is outstanding and enthusiastic, that the administration and staff are very open and supportive. But I'll say it anyway, because it's true. In a way, vet school is like coming to Stanford all over again, except that now practically every class is about animals. So hang in there as you apply to vet school; it's an adventure both incredibly intense and fun!

Particulars of UC Davis:

The vet school facilities are absolutely gorgeous and new and tailored to student needs. You and your classmates will have your schedules for core classes automatically loaded for each quarter, and then you can take a few electives. You go to lecture (usually from 8am to noon) each day, and then have lab from 1pm to 4 or 5pm. The schedule varies each day; there is really no pattern. You use your computer almost every minute of every day. I love my laptop! And the lecture halls have nice ergonomic chairs and an electrical outlet for each seat at the tables. Instead of going to different lecture halls, the core class professors rotate through to your first-year lecture hall. There are tests just about every 10 days, but the professors are very accommodating about scheduling review sessions and answering questions.

Each class elects student officials for activities and other duties. Our class is very spirited and cohesive, so we've done quite a few social events and stress-relief activities. People coordinated themes for the different tests (crazy hat test, pajama test, dress-in-a-vest test, crazy eyeglasses test). There are intramural sports, which are fun, and of course, a slew of clubs for every type of vet med interest you can imagine (wildlife, exotics, marine mammal, canine, feline, food animal, equine, shelter, holistic, lab animal, behavior, surgery, pathology, and more). The other cool thing about vet school is the many opportunities for internships, externships, summer jobs, lab work, and research.