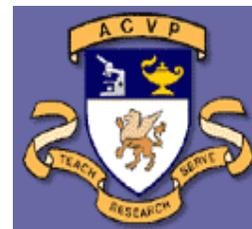


November, 2008

Volume 1, Issue 2



PATHWAYS

A NEWSLETTER FOR STUDENTS OF VETERINARY PATHOLOGY

Welcome to PATHways!

Hello and welcome to the second issue of PATHways. We hope you enjoyed the inaugural issue. We received a lot of positive feedback and had fun creating it!

We have an issue jam-packed with information. "The PATH-way to Becoming a Pathologist" (contributed by Dr. Lyn Wancket) gives an overview of decisions you will need to make as you make the transition from veterinarian to veterinary pathologist. In "Veterinary Pathology Externships" Dr. Mandy Fales-Williams outlines how to go about looking for and applying for these great learning



opportunities. Drs. Peter Mann and Robert Dunstan are profiled in "Career Paths Taken are Not Always Straight". These question and answer sessions (taken from a lunchtime career development seminar given at the 2008 STP Symposium last June) give a great overview of some of the changes you might face in your career as a veterinary pathologist— there's no need to be afraid of change, embrace it! Dr. Krista LaPerle contributed the Case Report "The Case of the Mass-Covered Mouse". This case demonstrates a lesion you might come across in a

toxicologic pathology or investigative setting and is an excellent example of how to write a board-quality description. Thanks to Dr. Stephanie Corn for compiling the "Upcoming Events".

Have fun reading the newsletter, and please don't hesitate to let me know if you can think of a way to improve it, or if you have a contribution to make. I would love to include student contributions in the future!

Your editor, Sarah Tannehill-Gregg

We're on the Web!
www.toxpath.org
www.acvp.org

Did you know the STP website has an section dedicated solely to students? You can find information about membership, student opportunities and the NIH Loan Repayment Program.

The STP is interested in hearing from students about how the student section of the website could be improved.

Please check out the website by going to:

<http://www.toxpath.org> and selecting "For Students"

Please send any comments to Sue Pitsch at STP Headquarters (stp@toxpath.org) with "Student Website Feedback" as the subject.

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The PATH-way to Becoming a Pathologist

So you were bitten by the path bug, survived the initial infection, and want to pursue formal pathology training after you graduate from vet school. Unfortunately, your busy schedule makes it hard to check out the 50+ US and international training programs listed on the ACVP website, each with its own requirements and expectations. Where to begin?

This article highlights 3 main decision points to help you clarify your residency preferences and make it easier to find residency programs that are a good match for you:

1. Clinical vs. anatomic pathology

While the training programs have many similarities, there are some key differences. There are fewer clin path training programs and many only accept 1 resident/year. Clin path residents are often embedded right in the hospital, allowing you to integrate patient data in real time and work directly with clinicians to guide patient care. Anatomic residents support necropsy and biopsy services and often provide the final diagnosis. If you pick one path but still want exposure to the other, consider a residency with a strong record of cross training.

2. Type of residency program

Traditional 3 year residencies are available at vet schools, med schools, referral hospitals (Animal Medical Center in NYC), and the federal government (AFIP). These programs provide intense, focused pathology training and diplomates completing these programs are immediately able to get jobs in diagnostic and contract research labs (other positions may require more advanced training).

Specialized path residencies can begin with 1-2 years at a vet school before the resident moves to a zoo or an industrial position to work and study for boards.

Residencies **combined with graduate school** often begin with pathology training, transition to dissertation research, and allow you to take boards shortly before or after you complete your graduate degree. A combined program may save a few years of overall training time, can pay more, and will get you the advanced degree required for many jobs in industry and academia; however, it can be very difficult to balance being both a pathologist and a primary researcher.

3. Beyond the path training

While all residency programs provide solid training in pathology fundamentals, each has their own special strengths and will influence how you spend your day-to-day life. Things to consider include:

Size of program Will you be the only first year resident or join a group of 20+ trainees? Total number of residents influences the amount of time spent on the necropsy floor or at the cytology microscope. You should also consider the number of faculty pathologists who will be available for your training.

Residency structure Does your learning style allow you to thrive with many didactic courses or will a program that emphasizes self-guided study be the best fit? Is the program flexible in allowing you to attend outside meetings, courses, and visit potential employers?

The PATH-way to Becoming a Pathologist, Cont.

Case load and diversity Total case load varies widely between institutions, especially those with a state diagnostic lab. Vet schools offer a mix of large and small animal cases and may have increased numbers of exotics or wildlife. Programs at zoos, med schools, or the government offer a unique mix of cases.

Money, Money, Money A frightening figure: the average 2008 US veterinary graduate will have over \$100k in debt. While that debt is often deferred during training, your salary and local cost of living are still important considerations. Combined programs may offer higher, NIH grade salaries but take longer to complete; specific fellowships (like the ACVP/STP coalition) offer extra benefits, but there are relative few fellowships available.

The rest of life There is a life outside of residency and finding a balance between work and the rest of your life is easiest when you are happy where you are living. Thankfully, there are residencies located across the continent, from New York City to Pullman, Washington (population~25,000)

After considering these three points, check out these resources to help identify residency programs that are best for you:

1. Bounce ideas off residents and faculty members at your current vet school
2. Track down residents from different programs at ACVP or other path meetings
3. Keep in touch with visiting pathologists who lecture at your school

Online resources:

ACVP

<http://www.acvp.org/training/registry/menu.php>

Resident's forum

<http://www.vetpathforum.org/index.php>

AFIP

<http://www.afip.org/consultation/vetpath/>

ACVP/STP coalition

<http://www.vetpathcoalition.org/>



Veterinary Pathology Externships

Interested in pathology but not sure what the job settings and expectations are like? Want to gain first-hand information about a residency training program? Curious about diseases or species that occur in other regions of the country? Try an externship in veterinary pathology! There are numerous programs around the country in anatomic, clinical and toxicologic pathology. Many opportunities are available to work with pathologists in academia, industry, government research labs, and private animal facilities. The American College of Veterinary Pathologists (ACVP), American Society for Veterinary Clinical Pathologists (ASVCP), Society of Toxicologic Pathology (STP) and C.L. Davis Foundation websites list a large variety of externships based in diagnostic laboratories, research labs, pharmaceutical companies, zoological parks, and laboratory animal facilities. Some programs accept first and second year students for summer programs, while others can schedule junior or senior veterinary students throughout the year. Most programs last three to six weeks, though this varies from 1 week to 10 weeks.

To learn more about each program, please visit one of the websites below. The ACVP Externship Center lists 30 externship programs from around the country. In addition, you will find information on the different environments represented by these externships (academia, diagnostic labs, government labs, industry, zoological/wildlife). You may wish to apply for an Externship Scholarship from the ACVP; see the ACVP Externship Center website for application materials. Similar information is available on the STP website (Student Information section), including direct links for several useful websites. On the CL Davis Foundation website, you will find a slightly different list of externships, including several opportunities at diagnostic labs and primate centers .

ACVP Externship Center

http://www.acvp.org/training/extern_center.php

STP Student Information

<http://www.toxpath.org/student.asp>

CL Davis Foundation

http://www.cldavis.org/student_externships.html

The following sites are examples of externship programs at pharmaceutical companies:

Eli Lilly Externship in Veterinary Pathology and Laboratory Animal Medicine

<http://www.asvcp.org/trainingprograms/LillyExternship.pdf>

Biogen Idec Internship Program

<http://www.biogenidec.com/site/internships.html>

Glaxo-Smith Kline Summer Intern Program

<http://us.gsk.com/html/career/career-summer.html>

Try more than one! There are many different settings and actions by which pathologists contribute to science, animal well-being, and advancement of medical knowledge. Experience these environments for yourself and find the one that best fits your interests.



Career Paths Taken Are Not Always Straight:

A distillation from the Career Development Lunchtime Series during the 2008 STP Annual Symposium in San Francisco, CA

The Career Outreach Committee of the STP sponsored an informational lunch-time session to learn about the various career paths taken, decisions made, and experiences gained as told by four STP Members who have taken different career paths. These panelists also answered a series of career profile questions; we included 2 profiles here*.

Peter Mann, DVM, DACVP

(Career path: Academia to Pharma to CRO with embedding in Pharma)

What is your current position? I am currently the Manager of EPL Northwest. In this position I oversee a bustling Office of One. I spend approximately 35 % of my time in my home office (reading slides in my pajamas according to many), 25% of my time supervising necropsies and reading studies at a local CRO, and 40% of my time traveling to and conducting peer reviews or primary reads for clients. I have several small clients for whom I am the Pathologist of Record; one of them currently occupies a significant portion of my home office time

What was your career path? My undergraduate degree was in English literature. After a year spent as a full-time substitute in Public Schools, and several years as a part time musician, I decided to go back to school to see if I could become a veterinarian. I got in and gravitated toward lab animal pathology while at University of Missouri. I went directly from Missouri to a pathology residency at the National Zoo in Washington DC. After three years at the Zoo, I went to the University of Pennsylvania, where I passed my Boards, and spent most of my time with recently deceased racehorses at New Bolton Center. After three years, I went into industry, taking a position with ICI Americas, which has since morphed into Astra Zeneca. In 1989, ICI closed down their R&D site in the US. I then joined EPL, where I have remained for the last 19 years. I spent the first year with EPL in Harrogate, a small town in North Yorkshire in the UK. I then returned to the US, and spent 10 years with EPL in RTP, NC, first as a staff pathologist, then a Lab Director, and then as a

Director of Special Projects (a title that usually means your management doesn't know what to do with you!) After 10 years in NC, I took a position as an Embedded Pathologist at DuPont Pharma in Wilmington, DE. I was an in-house contractor, with Dupont as my only client – they controlled my calendar, and I read in-house studies so that their staff pathologists were able to spend their days going to meetings and working on project teams. When BMS bought DuPont Pharma, they closed the site, and I established EPL NorthEast in our home in Maryland. I had a staff of one, whose main job was to bark at the FedEx driver. The work mix at NorthEast was similar to my current mix. In 2007, my beloved, Dr. Everds, took a position at Amgen in Seattle, and I changed EPL NorthEast to NorthWest (fairly simple – stick in a W, shrink the e and loose the a. We have been in Seattle for 1 ½ years.

What was the impetus behind your career changes?

Academia: I was a junior staff member at Penn. It was very difficult to find any research funds. I had one small project where I had implanted a transmissible nasal tumor into sheep, and then put them out to pasture for a year to see if the tumor would grow in the recipients. One morning I received a phone call from the school, “Dr. Mann, I’m sorry but some dogs broke into the farm and ate your research project.” At that point I decided to move on to industry.

Industry: after 4 years, ICI closed down their US R&D site. I had wanted to spend some time in the UK, so when EPL had an opportunity in England, I went for it. After 1 year, the amount of work available in the UK decreased, so I returned to the States, to EPL in NC. After 10 years in NC, I had to opportunity to be embedded at DuPont Pharma in Delaware. Since Dr Everds was working there, that was a no-brainer; it saved a lot of gas and time we were spending for weekend visits. After BMS bought DuPont Pharma, they closed the Delaware site, and I established EPL NorthEast. When Nancy decided to move to Amgen, I was able to easily reconfigure as EPL NorthWest.

*Answers were edited to better fit the space. You can look forward to the remainder of the career profiles in the spring PATHways!

Career Paths Taken Are Not Always Straight:

A distillation from the Career Development Lunchtime Series during the 2008 STP Annual Symposium in San Francisco, CA

Peter Mann, Cont.

What did you take away from each position that was positive or negative

University of PA

Pro: Teaching, working with Vet Students, training residents, ability to do independent research

Con: Low salaries, lack of funding for research, academic politics, long hours and weekends

ICI

Pro: learning to read safety studies, learning about drug development, good salary, and regular hours

Con: Attending endless meetings, lack of loyalty of big companies

EPL

Pro: Realizing I could still read studies. Developing my skill set as a slide reader, peer review pathologist. Opportunity to try management. (Didn't like it) Running a small office (one person) Being a major player in a small company. Developing my own client base, and determining my own schedule

Con: Slightly lower salary than pharma. Benefits not quite as good

What advice do you have in making career path decisions?

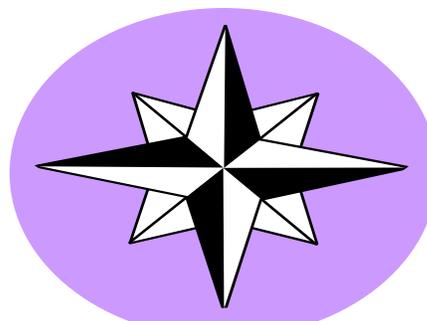
Life is too short to be miserable. There are many possibilities as pathologists and no choice has to be permanent. Go for it.

What were your biggest misconceptions or ah-ha moments during career changes?

When I left academia, I was assured by my colleagues that I was going over to the dark side. Not true. I have enjoyed almost every moment of my career. I used to be jealous of my colleagues who stayed in academia – they could do any research they desired. Then I realized that they had

very small budgets and spent most of their time trying to find funding. When I got to EPL, I realized that I still knew how to read studies, even though I had spent much of the last four years in meetings. When BMS closed down DuPont Pharma, I realized (once again) that big companies are not very secure places to work.

What I realize every day is that I love pathology. I enjoy reading slides and interacting with other scientists in the drug discovery process. I learn something new with every project and at least two or three times a year I see something that I have never seen before – something that makes me stop and go, "Wow, is that cool or what?" What a great job.



"We have a habit in writing articles published in scientific journals to make the work as finished as possible, to cover up all the tracks, to not worry about the blind alleys or describe how you had the wrong idea at first, and so on. So there isn't any place to publish, in a dignified manner, what you actually did in order to get to do the work."

- Richard Feynman (American physicist and nobel laureate)

Career Paths Taken Are Not Always Straight: continued

Robert W. Dunstan, DVM, MS, DACVP

(Career path: Academia to Pharma/Merger survivor to Biotech)

What is your current position? Distinguished Investigator, Biogen Idec, Cambridge MA

What was your career path?

Michigan State University (Resident to Full Professor)

- 1979 Residency in Anatomic and Clinical Pathology
- 1982 MS in Pathology (Designing a serologic test for a lysosomal storage disease); DACVP; Appointed as an Assistant Professor, Department of Pathology (primarily a diagnostic pathologist and teacher)
- 1983 Began specialization in surgical path/dermpath
- 1988 Sabbatical at Jackson Laboratory to learn genetics research, decided to pursue research in dermpath
- 1991 Appointed full professor
- 1997 First substantive extramural funding obtained (\$200K, the Iams Company)

Texas A&M University (Full Professor)

- 1998 Ran largest academic dermpath service and Comparative Dermatopathology Laboratory (specializing in hair follicle research; molecular basis of heritable cornification defects of animals)

Pfizer Global Research and Development, Ann Arbor, MI
(Research Associate to Associate Research Scientist)

- 2002 Hired to perform safety studies for Anaderm, a newly formed dermatology therapeutic area
- 2003 Reassigned to the Investigative Pathology Lab
- 2004 Head of Investigative Pathology, (specialized in dermatology research, IHC, virtual microscopy, image analysis)
- 2007 Announcement Pfizer Ann Arbor site to closed; dermatology TA to be shut down

Biogen Idec, Cambridge, MA (Distinguished Investigator)

- 2007 Head Investigative Pathology (IHC methods, virtual microscopy, image analysis)

What was the impetus behind your career changes?

Until I moved to pharma, my career changes (transitioning from diagnostician to researcher and moving to Texas A&M) grew from a desire to better understand dermatopathology. The more I did research, the better I liked doing it. I was offered the position at Pfizer because of my work in dermatopathology and dermatology research; however, as the job evolved, most of my work was not associated with skin. At Biogen Idec, I was offered the position because of my experience in running a laboratory and experience with “molecular morphology.” I now do very little dermatopathology or dermatology research. Although there are aspects of my “former life” that I miss, I like doing what I now do better than what I did before.

What did you take away from each position that was positive or negative?

1. Never expect a dysfunctional organization to get better over time.
2. If you want job security, stay with academia . . .
3. but you are more typecast in a position in academia than in industry. Industry offers many more opportunities to reinvent you.
4. Most biotechs are more academic than big pharmas because publications are a way smaller firms use to gain credibility and to recruit/retain top scientists.
5. As a rule, biotechs are a better place to start a career in the pharmaceutical industry because they are smaller and you are forced to play many more roles in the drug discovery/development process.
6. Make yourself essential. As an individual, you have a much greater chance to succeed if you position yourself so you do not do what you and most of your colleagues were hired to spend the greatest amount of their time doing (i.e., you seldom advance in academia by teaching the most courses and you seldom advance in industry by reading the most safety studies).

Career Paths Taken Are Not Always Straight: continued

Robert W. Dunstan, Cont.

7. Large molecule development is much more creative and requires more morphologic evaluation in discovery but usually less morphologic evaluation in safety. Small molecule development requires less morphologic evaluation in discovery but greater morphologic evaluation in during safety.
8. All positions you hold should serve as stepping stones and you should learn from the good and bad aspects of each one.
9. Always make your boss look good. If you do not like your boss, still make your boss look good until he or she no longer supervises you or you leave.
10. There is life (and often a better one) after a site closure because sites close only if a company is struggling—never a good company to be with (see #1).

What advice do you have in making career path decisions?

Taking a job with another organization (i.e., academia to industry, one company to another, industry to academia)

1. You can't always be logical. Logic will always favor staying put rather than taking a risk on a new position.
2. If you move from academia to industry, give it 18 months (most hate their first year in industry, I did).
3. Your kids will adapt much quicker to moving than you will (even if they are in high school).
4. Salary should be correlated with job satisfaction. Go for the position you will like the best, not the one that pays the most at the start. You will end up making much more in the long run in a job you like.
5. Always be looking for the next job. Even if you are totally content where you now are you should quietly try to interview once every 18-24 months. This is not so frequent as to make you look disgruntled, teaches you how competitive you are in the current market and it gives you a rare opportunity to see

how other organizations function.

Changing what you do in the same organization (i.e., moving from drug safety to discovery, from a toxicopathologist to a manager)

1. For most, it will be much easier to move to a new organization than to take a new career path where you now work
2. You either have to be “pretrained” for a new position in the same organization—most of those who believe they can self train on the job fail . . .
3. or you need a mentor.

What were the your biggest misconceptions or ah-ha moments during career changes?

The realization that you cannot do it alone. You need to be mentored. In my experience there are 2 types of mentors: 1) those who inspire you to “take the leap” to a career change and 2) those who teach you to be successful in your new role. Both are essential. In my experience, the inspirational mentor and the teaching mentor are seldom the same person. After thirty years working in academia and industry, I have largely made the transition from mentoree to mentor and have come to realize how important it is for a person going through a career change to be “mentorable.” A mentor is under no obligation to train you. He/she has to enjoy the interaction. The best mentoring is “win-win” for the mentoree and the mentor. Although most who mentored me did so early in my career, later in my career as I made the transition from diagnostic dermatopathologist to researcher in dermatology, I was mentored by Dr. Patrick Venta and the transition from toxicopathologist to discovery investigator at Pfizer could not have occurred without the help of Dr. Mudher Albasam.

Case Report

THE CASE OF THE MASS-COVERED (Tg.AC RAS) MOUSE

The presentation.....



Signalment:

Female Tg.AC RAS Mouse

History: Mouse alone in cage. No known experimental manipulation. Multiple skin tumors observed.



Gross Lesions: There were numerous, exophytic, white to tan epidermal masses, some of which were ulcerated, located all over the mouse: right lower eyelid, caudodorsal back, right external ear canal, vulva, and right upper lip. On cut section, masses were firm, white, and pedunculated. The nonglandular portion of the stomach contained approximately 8 white to tan masses, similar in appearance to the epidermal lesions, which were up to 5 mm in diameter. There was a 5 x 5 x 5 mm swelling in the left ventral cervical region.

Case Report

THE CASE OF THE MASS-COVERED (Tg.AC RAS) MOUSE

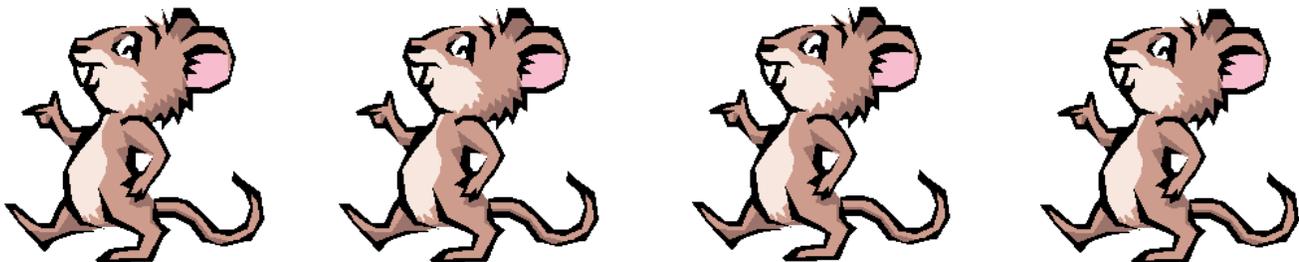
The answer.....



Microscopic Description: Haired Skin: Multifocal, well-demarcated, exophytic, pedunculated masses are attached to the epidermal surface by a stalk. These masses respect the basement membrane and do not invade into the underlying epidermis or dermis. Masses are composed of islands of stratified squamous epithelial cells thrown into papillary projections. The islands are delineated by a fine fibrovascular stroma. Squamous epithelial cells have round to oval, vesicular nuclei and one to multiple prominent nucleoli with moderate amounts of basophilic to eosinophilic cytoplasm. Rare mitotic figures are present along the basal layer of epithelial cells within the islands. Extensive orthokeratotic hyperkeratosis is prominent.

Morphologic Diagnosis: Skin, papillomas, multifocal, moderate to marked.

Comments: Tg.AC mice were constructed by zygote injection of a gene construct in which expression of the Ha-ras oncogene (two activating point mutations in codons 12 and 59) is driven by the z-globin promoter. Consequently, the transgene is expressed in embryonic blood cells, the hematopoietic fetal liver, placenta and low amounts in the adult bone marrow. Up to 40 copies of the transgene per genome have been reported. Tumors that occur spontaneously in Tg.AC mice include squamous papillomas of the skin and forestomach and squamous carcinomas of the salivary gland as in this case, as well as odontogenic tumors, erythroleukemia, and pulmonary adenomas. The transgene is not constitutively expressed in non-tumor-bearing tissues in the skin but is expressed in papillomas and squamous cell carcinomas. Ras is a G-protein involved in intracellular signal transduction critical to many cellular processes. Mutations in the Ras have been reported in up to 30% of human cancers. These mice have been proposed to be useful for the detection of "non-genotoxic" carcinogens and tumor promoters. The induction of papillomas and squamous cell carcinomas following the application of such compounds demonstrates that the presence of the oncogenic transgene is an initiating event and that the tumor response can be driven by the application of a promoter.



Toxicology and Experimental Pathology Specialty Section (TEPSS)- sponsored student travel awards

Students are encouraged to apply for the Toxicology and Experimental Pathology Specialty Section (TEPSS)-sponsored student travel awards to attend the 2009 Society of Toxicology annual meeting in Baltimore, MD. **To apply for this travel award, an abstract must have been submitted through the regular SOT process. The due date for SOT abstract submissions was October 3, 2008.**

Nominees must be the first author of an SOT-accepted abstract concerning research in toxicology that presents work illustrating the integrated application of pathology (morphologic or clinical pathology) endpoints with other scientific approaches, e.g. molecular or systems biology, imaging, or in vitro-in vivo correlations, to enhance the understanding of whole animal or tissue toxicologic responses. The abstract submission should identify **TOXICOLOGIC AND EXPLORATORY PATHOLOGY as the specialty section**. Applicants must also submit the following to the

TEPSS Counselor: [a] a copy of their abstract (the candidate must be the first author and the presenting author), [b] a letter (maximum 2 pages) describing their research project and professional goals, and [c] a letter of sponsorship from an academic advisor, who is a member of SOT.

Abstracts will be judged based on scientific merit and clarity of presentation. Consideration will also be given to candidates whose professional goals include the incorporation of the science of pathology in their research work.

TEPSS Travel Award winners will present a brief (10 minute) synopsis of their research project at the TEPSS Reception during the Annual SOT Meeting, where they will be recognized for their accomplishment with a plaque and check for \$1000.00, a one-year subscription to Toxicologic Pathology and student membership to the Society of Toxicologic Pathology.

Award Submission Deadline: **January 16, 2009**

Please contact Donna Dambach, TEPSS Counselor (Dambach.Donna@gene.com) or the [TEPSS Web site](http://www.toxicology.org/ISOT/SS/TEP/) (<http://www.toxicology.org/ISOT/SS/TEP/>) for additional information.

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Feel free to contact committee members with questions or for advice

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* Contributed to this newsletter

Upcoming Events.....

November 9-12	American College of Toxicology 29 th Annual Meeting Hilton El Conquistador, Tucson, AZ http://actox.org/	April 18-22	American Society for Investigative Pathology Annual Meeting at Experimental Biology 2009 New Orleans, LA http://www.asip.org
November 13-14	23 rd Annual Meeting of the British Society of Toxicological Pathologists London, England www.bstp.org.uk	June 20	NTP (National Toxicology Program) Symposium Wardman Park Hotel, Washington, DC www.toxpath.org/AM2009/index.asp
November 15-19	American College of Veterinary Pathology 59 th Annual Meeting and American Society for Veterinary Clinical Pathology 43 rd Annual Mtg Hilton Palacio del Rio Hotel, San Antonio, TX http://www.acvp.org/meeting/	June 21-25	28 th STP Annual Symposium, Theme: Cancer Wardman Park Hotel, Washington, DC www.toxpath.org/AM2009/index.asp
December 4-5	Hemangiosarcoma in Rodents: Mode-of-Action Evaluation and Human Relevance Westin Arlington Gateway Hotel, Arlington, VA www.toxicology.org/ai/meet/hr-COF_meeting.asp	July 20-22	Toxicology & Pathology in Drug Discovery & Development Short Course College of Veterinary Medicine University of Illinois www.vetmed.illinois.edu/ope/itp
December 11	AAEP Meeting: Infections Caused by Rhodococcus equi. San Diego Convention Center, San Diego, CA www.cldavis.org or www.aaep.org	July 22-24	Target Organ Toxicologic Pathology Part 1 College of Veterinary Medicine University of Illinois www.vetmed.illinois.edu/ope/itp
March 15-19	48 th Annual Meeting of the Society of Toxicology Baltimore Convention Center, Baltimore, MD http://www.toxicology.org/ai/meet/am.asp	August 13-14	Midwest Association of Veterinary Pathologists Turkey Run State Park Marshall, IN Website: http://vetmed.illinois.edu/mavp/
March 23-27	34th Annual Gross Morbid Pathology of Domestic Animals Bethesda, MD www.cldavis.org		

**2008 Society of Toxicologic Pathology Symposium
San Francisco, CA
Student Outing
to Alcatraz Island**

We hope to see you at the 2009 STP Symposium held June 21-25 in Washington, D.C. We will have a student outing where you can spend the afternoon with STP members acting as mentors— it's fun and informational!

Lyn Wancket (The Ohio State University) and Shankang Ma (University of Louisville) enjoy a beautiful day on the ferry to Alcatraz.



The entire gang getting ready to tour the island. The group includes students and STP members acting as mentors.



Special thanks to Mark Cartwright for the beautiful pictures!