

Exploring Careers: Lily I. Cheng

When I was in my sophomore year of college at University of Maryland, one of my friends told me about a volunteer opening at the National Zoo in Washington, D.C. in pathology. All I heard was “National Zoo” and I was there! I had wanted to be a veterinarian and work in a zoo since I was 5! Reporting in my first day, I had a brief orientation and was then taken to the necropsy ‘garage’, and given a pair of rubber boots, a bright yellow plastic apron, brown coveralls and a large daunting knife: my assignment that day was to dispose of the carcass of a Bengal tiger which had recently been necropsied. Not exactly what I had in mind when I signed up as a volunteer?! When the pathologist returned later to check on my progress, I believe I was still standing there dumbfounded. “Uh, sorry, WHAT did you want me to do?? And why is everything DEAD here??” The pathologist chuckled at my naiveté, shook his head, and then patiently walked me through what would be the first of many awe-inspiring necropsies (way better than the earthworm I did in 6th grade). I was hooked! From that day forward, I developed a tremendous respect and love for pathology!

I attended veterinary school at Purdue University in West Lafayette, IN (Go Boilermakers!). During my senior year, I was able to take an international externship - first to National Taiwan University to learn animal acupuncture and then to Beijing where I helped to coordinate the first Clinical & Diagnostic Zoo & Wildlife Pathology workshop in China with zoo pathologists from the National Zoo and veterinary colleagues. The highlight was a visit to the Research Base of Giant Panda Breeding in Chengdu and meeting one of their residents up close and personal!



Necropsy fun - NZP 2000

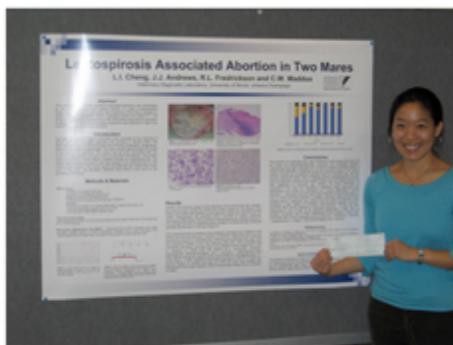


9-month old panda - RBGPB, Chengdu, China

After graduation from veterinary school, I pursued a residency in anatomical pathology at the University of Illinois in Urbana-Champaign. I served as a teaching assistant for the second year pathology course and for the senior rotation through the Veterinary Diagnostic Lab, resident advisor for the Pathology Club and held weekly pathology rounds for the ophthalmology residents on biopsy submissions. I most happily obtained ACVP board certification in 2008.



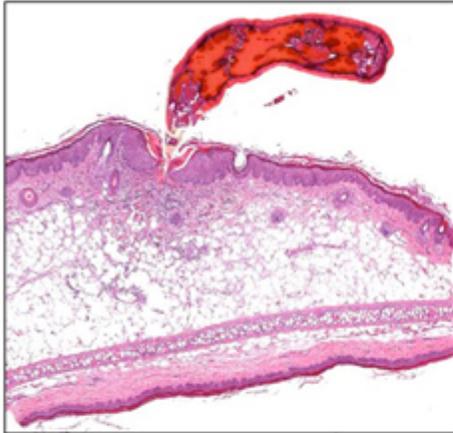
2005 UIUC VDL Pathology Residents



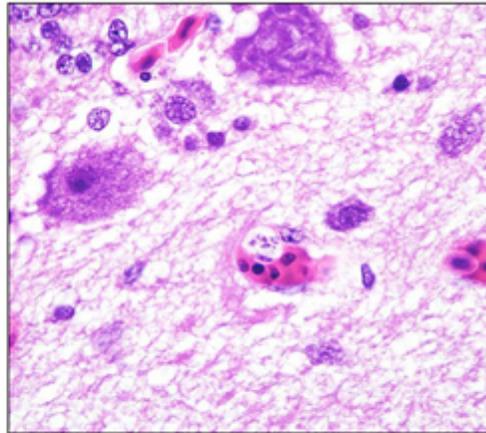
2004 AAVLD Meeting - Hershey, PA

After residency, I took my first “real job” as associate pathologist with Dr. Jerrold Ward in the Infectious Disease Pathogenesis Section of the Comparative Medicine Branch, National Institute of Allergy and Infectious Diseases (NIAID) at NIH in Bethesda, MD where I investigated vector-borne, bacterial and viral diseases in a

wide variety of laboratory animal species and insects. This work required both in depth understanding of disease pathogenesis, cellular mechanisms and transmission, as well as a creative mind to best microsection invertebrate hosts to demonstrate mechanism of action (i.e, how to section a tick still attached to guinea pig skin!). Some particularly interesting projects were evaluating tissues from king penguins infected by Babesia sp. and working with leishmania-infected sandflies.



Photomicrograph of guinea pig ear with attached mouthpiece from engorged tick (4x)

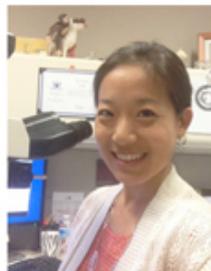


Brain from king penguin with intra-erythrocytic Babesia sp. organisms (40x)

I joined the Translational Sciences department as a research pathologist at MedImmune in 2009 where I have been for the past 4 years. I am responsible for designing and interpreting research-based pathology studies for the purpose of developing therapeutic biologics (monoclonal antibody-based) intended for human use. I also serve as project pathologist in numerous aspects of drug development, including target identification and validation, animal model development, efficacy study read-out, immunohistochemical-based assays, and some cell-based assays. In addition, a developing part of my job here has been drug safety assessment on toxicology dose range findings studies in rodents and non-human primates.



MedImmune, Gaithersburg MD



MedImmune employees volunteering at the NIH Children's Inn playground building project

In my spare time, I enjoy getting my butt kicked at boot camp workouts (ran Tough Mudder 2012!), gardening, traveling and finding creative and nearly edible ways to use leftovers in the fridge. I also currently volunteer at Second Chance Wildlife Center in Gaithersburg, MD that rehabilitates injured, orphaned or ill songbirds, squirrels, raptors, turtles and other wildlife species!

