AMERICAN COLLEGE OF VETERINARY PATHOLOGISTS

FREQUENT CONTRIBUTORS TO THE FIELD CALLED LIFE.

James Thomson,
Pioneer of Stem Cell Research,
University of Wisconsin

How has veterinary pathology helped your career?

"Veterinary pathologists have a nice combination of skills that can open doors that otherwise might remain closed. They can choose a tenure track or business, and there are many other areas they can pursue. For me, research was my first choice and it's been a good life. Veterinary pathology gives you options outside your average clinic, but it's not an easy path. It requires a persistent personality."

Since first striking out on a mission to "further scientific progress in veterinary pathology" in 1949, the American College of Veterinary Pathologists (ACVP) has, over time, evolved into one of the most versatile and significant scientific associations whose contributions to animal health as well as comparative knowledge are unparalleled.

While our members continue to push the forefront of understanding the underlying causes and mechanisms of disease, today many are applying their skills toward tackling crucial public health issues, drug discovery and development, biomedical research, wildlife conservation, cancer research, infectious diseases, biotechnology and bioterrorism.

"Veterinary pathology training yields a broader understanding of how bodies and diseases work at a very basic tissue level," argues James Thomson, whose work in human stem cell research has earned him worldwide recognition and planted him on the cover of *TIME*. "Embryonic stem cell research is really an evolution of the postdoctoral work I did in primate *in vitro* fertilization, where instead of using mouse embryos, we began using embryos from rhesus monkeys because they more closely resembled the physiology of humans."

This openness to looking cross-species for answers is not uncommon in veterinary pathology. In fact, it is the norm.

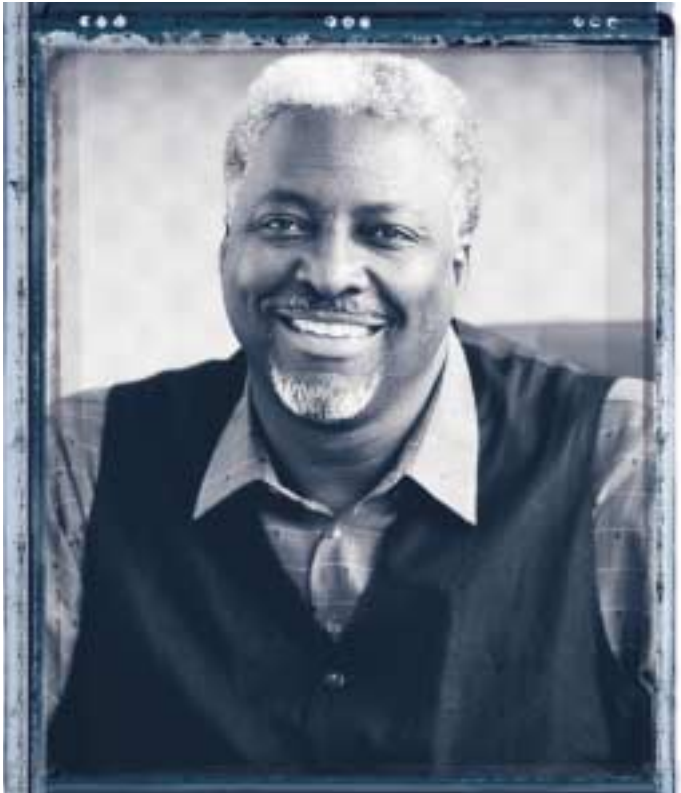
"West Nile took someone with a comparative veterinary pathology background to see the forest for the trees," says Tracey McNamara. As the former head of pathology for the Bronx Zoo and Wildlife Conservation Society, McNamara believes she had an advantage over scientists of other disciplines when in the summer of 1999 crows began dying around New York, while at the same time area public health officials began sounding alarms of residents falling ill to an unknown virus.

"My initial concerns of a possible link were dismissed based on textbook knowledge," reflects McNamara. "But having worked in this unusual field

Tracey McNamara,
Wildlife Conservation Society

What does it feel like to make a key discovery?

"The point when we realized that we were on the trail of a new disease is crystallized in my memory. It was when everything I ever studied and worked for all came together in this one investigation. It was exhilarating. It was frightening. It was the best of what science can and should be. Public health now recognizes the pivotal role pathology played in the recognition of the West Nile virus. It's gratifying to know that my work had an impact."



Harold Davis,
Amgen, Inc.

What should people know about ACVP?

"It's an organization dedicated to the improvement of the health and welfare of animals and humankind. ACVP is a collection of smart, hard-working achievers. To become a member of this organization says that one has truly dedicated oneself to the pursuit of knowledge and the understanding and application of that knowledge for the benefit of others. Of all the organizations I belong to, it's the one that I hold in highest esteem. In my line of work, it carries a great deal of weight to be a board member of the ACVP."

for so long, expecting the unexpected is routine for me. I was comfortable making an intuitive leap that there might be something unusual going on."

The leap paid off, and to this day McNamara's research in identifying and defining West Nile remains the seminal work on the subject.

"I believe a degree or training is something that should open doors—not pigeonhole an individual," notes Harold Davis, V.P. of Preclinical Safety Assessment at Amgen. Managing a group of around 250 people at one of the world's largest biotech companies, Davis has leveraged his love for cardio-vascular physiology and pathology into a career where he can make a profound difference.

"The company that I work for is making a positive impact on the world," says Harold Davis. "Our drugs help critical needs patients who would otherwise likely be deceased or incapacitated. When I meet an arthritis sufferer who has gone from no mobility to living an almost normal life, or a cancer patient who would not receive the prescribed level of chemotherapy they require without the aid of our drugs, I feel rewarded."

The opportunity to improve the health and welfare of animals and people — often in great numbers — combined with the latitude people have for growing and shaping their careers is ultimately what attracts such intelligent, inspired people to the College.

"I practiced in a mixed animal clinic for two years before realizing it wasn't as exciting or fulfilling as I thought it would be," says Barbara Davis, now the acting lab chief of the Laboratory for Women's Health for the National Institutes of Health. "I wanted to learn about the disease process—how it looks and what happens to make an animal sick."

"My career has developed based on my veterinary pathology training to broaden the outlook and approach to understanding how environmental factors affect the female reproductive system," Barbara Davis says. "Because of my background

Barbara Davis,
National Institutes of Health

What makes a good veterinary pathologist?

"There isn't one simple answer because there are so many different paths you can take. Everyone working in the field has a different skill set. We do share some attributes, though. You have to be inquisitive and you have to be willing to be wrong, take risks, ask questions and test hypotheses. Because my work is more experimental, I really like to follow up on questions. I'm not satisfied with just the diagnosis of a cancer. I want to know why the cancer occurred. I think that's a pretty typical quality among veterinary pathologists. Above all else, you have to be persistent."

Sonjia Shelly,
Veterinary Clinical Pathologist

What do you find most exciting about your work?

"I really enjoy the collaboration and detective work involved in diagnosis. With my work, I can't just look at a slide and feel comfortable that I know all there is to know about a patient. So I spend a lot of time on the phone with veterinarians to dig deeper. When I'm listening to the symptoms the veterinarian is seeing in a patient and looking at the results of the blood work, and together we're arriving at a defining moment, that's when I'm really having fun."

in animal pathology, I've been able to branch out into public health. Without my training, I wouldn't be able to have the impact I do—on science, women's health, my family, other women in the profession and as a teacher."

Though occupational opportunities have expanded the realm in which veterinary pathologists now exist, a great many of the College's members remain extremely devoted to improving the standard of care and diagnostics of animals as patients.

"I was continually coming up with questions that I didn't have answers to because I just didn't know enough," says Sonjia Shelly with regard to her clinical veterinary experience prior to pursuing ACVP board certification in clinical pathology.

In the diagnostic laboratory she now heads, which collects samples from surrounding veterinary clinics for analysis, Shelly enjoys passing along the knowledge she has gained to others.

"Everyday I teach," she says. "Every time I am speaking with a client I am teaching them about clinical diagnostics and interpretation of blood tests and what it might mean for the patient. And I enjoy doing so very much."

Honorary ACVP member and Nobel Prize laureate for his work in immunology, Peter Doherty, sums it up by saying: "I think veterinary science opens a lot of doors to a broad diversity of things people can do. Veterinary pathologists have a body of knowledge that nobody else has, which makes them enormously important, especially as we move forward developing vaccines for AIDS or now with SARS [Severe Acute Respiratory Syndrome] and in drug safety. I would certainly like to see more people who go into veterinary medicine pursue scientific research. It's a vitally important job."

Peter Doherty,

St. Jude Children's Hospital
and Nobel Prize Laureate

What should people know about veterinary pathology?

"Pathology is the basis of medicine. If you don't understand pathology, you don't understand medicine. Veterinary pathologists do a very important job in many respects, from animal medicine to scientific research. As a spokesman for science in my native Australia, I speak often about the importance of science and reason—its economic impact and its human value. Veterinary pathology is an essential component of it all."