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Dr. Steve Krakowka Retires After 41 Years of Service

After 41 years at The Ohio State University, three years (1971-1974) as an NIH post-doctoral trainee and 38 years as a faculty member, Dr. Steven Krakowka, Professor, Department of Veterinary Biosciences, College of Veterinary Medicine retired at the end of June, 2012. He will return to campus in September to continue research and teach general pathology to first year veterinary students under the new semester academic system. As Dr. Krakowka reflected on his career, a few quotes from Norman MacLean’s memoir, A River Runs Through It seemed to fit the occasion:

“My father was very sure about certain matters of the universe. To him all good things … trout as well as eternal salvation … come by grace and grace comes by art and art does not come easy.” Norman MacLean

Dr. Krakowka attended Washington State University (WSU) from 1964-67; was accepted into the WSU College of Veterinary Medicine in the spring of 1967, and graduated in 1971 with a DVM degree. While in veterinary school, Drs. Richard Piper (an OSU graduate), Travis McGuire (Texas A&M), and John Gorham (WSU) encouraged graduate pathology studies and a career in biomedical research. Dr. Charles Capen (WSU and OSU) recruited Dr. Krakowka to the graduate studies training program in the Department of Veterinary Pathobiology (now Biosciences), College of Veterinary Medicine at the Ohio State University in the fall of 1971. Dr. Adalbert Koestner, a pre-eminent comparative neuropathologist, was his advisor and a project involving the immunology and
neurobiology of canine distemper virus infection was developed. He was awarded his PhD degree at the end of winter quarter 1974 and offered the position as an Assistant Professor in the department. He successfully completed the ACVP certification examination (anatomic pathology) in 1976, was promoted to Associate Professor in 1978, and then to Professor in 1983.

Dr. Krakowka’s first years at OSU (1974 through 1988) were spent working on canine distemper virus (CDV) disease in gnotobiotic dogs, related canine virology, and immunology projects. He was a co-investigator then principal investigator (PI) on three NIH R01 grants (1978-1988) on the pathobiology of CDV infection as well as the PI of both a Morris Animal Foundation grant and a Kroc Foundation Multiple Sclerosis grant during that time. He published 141 papers during this time and three PhD graduate students (Drs. Michael Axthelm, Wolfgang Baumgartner, and Michael Oglesbee) received PhD training in his laboratory.

In 1987, the Gnotobiotic Life Laboratory, under his direction, began a series of experiments in gnotobiotic swine with *Campylobacter pyloridis* (now *Helicobacter pylori* or *Hp*), a human gastric bacterial pathogen implicated in the cause of type B gastritis and gastroduodenal ulcer (GDU) disease. 47 *Hp*-related publications were generated and a fourth graduate student (Dr. Kate Eaton) received her PhD. Another NIH R01 grant (1990-94) was awarded to Dr. Krakowka for *Hp* research; he was co-investigator on two NIH-SBIR therapy grants (1996-99 and 2001-02). Additional laboratory support for research was received from 18 pharmaceutical and drug discovery companies regarding therapeutic management of gastritis in *Hp*-infected gnotobiotic swine. During this time, Dr. Krakowka was a co-investigator on another R01 grant (1990-93) for the longitudinal long-term studies of the XSCID defect in gnotobiotic dogs.

In 1998, while still active in *Hp* and the XSCID studies, Dr. Krakowka, in collaboration with researcher in Canada and Europe, initiated a third project regarding the pathobiology of porcine circovirus type 2 (PCV2) infection using gnotobiotic swine as the animal model for disease. Through 2011, a total of 58 PCV2 publications were generated in his laboratory. PCV2 research was supported by an NIH R01 grant on virulence factors (2004-08), four grants from the National Pork Producers Council, numerous grants and contracts from biologics companies (chiefly Merial SAS, Lyon, and FR), along with resources generated as the only US member of two European Union Consortium Grants on PCV2 as a target for vaccination (2000-03) and PCV2 and food safety (2004-8).

In 2010, research programs were initiated on the pathobiology of porcine torque teno virus (TTV) infection (five publications) and more recently human noroviruses, the latter in collaboration with Dr. Jianrong Li of the OSU College of Agriculture. The norovirus pathogenesis of disease and vaccine protection project is well-funded by Dr. Li’s group; additional sources of support through the NIH and elsewhere are being pursued.
Dr. Krakowka has a total of over 300 publications, excluding meeting abstracts/presentations and three co-authored books, 252 of which were focused on three different and distinct infectious diseases: canine distemper virus, *Helicobacter pylori*, and PCV2. The remaining publications reflect his interest in infectious diseases of domestic animals. He has been recognized for both teaching (Norden Award, 1993) and research excellence by the OSU College of Veterinary Medicine. In 1995, he was named recipient of the Schunk-Prize for Veterinary and Human Research, Justus-Liebig University, Giessen, Germany and the DLT Smith Visiting Scientist Award, Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, Saskatchewan, Canada in 1997. In 2005, Dr. Krakowka was listed by *Science Watch* as the 11th most-cited author worldwide in Veterinary Medicine for the decade, 1995-2004. In 2008, he received the distinguished alumnus award from the College of Veterinary Medicine, Washington State University. Regarding external research funding, a total in excess of 10 million dollars in direct support over 38 years is a conservative estimate. Another unique feature and, in fact, a hallmark of his program is the loyalty and work ethic of his staff. Susan Ringler has 32 years (and counting) of service as his chief laboratory manager and Judy Dubena recently completed 30 years of service in gnotobiology, the last 20 years as the immediate supervisor of the Gnotobiotic Life Laboratory. Dr. Krakowka takes pride in the fact that four of his PhD students (Drs. Axthelm, Baumgartner, Oglesbee, and Eaton) have gone on to independent research careers in academics; two are currently chairmen of their respective departments.

"Poets talk about “spots of time,” but it is really fishermen who experience eternity compressed into a moment. No one can tell what a spot of time is until suddenly the whole world is a fish and the fish is gone." Norman MacLean

On his retirement, Dr. Krakowka states, “Retirement is a moment in time, but does not mean that the passion to work on the next new infectious disease will cease as professor emeritus. The norovirus and TTV projects are ongoing as is the move to develop the Gnotobiotic Life Laboratory into a campus-wide resource facility; I am committed to both of these long-term projects. Three life-long interests have nurtured my mind and soul. These are a passion for fly fishing, a love of the intellectual side of baseball, and the insights into biological processes that science provides. I am still passionate about fly-fishing and this will keep me entertained when not working in Goss.” These interests have been rewarded as my first son (Ben) developed into the finest fly fisherman I have ever seen, my second son (Isaac) loves baseball completely, even when his beloved Cleveland Indians lose, and one of my former graduate students is now the chairman of my department... not bad. The science has been pretty good and some pretty great players were critical members of a winning team. After all, emeritus is just an extra innings baseball game.”

“Eventually all things merge into one, and a river runs through it. The river was cut by the world’s great flood and runs over rocks from the
2011-2012 VBS Distinguished Graduate Awards

This year, two winners received distinguished graduate seminar awards. The first place award goes to Wei Liu (Chuck Brooks, advisor) for his presentation entitled "Structural Basis and Functional Impact of Ligand-Independent Dimerization for Human Prolactin Receptor.” Wei received his PhD in Autumn 2011 and is performing his post-doctoral studies at The Weill Medical College, Cornell University, in the Department of Developmental Biology. The second place winner is Dhohyung Kim (Stefan Niewiesk, advisor) for his presentation entitled "Mechanism of Maternal Antibody Inhibition and Vaccination Strategies in the Presence of Maternal Antibodies.” Dhohyung received his PhD in Winter 2012 and is post doctoral fellow in Boston at Harvard Medical School.

VBS HIGHLIGHTS FOR JULY:

Publications:


Berman-Booty LD, Garzel LM, Bergdall V, La Perle KM. A Prostate Fibromyxoid Sarcoma With Smooth Muscle Differentiation in a F344xBNF1 Rat. Vet Pathol 2012; 49(4): 642-647

Awards:

2012 Barber Fellow Recipients:

Two VBS graduate students were awarded the C Glenn Barber Fund for Protein Research for two years.

Nathan Dissinger for his proposal entitled: “Binding Partners of Hbz mRNA and Their Effect on Cellular Proliferation.” Nathan’s advisor is Dr. Patrick Green.
Eason Hildreth for his proposal entitled "Regulation of the hematopoietic stem cell niche by the nuclear localization sequence (NLS) and C-terminus of parathyroid hormone-related protein (PTHrP)." Eason is co-advised by Drs. Thomas J. Rosol (VBS) and Ramiro E. Toribio (VCS). Drs. Matthew Allen (VCS) and Larry Kirschner (College of Medicine) complete his PhD committee.

**VBS Summer Internship:**

This summer we are hosting Kari Deininger from Kenyon College in the Department of Veterinary Biosciences. Kari was selected as one of only six students chosen by the OSU Cancer Center for the Kenyon Summer Intern Program which is funded through a Pelotonia grant. She will have the opportunity to conduct research in Dr. Thomas Rosol's lab. She will be focusing on the pathogenesis of bone metastasis from prostate, head, and neck cancer and other active projects in the lab. Kari is planning on attending veterinary school after she graduates from Kenyon. We look forward to having Kari in the department this summer!

**Presentations:**

Several current and former VBS graduate students attended the 2012 Annual Meeting of the Society of Toxicologic Pathology in Boston.

The following graduate students presented posters:

Dr. Famke Aeffner - Effect of altered adenosine signaling on pulmonary function in CD73 and ADORA k.o. mice infected with influenza A (H1N1) [recipient of a student travel award]

Dr. Lisa Berman-Booty - The novel energy restriction-mimetic agent OSU-CG5
suppresses the growth of castration-resistant xenograft prostate tumors in vivo without evidence of systemic toxicity

The photo above was taken in front of Boston’s Trinity Church during an STP student-mentor-outing. From left to right: Mary Carsillo (mentor), Famke Aeffner, Bevin Zimmerman (mentor), and Kristin Lewis

Announcements:

Pelotonia: August 10-12

This year will be the fourth annual Pelotonia bike ride to raise money to support cancer research at The Ohio State University Comprehensive Cancer Center - James Cancer Hospital and Solove Research Institute. The College of Veterinary Medicine is sponsoring a team as part of Team Buckeye and alumni are welcome to join. All levels of bike enthusiasts are welcome! Last year, a record $13.1 million was raised. Dr. Michelle Harcha is team captain. To register, go to www.pelotonia.org and register as an individual. Then, contact Dr. Harcha at michelle.harcha@cvm.osu.edu with your rider ID, and she will add you to the team. To donate to the College of Veterinary Medicine Peloton, visit our Pelotonia profile.

Wellness News: July is UV Safety Month

Summer is a great time of year to think about skin safety. Ultraviolet (UV) radiation from the sun is the main cause of skin cancer and vision damage. Anyone can get skin cancer, but the risk is greatest for people with light-colored skin, blond or red hair and blue or green eyes. Take these steps to help prevent skin cancer:

- Stay out of the sun between 10 a.m. and 4 p.m.
- Use sunscreen with SPF 15 or higher
- Cover up with long sleeves, a hat and wear sunglasses
- Check your skin regularly for changes

To learn more, visit www.nursing.osu.edu/BWT

For comments or suggestions for our newsletter, please contact Ms. Elizabeth Hope, Program Assistant at hope.18@osu.edu Department of Veterinary Biosciences.