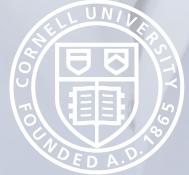
ANNUAL REPORT



Leadership Program for Veterinary Students

Preparing tomorrow's scientists and public health professionals, today

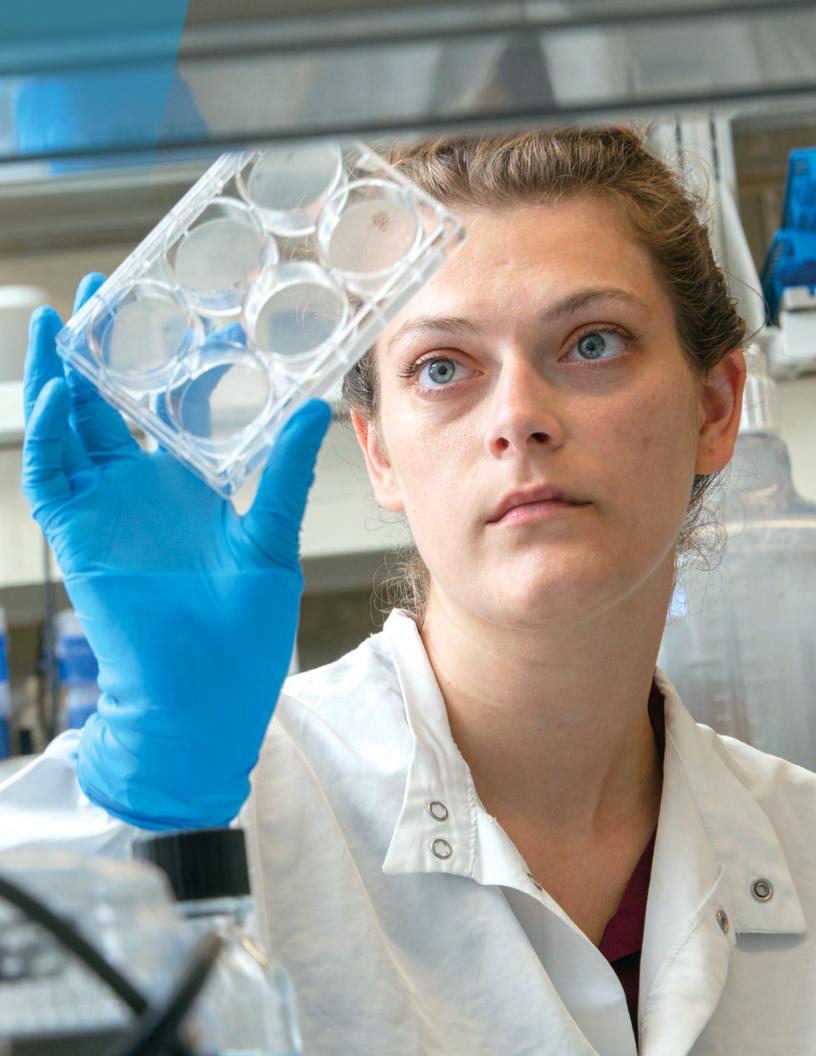




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Photography by Alexis Wenski-Roberts Additional photos by Colorado State University, John Enright/Baker Institute, Lindsay France/UP, Karsten Hueffer, Midland Animal Clinic, or provided

Produced by the Cornell University College of Veterinary Medicine

Cornell University is an equal opportunity, affirmative-action education and employer.

A Commitment to Excellence

The mission of the annual Cornell Leadership Program for Veterinary Students is to provide students with learning experiences that clarify and reinforce their commitment to careers in science. Since its inception, 32 years ago, over 700 alumni have participated.

hese individuals came from veterinary colleges in all parts of the world and many, as we had hoped, have become scientific leaders within the veterinary profession. We are delighted to report that 16 outstanding scholars participated in this year's program. It is too early to know where they will take their careers; however, based on the achievements of past participants we can expect great things from them.



Research is the major focus of the Leadership Program. Program scholars undertake individual research projects under the guidance of Cornell faculty members who are all highly successful scientists and experienced mentors. The university's world-class research facilities and intellectual environment support the scholars' research investigations. In addition to laboratory-based research, program scholars participate in modules and workshops that are designed to highlight employment and leadership opportunities for veterinary graduates in academia, government, and industry.

There remains a chronic shortage of veterinary scientists. For the future success of the veterinary profession, it is critically important that young veterinarians engage in biomedical research. Veterinary students are often much less informed about careers in biomedical research, public health, or the pharmaceutical industry. The goal of our program is to show the most talented veterinary students the attractions of biomedical research as a career and to provide them with practical career guidance on how to succeed.

JOHN S. L. PARKER, BVMS, PHD PROGRAM DIRECTOR



Acknowledgements

The Leadership Program for Veterinary Students is made possible through awards from federal agencies, foundations, Universities, and other private sector sponsors.

For their generous support this year, the program organizers thank:

Albert C. Bostwick Foundation	National Institute for Health
Dr. Geoff Letchworth	Royal Veterinary College
Cornell Feline Health Center	University of Cambridge
Cornell Canine Health Center	University of Edinburgh

The program organizers also thank the facilitators, counselors, and mentors who took part in the 2022 program. Thank you to Elaine Lu, the Program Student Coordinator, Jackie Wright, Sue Williams, Terri Denman Alexis Wenski-Roberts, and David Frank for their administrative and technical assistance. Finally, the organizers congratulate the participating scholars. Their academic achievements, coupled with their dedication to discovery and service, mark these individuals as future leaders of the veterinary profession.

From time-to-time, the program organizers have described elements of the program, strategies for their mentation, and outcomes of this initiative. **Promoting Science-Based Careers Through Student-Directed Learning.** McGregor, D. D. and Fraser, D. R. J. Vet. Med. Educ. 33; 294, 2006.

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Acquainting Veterinary Students With Careers in the Pharmaceutical Industry. McGregor, D. D., Fraser, D. R., Haven, M. L. and Hickey, G. J Vet. Med. Educ. 34; 139, 2007.

Career Paths of Alumni of the Cornell Leadership Program for Veterinary

Students. Fraser, D.R., McGregor, D.D. and Gröhn, Y.T. Vet. Record 163; 750, 2008.

Vocational choices made by alumni of the Leadership Program for Veterinary Students at Cornell University. Fraser D.R., Parker J.S.L., McGregor D.D. J Am Vet Med Assoc 249:759, 2016.

The Global PANDEMIC

THE 2020 PROGRAM was held virtually and scholars participated virtually by undertaking a research project that involved online data collection and processing. In addition, Scholars participated in a weekly journal club that was organized by Cornell graduate students.

PARTICIPANT	UNIVERSITY	MENTOR	DEPARTMENT	SPONSOR
Sarah Cover	Royal Veterinary College, UK	Laura Goodman	Baker Institute for Animal Health	NIH
Richard Adeleke	University of Ibadan, Nigeria	Rick Cerione & Mark Antonyak	Molecular Medicine	Bostwick Foundation
Nora Ahrens	Utrecht University, The Netherlands	Gerlinde Van de Walle	Baker Institute for Animal Health	Bostwick Foundation
Elise Arlt	University of Leipzig, Germany	Nozomi Nishimura	Biomedical Engineering	Bostwick Foundation
Lia Danielle Birston	University of Queensland, Australia	Renata Ivanek	Population Medicine & Diagnostic Sciences	Bostwick Foundation
Ariel Bohner	Cornell University	Michelle Delco	Clinical Sciences	NIH
Fiona Emdin	University of Sydney, Australia	Kevin Cummings	Population Medicine & Diagnostic Sciences	Bostwick Foundation
Lucy Fuchter	University of Sydney, Australia	Cynthia Leifer	Microbiology & Immunology	Bostwick Foundation
Rachel Gagliardi	North Carolina State University	Heidi Reesinck	Clinical Sciences	NIH
Senungwan Han	Seoul National University, South Korea	Chris Schaffer	Biomedical Engineering	Bostwick Foundation
Christina Kerkepass	Freie University, Germany	Hector Aguilar-Carreno	Microbiology & Immunology	Bostwick Foundation
May Sie Lim	University of Sydney, Australia	Yrjo Grohn	Population Medicine & Diagnostic Sciences	Bostwick Foundation
Harriet Long	Royal Veterinary College, UK	Ted Clark	Microbiology & Immunology	Bostwick Foundation
Josephine Marchand	Utrecht University, The Netherlands	Doug Antczak	Baker Institute for Animal Health	Bostwick Foundation
Kaitlyn McGarvey	Cornell University	Laura Goodman	Baker Institute for Animal Health	NIH
Robert Mraz	University of Sydney, Australia	Jon Cheetham	Clinical Sciences	NIH
Adam Rouan	Royal Veterinary College, UK	Colin Parrish	Microbiology & Immunology	NIH
Alexandra Schluter	Freie University, Germany	Bettina Wagner	Population Medicine & Diagnostic Sciences	Bostwick Foundation
Peyton Tam	Ontario Veterinary College	Scott Coonrod	Baker Institute for Animal Health	Bostwick Foundation
Yu-An Wei	University of Edinburgh	Robert Weiss	Biomedical Sciences	NIH
Natalie Zatz	Cornell University	Diego Diel	Population Medicine & Diagnostic Sciences	NIH

The **2020 & 2021** Leadership Programs were significantly impacted by the **COVID-19** pandemic, and no annual report is available for these two years.

THE 2021 PROGRAM was in-person, but was limited to students from the United States due to travel restrictions that prevented students from other countries from coming to Cornell for the summer.

PARTICIPANT	UNIVERSITY	MENTOR	DEPARTMENT	SPONSOR
Sarah Cover	Royal Veterinary College, UK	Laura Goodman	Baker Institute for Animal Health	NIH
Abigail DeJohn	Cornell University	Cynthia Leifer	Microbiology & Immunology	NIH
Rachel Gagliardi	North Carolina State University	Heidi Reesink	Clinical Sciences	NIH
Jennifer Hagan	Royal Veterinary College, UK	Scott Coonrod	Baker Institute for Animal Health	NIH
Yimei Lin	Cornell University	Rick Cerione & Marc Antonyak	Molecular Medicine	NIH
Alexandra Reddy	Virginia-Maryland College of Veterinary Medicine	Gerlinde Van de Walle	Baker Institute for Animal Health	NIH
Kirsten Young	Royal Veterinary College, UK	Colin Parrish	Baker Institute for Animal Health	NIH



2022 CURRICULUM

Program Activities

The Leadership Program combines faculty-guided research with student-directed learning through participation in modules, workshops, and group discussions. The activities encourage responsible leadership, critical thinking, and the development of teamwork skills.

he program also highlights graduate training opportunities calculated to promote the professional development of program alumni as independent scientists and public health professionals.

CAREER EXPLORATION

Career planning is featured prominently in the Leadership Program. Three meetings were convened to consider opportunities for veterinary graduates to broadly influence the veterinary profession through careers in the academy, government or industry.

Drs. Casey Cazer, David Fraser, and John Parker reviewed career options available to veterinary graduates who aspire to careers in science. They emphasized the importance of selecting a superior environment for graduate research training and a mentor who has a successful training record.

A companion meeting addressed issues related to graduate research training. Drs. Mason Jager, John Parker and Robert Weiss identified aspects of training that one should weigh in selecting an institution for graduate study; the subject of one's thesis research and an individual to guide one's graduate studies. This was followed up on later in the program during the Career planning Workshop. This meeting, facilitated by Drs. Jessica McArt, Mark Rishniw, and Gerlinde Van de Walle, provided an opportunity to reflect on the different aspects of advanced graduate training that were addressed in earlier meetings

In a separate meeting, a case study illustrated "translational science." The ensuing discussion led by Drs. Heidi Reesink and Erin Daugherity revealed how an individual trained to a high level of proficiency as both a clinical specialist and research scientist can extend the frontiers of knowledge through his or her capacity to define disease mechanisms at the cell or molecular level.





CAREERS IN INDUSTRY

Drs. Gerard Hickey, Emily Hickey, Peggy McCann, Natalie Hoepp, and Alex Byas discussed options for a variety of careers in the pharmaceutical industry. The students submitted questionnaires about their own experiences in veterinary science in advance and the facilitators then posed targeted questions to the students that explored their personal interests and qualifications for employment.

INFECTIOUS DISEASES

A workshop moderated by Drs. Terry Dermody, Sarah Caddy, Cynthia Leifer, and John Parker featured One Health-themed Scenarios focused on Rabies virus, Chagas Disease, Brucellosis, Hendra virus and monkeypox virus. These infectious agents are responsible for emerging or re-emerging diseases in humans and animals. Working in teams, the Program scholars conducted library research on the Scenarios, and then presented solutions to the questions raised in the scenarios and engaged and discussed each case with their peers and facilitators. Later in the day, the students met with the facilitators to discuss careers and the need for veterinary scientists in infectious disease research or veterinary public health.

LEADERSHIP ROLE PLAYING

Leadership and its attendant responsibilities are central considerations in the Leadership Program. Critical thinking and decision-making are featured in a scenario-based module that explores public health, economic, political, and social issues. Students and facilitators are assigned roles that oblige them to articulate, defend, or modify their views as the scenario unfolds. At the conclusion of the module, the facilitators comment on the exercise and discuss leadership principles they have adopted from their own careers. This year, Dr. David Fraser moderated the discussion with assistance from Mr. Michael Parker, and Drs. Franziska Grieder and Gerlinde Van de Walle.

PUBLIC HEALTH DISCUSSION

Drs. Karin Hoelzer, Emily Schmitt-Matzen, and Caroline Yancey discussed options for a variety of careers in Public Health. The facilitators discussed how advanced training, via either a Master in Public Health (MPH), a PhD, or both, provides veterinarians with endless opportunities to work in the field of Public Health in places such as academia, government agencies, or international organizations. They also described how a veterinary public health professional combines their knowledge of veterinary medicine, public health, and ecology, to monitor and control public health, food safety, and environmental threats.

NIH DISCUSSION

The National Institutes of Health and the Cornell University College of Veterinary Medicine have forged a partnership that offers program scholars the opportunity to learn about research conducted at the national premier biomedical research institution. This year's participants met online with representatives from the NIH for a half-day of scientific presentations and discussions.

NATIONAL VETERINARY SCHOLARS' SYMPOSIUM

The National Veterinary Scholars Symposium was held at the Rivercenter conference venue in St. Paul, Minnesota from August 4th to the 6th. Several of the Leadership Students attended the symposium and presented poster abstracts at the symposium, which attracts more than 500 veterinary students from around the United States. The symposium brings together students enrolled in summer research program where they present their research findings and hear talks and presentations from veterinary scientists.





PRESENTATIONS

Leadership Program scholars discussed their research in a series of presentations over two days at the conclusion of the program. A book prize was awarded to Amanda Flanagan for the best overall research achievement as judged by her underlying hypothesis, investigative protocol, results, and presentation. Additional prizes were awarded to Lucie Michel, Christina Kerkenpass, and Joséphine Marchand for exceptional achievements in integrative biology, cell biology, and molecular biology, respectively. Isabelle Towell was awarded a prize for the highest-ranking presentation by a scholar from the United Kingdom or Australia. The Selection Committee for the 2022 Leadership Program salutes these individuals and congratulates the entire group for their commitment to research and the excellence of their presentations.

Overall Program Prize — Amanda Flanagan Integrative Biology Prize — Lucie Michel UK-Australia Prize — Isabelle Towell Cell Biology Prize — Christina Kerkenpass Molecular Biology Prize — Joséphine Marchand







P R O G R A M A G E N D A

June 6	Opening Meeting and Ethics Discussion
	Welcome BBQ
June 7	Student/Mentor Breakfast
	Laboratory Orientation
June 11	Career Exploration Discussion
June 12	Leadership Pre-meeting
June 13	Role Playing Leadership Module
	Dinner with Facilitators
June 23	Meeting with NIH
June 27	Careers in Pharmaceutical Industry Workshop
June 28	Careers in Public Health
July 5	Research Project Previews
July 11	Infectious Diseases Workshop
July 21	Research Training Discussion
July 22	Wine & Cheese Gathering with Mentors
July 25	Translational Science Discussion
July 27	Reunion Dinner
August 4-6	National Veterinary Scholars Symposium
August 8	Career Planning
August 10	Research Presentations
August 11	Research Presentations
	Farewell Dinner

June 6– August 11, 2022

Conceptual Concerns

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Dr. Alex Byas Principal Scientist

Merck



Dr. Sarah Caddy

Assistant Professor Baker Institute for Animal Health, Cornell University



Dr. Casey Cazer

Assistant Professor Population Medicine & Diagnostic Sciences, Cornell University



Dr. Franziska Grieder

Director Office of Research Infrastructure Programs, NIH



Dr. Gerry Hickey

CEO Biomere (Biomedical Research Models, Inc.)



Dr. Emily Hickey

Principal Synergy Regulatory Services LLC



Dr. Cynthia Leifer

Professor Microbiology & Immunology, Cornell University



Dr. Mark Rishniw

Consultant Cardiology, Veterinary Information Network (VIN)



Dr. Peggy McCann

Associate Vice-President Regulatory Affairs, Merck





Dr. Jessica McCart

Associate Professor & Interim Chair Population Medicine & Diagnostic Sciences, Cornell University



Dr. Gerlinde Van de Walle

Associate Professor & Interim Director Baker Institute for Animal Health **Co-Director** Cornell Leadership Program for Veterinary Students, **Cornell University**





Dr. Emily

Epidemiologist

and Prevention

Schmitt-Matzen

Center for Disease Control



Dr. Erin Daugherity

Director

Center for Animal Resources and Education, Cornell University



Dr. Terry Dermody

Chair & Professor: Pediatrics University of Pittsburgh School of Medicine



Dr. David Fraser

Emeritus Professor & Dean Animal Science University of Sydney



Dr. Karin Hoelzer

Director

Policy and Regulatory Affairs, National Organization for Rare Disorders



Dr. Natalie Hoepp

Principal Scientist Merck



Dr. Mason Jager

Assistant Professor Population Medicine & Diagnostic Sciences, Cornell University



Dr. John Parker

Director Cornell Leadership Program for Veterinary Students, Cornell University



Mr. Michael Parker

Trustee Albert C. Bostwick Foundation



Dr. Heidi Reesink

Associate Professor Clinical Sciences, Cornell University



Dr. Robert Weiss

Professor Associate Dean for Graduate Education, Cornell University



Dr. Caroline Yancey

Associate Professor Public & Ecosystem Health, Cornell University

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2022 Program Scholars and Their Research





Jude Aboukhater

Investigating Potential Biomarkers for Early Detection of Canine Splenic Hemangiosarcoma

My first year of veterinary school consisted of a plethora of experiences that reaffirmed my goal to become a transformative veterinarian at the intersection of clinical care and cancer biology research. With this passion, I applied to the leadership program in order to hone my critical thinking and research skills.

This summer I had the privilege of working in Dr. Coonrod's lab researching canine splenic hemangiosarcoma (HSA), a cancer of the vascular endothelium known to be a "silent killer" due to the lack of early detection methods for it - often leaving patients that present at the onset of their clinical symptoms with a 5-7 months prognosis. My project aimed to investigate potential biomarkers that can help develop early detection assays and differentiate HSA from benign masses. Using ChRO-seq data, we chose to investigate the CAV-1 gene since not only was it upregulated in HSA patients, but was also detectable in blood serum making it an ideal candidate for a detection assay. I spent my time in the lab running assays to measure CAV-1 transcript levels of malignant HSA endothelial cells and tissues as well as protein expression assays. Although the results proved to be discouraging in cells, they were very promising when I went on to test CAV-1 in tissues, which gave me insight into the nature of the tumor microenvironment.

I would like to thank the leadership program directors as well as the incredibly supportive team I found at my lab: Dr. Coonrod, Kelly, Chitvan and Brooke.

FIELD/SPECIALIZATION / Baker Institute for Animal Health
award / NIH



Lauren Bauer

The Difference in Bovine HDL Quality and its Relation to $\mathsf{TNF}\alpha$ Cell Induced Death

The Cornell Leadership Program has been a unique opportunity to gain more hands-on laboratory experience. The various leadership workshops and dinners helped with global networking and helped to increase exposure to the wide variety of career paths within research.

This summer, I worked in Dr. Erica Behling-Kelly's lab in the Department of Population Medicine and Diagnostic Sciences. I investigated the effects of bovine high-density lipoprotein (HDL) samples collected from healthy and clinically ill dairy cattle during the postpartum period. I gained experience with cell culture techniques and treated bovine aortic endothelial cells with HDL and TNF α to observe if there was a difference in HDL from healthy and sick cattle.

Before participating in the Cornell Leadership Program, I just started my final year at the Royal Veterinary College in London. My areas of interest include veterinary epidemiology, transboundary animal diseases, and sustainable small ruminant production to assist female smallholder farmers in low- and middle-income countries. Although my interests remained the same during the program, I gained translatable and highly practical laboratory skills while the workshops provided more information about career opportunities in research and academia. Additionally, this program highlighted the importance of effective team collaboration, networking, pushing the boundaries of one's comfort zone, and taking the initiative while conducting experiments.

I am truly grateful for this opportunity and would like to thank all of the facilitators for organizing this year's program.

HOME UNIVERSITY / Royal Veterinary College CORNELL MENTOR / Erica Behling-Kelly FIELD/SPECIALIZATION / Population Medicine & Diagnostic Sciences AWARD / NIH

HOME UNIVERSITY / Cornell University

CORNELL MENTOR / Scott Coonrod



Rachel Dufour

Evaluation of Herpes Simplex Virus ICP22 Function in Early Transcription

This summer I had the pleasure of working in the lab of Dr. Joel Baines researching herpes simplex transcription. About two-thirds of the human population is infected with human simplex virus 1 (HSV-1). HSV-1 is able to establish latency, and once reactivated can produce symptoms intermittently. During productive lytic infection, HSV-1 transcription is mediated by host RNA polymerase II, which is recruited to initiate a temporal cascade of viral gene expression. The immediate-early genes are transcribed first, and their protein products are required to continue viral replication. The function of one of the immediate-early genes and its protein, ICP22, in early transcriptional repression is curious as it is not known to be a virion component and so must be rapidly synthesized. The aim of the summer study was to evaluate the early role of ICP22 in HSV-1 transcription.

I am a 3rd year veterinary student at Louisiana State University School with an interest in infectious disease and immunological research. I applied to the program with the aims of exploring different careers, developing laboratory skills, and growing understanding of the research process. The Leadership Program has allowed me to explore new career opportunities and forge lifelong friendships. I extend my deepest gratitude to Drs. Parker, Van de Walle, and Fraser for facilitating such an amazing summer, to Elaine and Jackie for their support, and to Drs. Dunn, Birkenheuer, and Baines for letting me learn from them again this summer!

HOME UNIVERSITY / Louisiana State University School of Veterinary Medicine

CORNELL MENTOR / Joel Baines

FIELD/SPECIALIZATION / Baker Institute for Animal Health

AWARD / NIH



Amanda Flanagan

Identifying Factors that Promote Peripheral Nerve Regeneration

Since starting veterinary school, I knew that I wanted to have a career in research. I was interested in neuroscience, but I also knew that I lacked the research skills necessary to pursue research in this field. Fortunately, I was able to develop my knowledge of neurobiological research with the Lin Lab during the 2021 Veterinary Investigator Program, and this year I was able to continue my research as part of the Veterinary Leadership Program.

Peripheral nerve diseases such as traumatic and sensory neuropathies have been found in dogs and cats. A problem in this field is finding treatments that can slow the progress of these diseases. The Lin Lab focuses on developing novel treatments that help heal neuropathies, and this summer we determined the effects of protocadherins (PCDH) on mouse dorsal root ganglion (DRG) regeneration. We tested the effects of PCDHs on dissociated DRG neurons and on an in vivo mouse model where we transected and repaired the sciatic nerve. Based on preliminary findings, the application of PCDHs may provide a starting point for developing treatments that can delay the progression of peripheral nerve diseases.

I am very grateful that I was selected to participate in the Leadership Program, which allowed me to further develop my research skills and exposed me to the variety of research career options for veterinarians. I would especially like to thank Dr. Lin for being an incredible mentor. Lastly, I would like to thank the NIH for funding my participation in this program.

HOME UNIVERSITY / Cornell University CORNELL MENTOR / David Lin FIELD/SPECIALIZATION / Biomedical Sciences AWARD / NIH

Leadership

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Lab Work



Dimitria Gomes

EMT and Metastasis: Understanding the role of CD73

The epithelial to mesenchymal transition (EMT), which converts epithelial cancer cells to more-mesenchymal derivatives, enables them to metastasize to distant organ sites. In addition, mesenchymal tumors that have activated the EMT program are resistant to immune checkpoint blockade therapies (ICB). Moreover, abrogating CD73 (an ectoenzyme that generates adenosine), from mesenchymal cancer cells, renders their corresponding primary tumors completely responsive to ICB. However, whether targeting CD73 expression on mesenchymal cancer cells can also sensitize metastases to ICB is unknown. This is particularly important as metastasis contributes to 90% of all breast cancer related fatalities. Moreover, while primary tumors often respond to ICB therapies, metastatic outgrowths are largely resistant. Thus, the central focus of my project in the Dongre Lab was to determine whether abrogation of CD73 in mesenchymal cancer cells, could potentiate the efficacy of anti-CTLA4 ICB at the site of metastasis. I worked with a murine model of experimental lung metastases and determined whether treatment with ICB affected metastatic burden and the composition of immune cells in the lung tumor microenvironment.

I would like to sincerely thank Dr. Anushka Dongre for generously providing opportunities, mentorship, and support this summer. Thank you also to all the lab members (Lynna, Katy, Caitie, Isabel) and program members. I am grateful to the National Institute of Health for the scholarship supporting my research. As a third-year veterinary student who plans to pursue a career in lab animal medicine, the Leadership Program was an invaluable experience in the world of research.



Christina Kerkenpass

Engineering Chimeric Antigen Receptor (CAR) Lymphocytes to Target Feline Infectious Peritonitis Virus

I applied to the Cornell Veterinary Leadership Program two years ago to learn more about career opportunities as a veterinary researcher and to improve my leadership skills. I am very grateful that I was able to attend before I graduate in 2023 despite the delay due to the Covid pandemic. My expectations of the program have been more than fulfilled. The workshops broadened my horizons and gave me many things to think about. I was also able to step out of my comfort zone and work on my presentation skills. It was a unique experience to meet like-minded people and to build new friendships. Natasha, thanks for being the good soul of the house.

My summer project at the Leifer lab focused on the disease caused by feline infectious peritonitis virus (FIPV). FIPV is a fatal coronavirus infection of cats for which there is no approved therapy beyond management of symptoms. My work this summer focused on providing proof-of-concept for genetically engineering feline immune cells to detect and kill virally-infected cells using a chimeric antigen receptor (CAR). CAR therapy has been used successfully to treat human cancer. Results from these studies could improve feline health and will demonstrate the utility of CAR therapy against acute coronavirus infections.

Thanks, Dr. Cindy Leifer, for hosting me in your very welcoming lab environment. Special thanks to Jamie. You took me under your wings and it was a great pleasure to work with you.

I would also like to thank Drs. Van de Walle, Parker, and Fraser for running this outstanding program.

HOME UNIVERSITY / Cornell University

CORNELL MENTOR / Anushka Dongre

FIELD/SPECIALIZATION / Biomedical Sciences

AWARD / \mathbf{NIH}

HOME UNIVERSITY / Frei Universität, Germany

CORNELL MENTOR / Cynthia Leifer

FIELD/SPECIALIZATION / Microbiology & Immunology

AWARD / Feline Health Center



Samantha Lee

Investigating Genetic Risk Factors or Canine Cancer

I began veterinary school with the goal of pursuing a career in veterinary research. However, by the end of my second year of school, I still did not know what career opportunities were available for a veterinary scientist. The Leadership Program was instrumental in introducing me to research-based veterinary careers that I was previously unaware of. Going forward, I plan to continue veterinary research through a genetics PhD or clinical pathology residency. The program also allowed me to become close friends with veterinary students from all over the world who have similar career interests as myself, and I plan to keep these connections long into the future.

I worked in the Evans Lab researching canine genetic diseases, such as cancer. Gastric cancer disproportionately affects Belgian Shepherd breeds, indicating a genetic predisposition. I performed genome wide association studies to identify sites in the genome that are linked to gastric cancer susceptibility in these Belgian breeds. I also studied histiocytic sarcoma, a lethal neoplasia, which affects 20-25% of Flat-Coated Retrievers (FCRs). Previous work identified genetic factors that increase the risk of developing histiocytic sarcoma. To validate the association between these factors and histiocytic sarcoma, I genotyped a UK cohort of FCRs. This data also allowed us to compare the frequency of risk factors across geographically distinct FCR populations, which is important because different combinations of these genetic factors alter a dog's risk of disease. Understanding the distribution of the risk factors in FCRs is necessary for accurately assessing individual disease risk.



CORNELL MENTOR / Jacqueline Evans



Joséphine Marchand

Major Histocompatibility Complex Haplotypes in the Nokota Horse Breed

As a rising last year veterinary student at Utrecht University, I applied to the Leadership Program to obtain more research experience, hoping I can combine my love for teaching, clinical work, and research in a career in academia.

This summer I worked in Dr. Doug Antczak's lab, on a project that studied the diversity of the major histocompatibility complex (MHC) region in the genome of the Nokota horse, descendants form a feral horse population in North Dakota of largely unknown genetic ancestry. By studying the extent of MHC variation, we can say something about the breed's diversity. We were able to confirm 12 new haplotypes, 9 of which had not been observed previously in any horse breed. Another big part of my work was helping to organize the International Havemeyer Horse Genome Workshop, a conference for 100 scientist who work in horse genetics.

The Leadership Program really helped open my eyes about the pros and cons to various careers for veterinarians outside of private practice. With my graduation in sight (summer of 2023), I was able to plan the start of the career with the help of the program. After a couple of years in an equine private practice, my aim is to apply to a PhD-position or a residency in (equine) reproduction.

It was a true pleasure working in the Antczak lab this summer. Dr. Antczak has shown me how valuable great mentorship can be. A special thank you to Don Miller, who was ever so patient with me explaining our experiments, and to Maya Kulikowski and my fellow Leadership students for the friendship. A sincere thank you to the program directors and I am grateful for the financial support of the Bostwick Foundation for this fantastic summer experience.

HOME UNIVERSITY / Utrecht University, The Netherlands CORNELL MENTOR / Doug Antczak FIELD/SPECIALIZATION / Baker Institute for Animal Health AWARD / Bostwick Foundation

FIELD/SPECIALIZATION / Baker Institute for Animal Health
award / NIH



Lucie Michel

Spatial and social structure in rewilded laboratory mice

Since high school, I have been interested in pursuing a career in research, and especially in behavior – the Leadership Program was then the perfect opportunity for me to strengthen my decision and to discover what research was like in a US lab. I was able to meet amazing people in the Sheehan lab and to work on a fascinating project.

Lab mice have been bred for generations to become more docile and to live in small, enclosed environments. We wanted to see the impact of genetics on spatial and social structure by observing a group of lab mice in a large outdoor enclosure for 10 days and by comparing them to wild mice. Thanks to RFID chips and cameras, we were able to watch them and describe the interactions to reveal their territoriality. We were able to show that female lab mice tend to explore much more than their wild counterparts, and that male lab mice spend more time before displaying the aggressive interactions that lead to a structured territory.

This project is in perfect line with the Master's degree in ecology, behavior and evolution that I will start next year. After my graduation, I aim to begin a PhD and enter a research-based career in this area. I would like to thank Dr. Michael Sheehan and Caleb Vogt, as well as the whole team, for their help and guidance.

HOME UNIVERSITY / D'Alfort School of Veterinary Medicine, France

CORNELL MENTOR / Michael Sheehan

FIELD/SPECIALIZATION / Neurobiology & Behavior

AWARD / Bostwick Foundation



Zoe Raw

Development of a novel vaccine to prevent feline coronavirus (FCoV) disease

Feline coronavirus (FCoV) is an RNA virus that infects cats worldwide. Its symptoms are usually mild, but mutations of the virus can cause a systemic acute inflammatory response, resulting in Feline Infectious Peritonitis (FIP), a serious disease that is usually fatal. I worked in Dr. Aguilar-Carreno's lab on viral entry and vaccine development, including the development of a vaccine to prevent FCoV. This was my first experience of working in a wet lab, and it has been a phenomenal experience. I have enjoyed being involved in worldleading research projects, working with some great scientists in the fields of virology and vaccine development. I am extremely grateful to Dr. Aguilar-Carreno for allowing me to work with his team, and to my mentor, Shahrzad Ezzatpour, for her expert tuition, patience, mentoring and support. I'm also extremely grateful to all of the other lab members for being so welcoming, kind and supportive.

The Leadership Program has been an incredible opportunity and has opened my eyes to the many options available to pursue research in veterinary sciences after I graduate. I'm really interested in how a One Health approach can improve both human and animal health, and I have a particular interest in how environmental changes may influence patterns of disease spread, emergence, and zoonotic transmission. Once I have finished my veterinary degree at Bristol, I hope to return to Cornell to undertake a post-doc focusing on the ecology of pathogen spillover, in relation to climate change and population-level animal behavior.

HOME UNIVERSITY / Bristol University, UK CORNELL MENTOR / Hector Aguilar-Carreno FIELD/SPECIALIZATION / Microbiology & Immunology AWARD / Feline Health Center



Amy Richardson

The microbiome and its relation to the dermatopathology of the Elephant seal (Mirounga angustirostris)

I am a final year Veterinary student at the University of Liverpool with a keen interest in pathology and research. I applied to the leadership program whilst carrying out an intercalated degree in Comparative Pathology at the Royal Veterinary College, hoping to learn new lab skills, specifically molecular techniques, and to gain a better understanding of residency, PhD and career opportunities in America. The program has provided all this and more; I have found an amazing group of people who are supportive of their peers and are energized by the work they do, I hope to collaborate with many of them in the future.

I participated in two projects in the Goodman Lab. The first aims to determine how the microbiome of elephant seals differs between healthy versus diseased skin to improve current understanding of marine mammal health and aid conservation efforts in these species. The second is a survey of US wild mustelids that uses PCR and genome sequencing to discover emerging coronaviruses infections that could potentially become pathogenic and determine if mustelids are reservoirs for these infections. I hope to apply the techniques I have learned in this program to a career in wildlife/ forensic pathology.

I would like to thank Drs. Goodman, Flint, and Olarte Castillo for their support and guidance throughout this project, as well as Drs. Parker, Fraser, and Van de Walle for their dedication to this program and facilitating such an incredible experience of all attendees. I would also like to thank the Bostwick Family Foundation for funding this experience.

HOME UNIVERSITY / University of Liverpool, UK CORNELL MENTOR / Laura Goodman FIELD/SPECIALIZATION / Baker Institute for Animal Health AWARD / Bostwick Foundation



Alexandra Schlüter

Analysis of host-virus interactions of SARS-CoV2

The Cornell Leadership Program has been an incredible opportunity for me to spend my summer abroad at one of the most prestigious universities in the world. I was able to make various international contacts and the numerous workshops, as well as the work in the lab, have helped shaping my decision-making regarding my future career. Ever since I was little, I have strived to make a change and this program has shown me how far you can expand your influence if you keep your eye on the goal!

In my summer of 2022, I had the opportunity to experience intensive and applied high-level research first hand. I worked as part of the Diel lab in an international team and was able to build an excellent skill set of practical techniques in the lab. I would like to say a special thank you to Dr. Diel for the opportunity to work in his lab and to Mohammed Nooruzzaman for the excellent supervision.

I was part of an exciting project focusing on how a vaccine against SARS-CoV-2 could be made more efficient in the future. While current vaccines focus mainly on the spike protein, the genome of SARS-CoV-2 contains a total of 31 proteins, many of which are unexplored in terms of function and antigenicity. Using the cat as a model, we are trying to determine which other proteins of SARS-CoV-2 trigger a strong immune response and would be suitable as a possible component of a future vaccine.

AWARD / Bostwick Foundation

HOME UNIVERSITY / Frei Universität, Germany

CORNELL MENTOR / Diego Diel

FIELD/SPECIALIZATION / Population Medicine & Diagnostic Sciences

Community

Career Counseling



Anna Sullivan

Effect of Petazzoni longitudinal ulnar splitting and bi-oblique dynamic proximal ulnar osteotomy on contact mechanics of incongruent canine elbows

Canine elbow dysplasia (ED) causes pain and lameness. One feature of ED is incongruity between the radius and the ulna, resulting in abnormally high contact pressures in the elbow. Many surgical therapies exist to attempt to normalize radioulnar incongruity. The Bi-Oblique Dynamic Proximal Ulnar Osteotomy (BOD-PUO) is commonly utilized in clinical cases and the newly-proposed Petazzoni Longitudinal Ulnar Splitting (PLUS) is purported to result in less postoperative lameness than the BODPUO. Neither procedure has been studied to determine whether they resolve incongruity despite both already being applied in live animals.

I developed a cadaveric study and began preliminary testing comparing the BODPUO and PLUS procedures to evaluate the procedures' ability to return the elbow contact areas and pressures to baseline after first creating incongruity. I completed a literature review and designed the methods based on similar studies, collaborated with colleagues to develop the machinery and protocol for the testing set-up, and performed dissections and surgical procedures to optimize the protocol. During pilot testing, weight bearing force was applied from the humerus to the distal limb while pressure sensors in the elbow measured contact area and contact pressures.

I am a rising second year at Cornell University College of Veterinary Medicine with an interest in orthopedics. I applied to the Leadership Program to learn more about clinical research and small animal orthopedic surgery. The time I spent working in Dr. Selena Tinga's laboratory and creating new friendships this summer was invaluable, and I am incredibly thankful for this opportunity.





Isabelle Towell

Behavioral habituation following repeated stimulation of dorsal raphe serotonin neurons

As someone who has wanted to be a vet for a long time, I always assumed that would entail clinical practice. However, the Leadership Program has enlightened me on the other possibilities out there for veterinarians, such as research or industry.

This summer I had the pleasure of joining the Warden lab to investigate the behavioral effects of chronic serotonin (5-HT) stimulation. To do so, we used optogenetics to stimulate 5-HT neurons in the dorsal raphe nucleus and measured the associated locomotor response in an open field environment. We intended to repeat stimulation daily over several weeks to observe the long-term effects of repeated 5-HT stimulation. However, during our tests we could not observe any optogenetic response due to yet undetermined factors. Although unfortunate, I have learned a lot about the methods used in behavioral assays and optogenetics and it has made me think about the brain, emotion and behavior in a different way. I hope this research is carried out in the future as it has important implications for understanding the link between serotonin and behavior.

I would like to thank Dr. Melissa Warden for welcoming me into her lab and sharing her passion for neuroscience and knowledge; Cole Roland for mentoring me; and Eileen Troconis and Deepika Gupta for helping me every step of the way. I would also like to thank the Program directors for organizing such an incredible experience and the other leadership students for making this summer so fun and memorable.

HOME UNIVERSITY / University of Edinburgh, UK CORNELL MENTOR / Melissa Warden FIELD/SPECIALIZATION / Neurobiology & Behavior AWARD / Bostwick Foundation



Lotta Truyen

Surveying sialic acid receptors to understand the cell and species tropism of canine influenza virus

When the Leadership Program ends, I will have finished my 8th of eleven semesters of my studies of veterinary medicine and by now I am quite sure that I will go into research. That is why it has been such an amazing chance to gain not only research experience but also to meet so many inspiring, like-minded, and interesting people along the way. Furthermore, I have learned so much about potential career options and really appreciate the given advice for future career decisions.

I felt very honored to work in the Parrish Lab at the Baker Institute. My project was meant to examine the diversity of sialic acid (Sia) receptors across species that may impact canine influenza viruses. The influenza hemagglutinin is responsible for attaching to Sia and infecting the cell. Different species express different Sia (Neu5Ac and Neu5Ac), but because dogs lack a certain enzyme, they can only express the Neu5Ac form. To determine the differential display of Neu5Ac, Neu5Gc, or other Sia, I used a variety of molecular probes of viral proteins which bind Sia. I used these probes to screen cell culture cells of varied animals, as well as tissue sections to determine the display and distribution of the Sia receptors, with a particular focus on respiratory tissues and salivary glands.

I would like to thank Brian, Colin, Rob, Femi, and of course Wendy, for their help and support! I am grateful to the Margaret and Richard Riney Canine Health Center for providing the financial support.

HOME UNIVERSITY / TiHO, Hannover, Germany

CORNELL MENTOR / Colin Parrish

FIELD/SPECIALIZATION / Baker Institute for Animal Health award / Canine Health Center



Sze Lynn Yuen

Effects of extracellular vesicles from triple-negative breast cancer cells on the tumor microenvironment

As a rising penultimate-year veterinary student at Cambridge University with an interest in pursuing specialty training in oncology, I applied to the Veterinary Leadership Program to gain knowledge about research careers in the veterinary profession, hone my professional skills, and build connections with like-minded individuals.

I completed my summer research in the Cerione lab, where one of the major focuses of the group involves studying extracellular vesicles (EVs). EVs have been shown to be important mediators of intercellular communication in various pathological and physiological processes. My project investigated the effect EVs generated by triple-negative breast cancer cells (MDA-MB-231 cell line) had on promoting cancer progression, particularly how they would affect non-cancerous cell types found within the breast tumor microenvironment. I discovered that the EVs from MDA-MB-231 cells contained the oncogene K-RAS, and these vesicles could promote signaling events in recipient normal mammary epithelial (MCF10A) cells. These findings suggest that EVs produced by highly aggressive cancers can impact the function of non-cancerous cells within the tumor microenvironment and promote cancer progression.

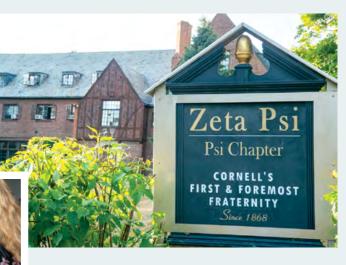
The program has been an invaluable experience; it has solidified my interest in translational science and provided insightful advice on how to best pursue my interest in cancer biology. I would like to thank all the Cerione lab members and especially, Drs. Rick Cerione, Marc Antonyak, and Fangyu Wang for their superb supervision and mentorship. I would also like to express my gratitude to Drs. Parker, Van de Walle, Fraser, and McGregor for organizing this fantastic program.

HOME UNIVERSITY / University of Cambridge, UK CORNELL MENTOR / Rick Cerione & Marc Antonyak FIELD/SPECIALIZATION / Molecular Medicine AWARD / Bostwick Foundation

Life Outside of the Laboratory

Apart from their intensive schedule, program scholars found time for many 'off-duty' activities.





Participants in the Leadership Program were housed in the **Zeta Psi fraternity house** on the Cornell Campus. They had exclusive use of the building for the ten-week period that the program was in session. Several events were scheduled there, typically in the evening in conjunction with a catered meal. The living arrangements enabled the scholars to socialize and relax in a convenient and pleasant campus environment.







Reunion Dinner

This year's reunion dinner was held on Wednesday, July 27th. Four past participants returned to enjoy a catered meal and lively conversation.





STAYING CONNECTED

Program Alumni

Contact with Leadership Program graduates is maintained in order to strengthen the professional network forged at Cornell and to uphold the program's tradition of excellence for the benefit of future scholars. Alumni are encouraged to make informed decisions about the advanced training needed to realize their professional goals.

The accompanying table lists degrees awarded to program graduates and degrees they are expected to receive after completing the academic programs in which they are presently registered. Not included in the list are degrees alumni received before they began their veterinary studies.

	NORTH AMERICAN ALUMNI (N=326)		OTHER COUNTRIES ALUMNI (N=353)		TOTAL ALUMNI (N=679)
DEGREE	NO.	%	NO.	%	%
PhD	52	16.0%	168	47.6%	32.4%
Dr. Med. Vet.	NA	NA	27	30.7%*	NA
MPH	15	4.6%	8	2.3%	3.4%
MS	11	3.4%	19	5.4%	4.4%

ACADEMIC QUALIFICATIONS OF ALUMNI OF THE LEADERSHIP PROGRAM (1990-2019)

*Numbers and percentage of German, Austrian, and Swiss Alumni (N=88)

The following table indicates that a substantial number of program alumni obtained residency training in the course of their graduate studies. One hundred and seven of these individuals were graduates of veterinary schools in North America while fifty-seven were alumni of schools located elsewhere in the world. It is tempting to speculate that the difference between the two groups reflects greater opportunities for residency training in North America although other, less obvious reasons may contribute to the observed difference.

RESIDENCY TRAINING OF ALUMNI OF THE LEADERSHIP PROGRAM (1990-2019)

	NORTH AMERICAN ALUMNI (N=326)		OTHER COUNTRIES ALUMNI (N=353)		TOTAL ALUMNI (N=679)
TRAINING	NO.	%	NO.	%	%
Residency	126	38.7%	64	18.1%	28.0%

PROGRAM ALUMNI

Where are they now?

Listed on the following pages are the positions currently occupied by program alumni (since 2020; see previous annual reports for earlier years) who have completed their veterinary education and are pursuing careers in science or public health.

2000

Beth (Bellohusen) Brenninkmeyer Chief Veterinary Officer, Guiding Eyes for the Blind, Somers, NY, USA.

Beatrice Bohme Veterinary Surgeon, University of Liège, Liège, Belgium.

Stephen Daley Senior Lecturer, Immunology, Faculty of Health, Queensland University of Technology, Brisbane, Australia.

Katy Evans Jane H. Booker Chair in Canine Genetics, The Seeing Eye, Morristown, NJ, USA.

Toby Floyd Veterinary Research Pathologist, Animal Health and Veterinary Laboratories Agency, Addlestone, Surrey, UK.

Rachel (Geisel) Allavena Associate Professor, Pathology, and Deputy Head of School of Veterinary Science, University of Queensland, Gatton, Australia. Samuel Hamilton Director, Occupational Disease and Chemicals Policy, Safework Australia, Canberra, Australia.

Natali Krekeler Senior Lecturer, Veterinary Reproduction, University of Melbourne, Werribee, Victoria, Australia.

Jamie Lovaglio Director Animal Services, Rocky Mountain Laboratories, Hamilton, MT, USA.

Richard Luce Program Director for the CDC Global Health Security Program in Democratic Republic of Congo.

Knut Stieger Professor, Ophthalmology, Justus-Liebig-Universität, Giessen, Germany.

Joost Uilenreef Head, Veterinary Anaesthesia and Pain management Services, Specialistische Dierenkliniek Utrecht, Netherlands.

Kevin Woolard Associate Professor, Pathology, Microbiology & Immunology, University of California, Davis, CA, USA.

2001

Julie Chevrette Associate Director, Animal Care, McGill University, Montreal, Quebec, Canada.

Karin Hoelzer Director, Public Health, Maximus, Washington, DC, USA.

Katherine Hughes

Lecturer, Pathology, University of Cambridge, Cambridge, UK.

Stephanie Janeczko

Vice President, Shelter Medicine Services at ASPCA, New York, NY, USA.

Charles Johnson

Pathologist, East Central Veterinarians, Cambridge, MN, USA.

Robert Klopfleisch

Professor, Pathology, Department of Veterinary Medicine, Institute of Veterinary Pathology, Freie Universität, Berlin, Germany.

David Loch Senior Associate, Patent and Trade-Marks Attorney, F.B. Rice, Brisbane, Australia. **Maeva May** Head of Policy, British Heart Foundation, London, UK.

Timothy Mishrall

Veterinary Research Scientist, Molecular Medicine, Lerner Research Institute, Cleveland Clinic, Cleveland, OH, USA.

Seung-Jin Park Seoul Metropolitan Government Veterinarian, Seoul, South Korea.

Judith Phillips Scientific Director, AlphaBioCom Medical Communications Philadelphia, PA, USA.

Kis (Robertson) Hale Chief Public Health Veterinarian, OPHS/USDA-

FSIS, Washington, DC, USA.

Simon Starkey Director, Veterinary Services & NY State Laboratory Animal Welfare Program, New York State Department of Health, Albany, NY, USA.

Jason Stayt Director, Veterinary Clinical Pathology, NovaVet Diagnostics, Perth, Australia.

Amy Warren Associate Professor Veterinary Pathology, University of Calgary, Canada.

Rachel (Windsor) Ballantyne Country Sales Manager, Saint Vincent Group General Trading LLC, South Africa.

Robin Yates Dean and Vice-Provost (Graduate Studies), Faculty of Veterinary Medicine, University of Calgary, Canada.

Bevin Zimmerman

Director, Pathology, Charles River Laboratories, Mansfield, OH, USA.

2002

Karin Darpel Head Orbivirus Research The Pirbright Institute, Guildford, UK.

Karyn Havas Director, Veterinary Epidemiology Pipestone Veterinary Services, Ithaca NY, USA.

Steven Laing Senior Pathologist- Scientist, Genentech, San Francisco, CA, USA.

Anne Lo Consultant, Hong Kong.

Michael Mienaltowski Associate Professor, Animal Science, University of California, Davis, CA, USA.

Andrew Miller Associate Professor, Veterinary Pathology, Cornell University, Ithaca, NY, USA.

Simon Priestnall

Professor, Pathology, Royal Veterinary College, London, UK.

Kelly Still-Brooks Assistant Professor, Dairy/Livestock Production Medicine, Colorado State University, Fort Collins, CO, USA.

Barbara Taennler (Wehrli) Chief Veterinary Officer, Poultry, GalliVET SA,

Switzerland.

Christine (Trezise) Bayley Veterinary Pathologist, Gribbles Pathology, Melbourne, Australia. Vivienne Yau Associate Professor, Veterinary Medicine, Western University of Health Sciences, Pomona, CA, USA.

2003

Rosie Allister Director of Allister Research and Consulting, Edinburgh, UK.

John Baker Senior Vice President, Product Portfolio & Innovation, Abcam, Cambridge, UK.

Patrick Carney Assistant Professor, Community Practice Service, Cornell University, Ithaca, NY, USA.

David Gardiner Veterinary Pathologist, ZNLabs Veterinary Diagnostics, Salt Lake City, UT, USA.

Erica Gruber Assistant Professor, Clinical Pathology, North Carolina State University, Raleigh, NC, USA.

Carol Haak Clinical Pathologist, Oklahoma State University, Stillwater, OK, USA. **Lindsey Hamilton** Clinical Pharmacologist, Invetus Pty Ltd, Canberra, Australia.

Michael Krahn Professor, Institute for Medical Cell Biology, University of Münster, Germany.

Heather Martin Assistant Professor, Weill Cornell Medical College, New York, NY, USA.

Siobhan (Mor) La Roche Reader in One Health Epidemiology and Population Health, University of Liverpool, UK.

Kate Patterson Senior Visual Science Communications Officer, Garvan Institute of Medical Research, Sydney, Australia.

Karla Stucker Science Teacher, Waterford School, Sandy, UT, USA.

Lyn Wancket Scientific Director, Charles River Laboratories, Raleigh, NC, USA.

Christianne Wrann Assistant Professor, Medicine, Harvard Medical School, Boston, MA, USA.

S The program ignited my interest in infectious diseases and opened my mind to professional aspects of veterinary medicine that I had not yet considered.

700+

Leadership Program Alumni

2004

Anton Asare Veterinary Medical Officer, USDA APHIS Veterinary Services, Lexington, SC, USA.

Carolin Block Business Solutions Leader, Roche, Basel, Switzerland.

Matthew Breed Senior Animal Program Veterinarian, Frederick National Laboratory for Cancer Research, Washington, DC, USA.

Andrew Broadbent Assistant Professor, Virology, University of Maryland. College Park, MD, USA.

Karla Dreckmann Senior Scientist Pharmaceuticals, Boehringer Ingelheim, Hannover, Germany.

Annika (Krengel) Weigold Zoo Veterinarian, Wilhelma, Stuttgart, Germany.

Robert Ossiboff Clinical Assistant Professor, University of Florida, Gainesville, FL, USA.

Allison Rogala Assistant Professor, Pathology, University of North Carolina, Chapel Hill, NC, USA. **Duncan Russell** Associate Professor, Pathology, Oregon State University, Corvallis, OR, USA.

Baukje Schotanus Freelance Medical Consultant, Utrecht, Netherlands.

Katherine Scollan Associate Professor, Veterinary Cardiology, Oregon State University, Corvallis, OR, USA.

Ivana (Sekis) Calice Academic Clinician, Department of Anaesthesiology and Perioperative Intensive-Care Medicine, Vetmeduni, Vienna, Austria.

Katy Townsend Associate Professor, Small Animal Surgery, Oregon State University, Corvallis, OR, USA.

Claire (Underwood) van Eps Assistant Professor, Large Animal Diagnostic Imaging, University of Pennsylvania, West Chester, PA, USA.

James Weemhoff Senior Scientist, Hill's Pet Nutrition, Topeka, KS, USA.

2005

Krystal (Allen) Worthington Laboratory Animal Veterinarian, NIMH, Bethesda, MD, USA.

Melanie Ammersbach Veterinary Pathologist, University of California, Davis, CA, USA.

Hannah Bender Veterinary Pathologist, Taronga Conservation Society, Sydney, Australia.

Hille Fieten Director, Genetics of Companion Animals, Utrecht University, Netherlands.

Hilarie Jerauld MS Candidate, Medical Research, Dept. of Medical Biochemistry and Microbiology, Uppsala University, Sweden.

Amanda Kreuder Assistant Professor, Veterinary Microbiology & Preventive Medicine, Iowa State University, Ames, IA, USA.

Rebecca Mitchell Representative in Georgia State Legislature, Atlanta, GA, USA.

Emily (Nestor) Truckenbrod Assistant Professor, Epidemiology, University of Minnesota, St Paul, MN, USA.

Marieke Opsteegh Scientist at RIVM National Institute for Public Health and the Environment, Utrecht, Netherlands.

Emily Orchard-Mills Service Specialist, Federal. Department of Agriculture, Fisheries and Food, Canberra, Australia.

Trisha Oura Assistant Professor, Diagnostic Imaging, Tufts University, Boston MA, USA.

Bo Raphael Biosecurity Officer, Department of Agriculture, Fisheries and Food, Canberra, Australia.

Johanna Rigas Veterinary Clinical Pathologist, Altasciences, Seattle, WA, USA.

Klara Saville Head of animal health, animal welfare and community development at Brooke, Action for Working Horses and Donkeys, London, UK.

Catherine Trickett

Lecturer, Veterinary Nursing & Farriery, Myerscough College, Preston, UK.

Nina Weishaupt Head, In Vivo Pharmacology, Xenon Pharmaceuticals Inc., Port Coquitlam, British Columbia, Canada.

2006

Stephanie Brien PhD candidate, Conservation Medicine, University of Edinburgh, UK.

Onno Burfeind Veterinary Service Specialist, Department of Agriculture, Futtercamp, Germany.

Bronwyn Clayton Senior Policy Analyst, Agriculture Industry Development, Department of Jobs, Precincts and Regions, Melbourne, Australia.

Alexander Corbishley

Senior Lecturer in Farm Animal Practice, The Royal (Dick) School of Veterinary Studies, University of Edinburgh, UK.

Janny de Grauw

Assistant Professor, Anaesthesiology, Utrecht University, Netherlands.

Louise Sullivan (Fitzgerald) Veterinary Pathologist, Vetnostics QML Pathology, Murarrie, Queensland, Australia.

Eva-Maria Laabs-Poos Government Veterinary. Officer, Oldenburg, Germany.

Gelja (Maiwald) Surma

Head of Business Development, SYNLAB.vet GmbH, Berlin, Germany.

Richard Meeson Professor Orthopedics, Royal Veterinary College, London, UK.

Ashley (Neary) Hartley Assistant Professor Small Animal Clinical Science, University of Tennessee, Knoxville, TN, USA.

Joseph Neary Senior Lecturer, Department of Livestock Health and Welfare, University of Liverpool, UK.

Tiffany Reed Veterinary Pathologist, Cook Research Incorporated, West Lafayette, IN, USA.

William Sander Assistant Professor, Preventive Medicine and Public Health, University of Illinois, Urbana-Champaign, IL, USA.

Lauren Sawchyn Medical Illustrator, Rowley, MA, USA.

Justine Shotton President, British Veterinary Association, Colder, London, UK.

2007

Patrick Ayscue Senior Biosecurity Fellow, Chan Zuckerberg Biohub, San Francisco, CA, USA.

Sonja Broer Professor, Pharmacology & Toxicology, Free University, Berlin, Germany.

Stephen Burr Postdoctoral Fellow, MRC Mitochondrial Biology Unit, Cambridge, UK.

Sarah Caddy (Wang) Assistant Professor, Virology, Baker Institute, Cornell University, Ithaca, NY, USA.

Elva Cha Associate Director, Global HEOR, Deciphera Pharmaceuticals Boston, MA, USA.

Boran Choi Research Fellow, National Institute Neurological Diseases and Stroke, NIH, Washington, DC, USA.

Ludwig Groebler Manager Customer Training, Intuitive Surgical, Hamburg, Germany.

Laura Grogan Research Fellow, Griffith University, Southport, Queensland, Australia.

Kate Johnson Lecturer, Animal Science, University of Reading, UK.

Kristin Lewis (Wilson) Principal Pathologist, Amgen, San Francisco, CA, USA.

Kay Russo Ruminant Research Specialist, Land O'Lakes Inc., Fort Collins, CO, USA.

Mihai Swift PhD candidate, Conservation Biology, Natural History Museum & King's College, London, UK.

Ryan Traslavina Pathologist, Antech Diagnostics, Hunt Valley, MD, USA.

Maria Volkmann Research Associate, Robert Koch Institute, Berlin, Germany.

Annemarie Voorbij Assistant Professor, Small Animal Internal Medicine, Utrecht University, Netherlands.

Shen Yang Senior Research Scientist, Cell Biology, Eidgenössische Technische Hochschule, Zürich, Switzerland.

Jennifer Bernard

Pathologist, IDEXX Laboratories, Memphis TN, USA.

Jennell Romero (Bigrigg)

Pathologist, Charles River Laboratories, Ashland, OH, USA.

Lucie Chevallier Associate Professor, Molecular and Medical Genetics, Ecole Nationale Vétérinaire d'Alfort, Maisons-Alfort, Île-de-France, France.

Katharina Dinger Animal Welfare Officer, University of Cologne, Germany.

Johanna Dups-Bergmann Research Scientist, Institute of Epidemiology, Friedrich-Loeffler-Institut, Federal Research Institute for Animal Health, Greifswald-Insel Riems, Germany.

66 The program was one of the most important experiences of my life.

-JOANNA MIECZKO, 2008

2008

Rachel Acciacca Major, U.S. Army, Critical Care Specialist, Fort Campbell, TN, USA.

Hannes Bergmann

Research Scientist, Institute of Epidemiology, Friedrich-Loeffler-Institut, Federal Research Institute for Animal Health, Greifswald-Insel Riems, Germany. **Lisa Holz** Postdoctoral Fellow, Virology, University of Tuebingen, Stuttgart, Germany.

Jennifer Irving Pathology Resident, Royal Veterinary College, University of London, UK.

Sally Ann Iverson

Preventive Medicine Fellow, Centers for Disease Control and Prevention, Phoenix, AZ, USA. Joshua Leach MRC Clinical Research Fellow, Beatson Institute for Cancer Research, Glasgow, UK.

Ming Lui Clinical Veterinarian and Animal Health Team Manager, University of California, San Francisco, CA, USA.

Katherine McKelvey Academic Clinician, Theriogenology, North Carolina State University, Raleigh, NC, USA.

Joanna Mleczko Veterinary Research Scientist/ Study Director, Lovelace Biomedical Institute, Albuquerque, NM, USA.

Dallas New Veterinary Epidemiologist, Operational Solutions for Primary Industry, Wellington & Wairarapa, New Zealand.

Annelies Nijdam

Postdoctoral Fellow, Epidemiology, Antoni van Leeuwenhoek Netherlands Cancer Institute, Utrecht, Netherlands.

Kimberley Schiller Senior Manager, Accenture Health and Public Service, London, UK.

James Swann Postdoctoral Fellow, Pharmacology, Kennedy Institute of Rheumatology, University of Oxford, UK.

Heidi Vesterinen Senior Veterinarian, Medtronic, Minneapolis, MN, USA.

2009

Guen Bradbury Innovation consultant, Innovia Technology, Cambridge, UK. Floryne Buishand Lecturer, Small Animal Surgery, Royal Veterinary College, London, UK.

Nancy Erickson

Postdoctoral Fellow, Institute of Veterinary Pathology, Department of Veterinary Medicine, Freie Universität, Berlin, Germany.

Jenna Gettings Postdoctoral Research

Scientist, University of Georgia, Atlanta, GA, USA.

Laura Gey Postdoctoral Scientist, Pharmacology, Medical Centre, University of Bonn, Germany. Katrina Stewart Resident/ MS Candidate, Purdue University College of Veterinary Medicine, Lafayette, IN, USA.

Jakob Trimpert Postdoctoral Scientist, Department of Veterinary Medicine, Institute of Virology, Freie Universität, Berlin, Germany.

Sarah van Rijn Academic Clinician, Small Animal Surgery and Orthopedics, Utrecht University, Netherlands.

Jolanda Verhoef Veterinary Pathologist, Charles River Laboratories, Montreal, Canada.

S The Leadership Program gave me the confidence and vision to pursue further training in science.

-SARAH WOOD, 2011

Shuhei Ito Technical Service Specialist, Pfizer Co. Tokyo, Japan.

Emily Jeanes Resident, Ophthalmology, Royal Veterinary College, London, UK.

Greta Schmoyer Inspector, USDA, APHIS, Knoxville, TN, USA.

Elizabeth (Slack) Davenport Chartered Patent Attorney, J A Kemp - Patent and Trade-Mark Attorneys, Oxford, UK. Hans Winkler Project Manager, Regulatory Affairs and Toxicology, WT Consulting, Zürich, Switzerland.

2010

Jennifer Cassano Assistant Professor of Equine Internal Medicine, University of California, Davis, CA, USA.

Gregory Dickens Innovation Consultant, Innovia Technology, Cambridge, UK. Line Greve PhD Candidate, Equine Medicine, Royal Veterinary College, London UK.

Sarah Hooper Assistant Professor Clinical Medicine, Ross University School of Veterinary Medicine, St. George Basseterre, Saint Kitts.

Sanne Hugen Resident, Medicine, Utrecht University, Netherlands.

Marie Killerby

Emergency Public Health Epidemiologist, Centers for Disease Control and Prevention, Atlanta, GA, USA.

Anne Kimmerlein

Epidemiologist, VCA Animal Hospitals, Los Angeles, CA, USA.

Brina Lopez Assistant Professor, Large Animal Medicine, Midwestern University, Athens, GA, USA.

Kathleen O'Hara PhD Candidate, Epidemiology, UC Davis, CA, USA.

Gertje Petersen

Postdoctoral Researcher / Consultant, AbacusBio, Dunedin, New Zealand.

Eliza Smith Program Manager, Kyeema Foundation, Brisbane, Queensland, Australia.

Luise Steltzer (Seeker)

Postdoctoral Research Scientist, Cell Biology, Scottish Centre for Regenerative Medicine, Edinburgh, UK.

Daniel Woodburn Pathologist, Labcorp, Somerset, NJ, USA.

2011

Angel Abuelo Sebio

Associate Professor, Cattle Health and Well-being, Michigan State University, East Lansing, MI, USA.

Hannah Atkins Assistant Professor, Pathology, University of North Carolina, Chapel Hill, NC, USA.

Jessica Beck Postdoctoral Research Scientist, Oncology, National Cancer Institute, NIH, Bethesda, MD, USA.

Alyssa Chandler Assistant Professor, Veterinary Medicine, Cornell University, Ithaca, NY, USA.

Timothy Chua Business Manager, A*STAR - Agency for Science, Technology & Research, Singapore.

Scott Dudis Major, U.S. Army, Resident, Animal Welfare, Walter Reed Army Institute of Research, Silver Spring, MD, USA.

Kristin Elfers Lecturer, Institute of Physiology, University of Veterinary Medicine, Hannover, Germany.

Ellen Hart Veterinary Medical Officer, Food and Drug Administration, Washington, DC, USA.

Linda Huang Pathologist, Antech Diagnostics, Ithaca, NY, USA.

Marion Leiberich Postdoctoral Research Scientist, University of Pretoria, South Africa.

Celine Mortier PhD candidate, Molecular

Immunology, University of Ghent, Belgium.

Maureen O'Brien Pathologist, Charles River Laboratories, Frederick, MD, USA.

Karina Radefeld (Stein) Postdoctoral Research Scientist, University of Veterinary Medicine, Vienna, Austria.

Heather Rhoden Clinical Instructor, NC State University, Raleigh, NC, USA.

Viktoria Rungelrath Postdoctoral Scientist, Center for Translational Medicine, University of Montana, Hamilton, MO, USA.

Lauren Smith Clinical Assistant Professor, Radiation Oncology, Texas A&M University, College Station, TX, USA.

Michelle White Head Genomics, FidoCure, Palo Alto, CA , USA.

Sarah Wood Research Chair in Pollinator Health, Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, Canada.

Erasmus zu Ermgassen

Postdoctoral Researcher, sustainable livestock & supply chains, Université Catholique de Louvain, Ghent, Belgium.

2012

Luca Bertzbach

Postdoctoral Research Scientist, Leibniz-Institut für Virologie, Hamburg, Germany. 32

Years of the Leadership Program

Deborah Burnett Senior Lecturer, Immunology, St Vincent Clinical School, University of New South Wales, Sydney, Australia.

Iris Chan Resident, Medicine, Langford Vets Small Animal Referral Hospital, Langford, UK.

Emily Cornwell Veterinary Medical Officer, Food and Drug Administration, Washington, DC, USA.

Anna Maria Gartner Laboratory Animal Veterinarian, Max-Planck Institute of Immunobiology and Epigenetics, Freiburg, Germany.

Anja Gemmer PhD Candidate, Neurology, Max Planck Institute for Brain Research, Frankfurt am Main, Germany.

Anna Goodroe Laboratory Animal Specialist (Primates), Texas Biomedical Research Institute, San Antonio, TX, USA.

Robert Holly Military Health Care Provider, Fort Bragg, NC, USA.

Laura Schmertmann Veterinary Compliance Officer, NSW Department of Primary Industries, Sydney, Australia.

Lucas Smolders

Postdoctoral Researcher, Small Animal Surgery, University of Zurich, Switzerland.

Hanna Castro (Telama) Development Manager, Valio, Helsinki, Finland.

Adam Werts Principal Scientist, Target Animal Safety, Zoetis, Parsippany, NJ, USA.

2013

Casey Cazer Assistant Professor, Epidemiology, Cornell University, Ithaca, NY, USA.

Frances Chen Head, Veterinary Translational Medicine, Cellular Longevity, Inc., San Francisco, CA, USA.

Iva Cvitas Resident, Pathology, University of Berne, Switzerland.

Angus Fisk Postdoctoral Researcher, Nuffield Department of Clinical Neurosciences, Sleep and Circadian Neuroscience Institute, University of Oxford, UK.

Krystana Foh Data Engineer, Benocs, Berlin, Germany.

Lucy Hardwick Research Scientist, Defense Science Laboratory, Porton Down, UK.

50 Countries Represented

Silvia Janska Co-Founder. CEO, Flexee Ltd, Croydon, UK.

Wilfred Leung Scientist, Oncology Biomarker Discovery, Genentech, San Francisco, CA, USA.

Jenny Munhofen Major, U.S. Army, Critical Care Specialist, Fort Campbell, TN, USA.

Tessa Procter PhD Candidate, Pathology, University of Edinburgh, UK.

Hendrik Sake Veterinary Service Specialist, Swine, HIPRA, Hannover, Germany.

Neharika Saxena PhD Candidate, Epidemiology, Rajasthan University, Jaipur, India.

Svenja Wiechert (Sake) Medical Writer, SKC Consulting, Hannover, Germany.

2014

Alicia Braxton Postdoctoral Research Scientist Johns Hopkins University School of Medicine, Baltimore, MD, USA. **Amy DiDomenico** Animal Pathologist, Amtech Diagnostics, Cary, NC, USA.

Laura Eling Postdoctoral Scientist, European Synchrotron Radiation Facility. Grenoble, France.

Alexandra Jaarsma Veterinarian, Equine Health and Performance Centre, University of Adelaide, Roseworthy, Australia.

Rachael Labitt Laboratory Animal Specialist, National Institute of Child Health and Human Development, Washington, DC, USA.

Chelsea Landon Staff Veterinarian, Laboratory Animal Research, Duke University Medical Center, Durham, NC, USA.

Fabian Lean Veterinary Pathologist, Animal and Plant Health Agency, Addlestone, UK.

Emily Milodowski Postdoctoral Scientist, Oncology, University of Bristol, UK.

Dimo Naujokat Veterinary Business Administration, Tyd FINANZ, Hannover, Germany. **Isabel Ralle** PhD candidate, Cardiology, Hannover Medical School, Hannover, Germany.

Marit van den Berg PhD Candidate, Medicine, Utrecht University, Netherlands.

Vanessa Oakes (Wallace) Clinical Instructor, Pathology, VA MD College of Veterinary Medicine, Blacksburg, VA, USA.

Lucy Watson Postdoctoral Scientist, Stem Cell Biology, Royal Veterinary College, London, UK.

Jonathan Wilson PhD Candidate, Pathology, University of Georgia, Athens, GA, USA.

2015

Souheyla Benfrid Virology project manager - Foot and mouth disease, National Health Security Agency – ANSES, Paris, France.

Elise Den Boer PhD Candidate, Animal Genetics, Utrecht University, Netherlands.

Alexa Edmunson Clinical Veterinarian, Charles River Laboratories, Ashland, OH, USA.

Simon Frueh Postdoctoral Fellow, Virology, Cornell University, Ithaca NY, USA.

Crystal Gergye Laboratory Animal Veterinarian, Emory University School of Medicine, Atlanta, GA, USA.

Elena Gräf PhD Candidate, Virology, University of Veterinary Medicine, Hannover, Germany. **Yun Ha Hur** Postdoctoral Student, Immunology, Rockefeller University, New York, NY, USA.

Franziska Kaiser PhD Candidate, Virology, Research Center for Emerging Infections and Zoonoses, University of Veterinary Medicine, Hannover, Germany.

Jocelyn Kessels Chief of Staff, Delivery Associates, London, UK.

Peter Kilfeather Postdoctoral Scientist, Neurology, University of Oxford, UK.

Julia Sehl-Ewart Pathologist, Friedrich-Loeffler Institute, Greifswald, Germany.

Sandra Stelzer PhD Candidate, Virology, Robert Koch Institute, Berlin, Germany.

Alice Watson PhD Candidate, Endocrinology, Royal Veterinary College, London, UK.

Katriina Willgert PhD Candidate, Epidemiology, University of Cambridge, UK.

2016

Carolyn Bender Research Veterinarian, Crown Biosciences Inc., New Iberia, LA, USA.

Georg Beythien Resident, Pathology, University of Veterinary Medicine, Hannover, Germany.

Ariana Boltax Assistant Professor, Clinical, Tufts Veterinary School, Boston, MA, USA. Kristina Ceres Combined DVM/PhD Candidate, Computational Epidemiology, Cornell University, Ithaca, NY, USA.

Elizabeth Goldsmith

Resident, Pathology, Washington State University, Pullman, WA, USA.

Svenja Maier Consultant, Veterinary Clinic Management, Baden-Württemberg, Germany.

Anna Molyneux Head, Official Controls Regulation Policy & Legislation, Department for Environment, Food and Rural Affairs, London, UK.

Christopher Shiprack Resident, Clinical Pathology, University of Minnesota, Minneapolis, MN, USA.

Michelle Teunissen Postdoctoral Scientist, Regenerative Medicine, Utrecht University, Netherlands.

Brittany Zumbo Resident, Oncology, Cornell University College of Veterinary Medicine, Ithaca, NY, USA.

2017

Ann DiPastina Resident, Food Animal Field Service, University of Pennsylvania, New Bolton Center, PA, USA.

Samantha Ellis Veterinary Officer, Department of Agriculture, Forestry and Fisheries, Canberra, Australia. Luca Fortuna Resident, Medicine, Highcroft Veterinary Referrals, Bristol, UK.

Rachel Garty Resident, Pathology, Royal Veterinary College, London, UK.

Jeffrey Kim Resident, Laboratory Animal Medicine, The Ohio State University, Columbus, OH, USA.

Elizabeth Reetz PhD Candidate, Pathology, Free University of Berlin, Germany.

Albert Thomas Resident, Pathology, University of Guelph, Ontario, Canada.

Kathrin Welsch PhD Candidate, Pathology, University of Veterinary Medicine, Hannover, Germany.

Kelley Zimmerman Resident, Oncology, University of Pennsylvania, Philadelphia, PA, USA.

2018

Julia Linda Gaida Large Animal Resident, Oregon State University. Corvallis, OR, USA.

Grace Hood DPhil Candidate, Virology, University of Oxford, Oxford, UK.

Louise Grace Klass PhD Candidate, Institute of Veterinary Parasitology and Tropical Veterinary Medicine, Freie Universitaet Berlin, Germany. James Mullman Combined DVM/PhD Candidate, Cornell University, Ithaca, NY, USA.

Marie Elizabeth Nehring PhD Candidate, Pharmacology, Institute of Veterinary Parasitology and Tropical Veterinary Medicine, Freie Universitaet Berlin, Germany.

Michelle Reichert Resident, Veterinary Medicine, University of Minnesota, Twin Cities, MN, USA.

(Gregory) Sean Stapleton Epidemiologist, CDC, Atlanta, GA, USA. Honoria Brown Research Scholar, Medical Devices for horses, University of Pennsylvania, New Bolton Center, PA, USA.

Plotine Jardat PhD Candidate, Animal Behavior, National Institute for Agriculture, Food and the Environment, University of Tours, France.

Jessica Kohs PhD Candidate, Virology, Friedrich Loeffler Institute, Riems Island, Greifswald, Germany.

I look back at the program as some of the best weeks of my life.

-DIMO NAUJOKAT, 2014

Neil Vezeau Supervisory Public Health Veterinarian, USDA Food Safety Inspection Service, HI, USA.

Rachael Wolters PhD Candidate, Pathology, Vanderbilt University, Nashville, TN, USA.

Elena zu Klampen PhD Candidate, Pathology, Friedrich Loeffler Institute, Mariensee, Germany.

2019

Anneloes Andriessen PhD Candidate, Pathology, University of Utrecht, Netherlands. Lisa Kossak PhD

Candidate, Virology, Institute of Virology, Freie Universität, Berlin, Germany.

Talitha Spanjersberg PhD candidate, Medicine, Utrecht University, Netherlands.

Matthew Wun Resident, Medicine, Washington State University, Pullman, WA, USA.

Dylan Yaffy Resident, Pathology, Royal Veterinary College, London, UK.

ALUMNI SPOTLIGHT

Life on the Last Frontier of Interior Alaska

Dr. Karsten Hueffer, 1999



Starting veterinary school in Hannover, Germany, I saw a career path that would lead me to become a countryside veterinarian akin to James Harriot. However, during the last year of veterinary school in Germany we have a whole semester of externships and I spent part of that time attending the Leadership program at Cornell. It changed my life in many ways, personally

and professionally, ultimately leading to a life on the Last Frontier of Interior Alaska with long winters and midnight sun filled summers. But let's put things in order:

During veterinary School in Germany, I became more and more interested in the basic foundations of medicine. In the last year of veterinary school, I was accepted into the Leadership program and flew to Ithaca in the summer of 1999 with a good friend from Hannover who was also accepted into the program; I had all the general prejudices Europeans have towards the US, and then likely some more. Arriving in Ithaca cured me of most of these misconceptions about my now adopted home country. Working in Dr. George Lust's group at the Baker Institute on cartilage damage and apoptosis was my first real experience of research and while the method development was challenging the work was ultimately very rewarding and resulted in co-authorship of my first peer reviewed publication a couple of years later. Apart from my first exposure to the challenges and rewards of laboratory research the professional development sessions transformed my outlook on a career in science. Meeting Dr. Colin Parrish paved the way to my PhD studies in his lab after graduating from veterinary school. During the Leadership Program was also the first time I met my now wife.

I liked my stay in Ithaca so much that I returned the following summer to begin my graduate studies on canine parvovirus cell biology and emergence. This deeper dive into microbial pathogenesis got me hooked and allowed me to spend some more years in beautiful Ithaca and with the great people at the Baker Institute.

After receiving my PhD from Cornell, I worked for three years on Salmonella pathogenesis at Yale Medical School under the mentorship of Jorge Galan as a post doc before moving North to the University of Alaska Fairbanks to begin a position as an Assistant Professor. In Alaska I fell in love with the circumpolar North and have been a dog musher for the last 15 years building a remote cabin in the wilderness, serving as volunteer firefighter for ten years and catching our yearly supply of 20 or so Copper River sockeye salmon. In 2014 we started a veterinary program at UAF in collaboration with Colorado State University. After 8 years teaching in a biology department, I was excited to move back into the veterinary field.

I now teach Veterinary Virology, Bacteriology and Research Methods in our program. My research program focuses on rabies and other zoonotic diseases with special emphasis on disease of the circumpolar North. I served as Associate Dean of the veterinary program for four years and since May this year I now serve as the interim Dean for the College of Natural Science and Mathematics at the University of Alaska Fairbanks. My professional and personal journey has taken quite a few turns and the Leadership Program for sure opened my eyes and opened doors. The journey has been very rewarding and working with students and colleagues has been and continues to be a true privilege.

Parrish Lab, 2002







College of Veterinary Medicine

The Leadership Program for Veterinary Students Baker Institute for Animal Health 235 Hungerford Hill Road Ithaca, NY 14853 Cornell Baker Institute for Animal Health

FOR MORE INFORMATION:

John S. L. Parker, Director 607 256-5626 | jsp7@cornell.edu vet.cornell.edu/summer-leadership-program

