



Cornell University
College of Veterinary Medicine

'SCOPES

FROM STETHOSCOPES | TO MICROSCOPES | TO THE SCOPE OF THE COLLEGE Summer 2015



INSPIRING LEADERSHIP
PEOPLE AND PROJECTS THAT ENVISION AND EMPOWER

**Cornell University
College of Veterinary Medicine**

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'SCOPES

Summer 2015

A message from the dean	1
News briefs leadership snapshots	3
BEST program paves way for PhDs to explore new career options	6
The dynamic diagnostician: Dr. Francis H. Fox's legacy lives on	8
Mastering scientific survival skills	10
Game changers: Cornell's student chapter of the Women's Veterinary Leadership Development Initiative wins prestigious Cook Award for 2015	12
Leading the way: Alex Travis heads up new Center for Animal and Public Health	14
Forging a new path: Cornell scientists take the lead in lymphoma research	16
Nemo's legacy: Cornell's farm animal hospital named after beloved pig patient	18
A gift of healing: Westie pup inspires donation to boost Sports Medicine and Rehabilitation service	20
Reunion 2015	23
Commencement 2015	28



FROM THE ARCHIVES: Francis H. Fox, DVM '45.



Dr. Michael I. Kotlikoff,
Austin O. Hooley Dean of Veterinary Medicine

Dean's Message: Transitions in leadership

This issue of 'Scopes focuses on leaders and leadership, and it seems appropriate at this time to say a few words about the coming leadership transition at Cornell.

For the last nine years, President David Skorton and Professor Robin Davisson have been extraordinary leaders who have also been intimate friends of the College of Veterinary Medicine, and I would like to take this opportunity to thank them for the enormous contributions that they have made to Cornell and to the College.

Robin, of course, is one of ours. As professor of Molecular Physiology in the Department of Biomedical Science, she has played a major role in the College, chairing the graduate field of Molecular and Integrative Physiology, overseeing core mouse physiological analysis and imaging facilities, and serving as a superb mentor for dozens of students, residents, and junior faculty. She is also a member of the Department of Cell & Developmental Biology at Weill Medical College where she

"I cannot imagine a more promising presidential appointment or a smoother transition in leadership at Cornell."

maintains a second active laboratory. As the very first faculty member with appointments in both schools, and the only Cornell faculty member with a laboratory on both campuses, she has formed extensive and critical bonds between the Veterinary and Medical Colleges. Robin and

I have co-mentored students and collaborated on projects, and I have seen first-hand her ability to inspire her students and co-workers, and to help them to achieve more than they thought they could. Robin has been a major force for discovery in the College and we will miss her enormously when she departs in July 2016.

As a physician scientist, David Skorton has had a particularly close relationship with the College and is a constant proponent of One Health. His advocacy on behalf of the College has been crucial in achieving the political support and philanthropy necessary to undertake the critical renovations and construction that is currently underway. In addition to his "day job" leading a University with four major campuses, David undertook the role of chair of the Board of the New York Racing Association at a critical time for that organization, righting the ship and establishing governance procedures that will stand New York thoroughbred racing in good stead for many years. Robin and David have also been wonderful (and frequent) clients of our teaching hospital, where they have brought their beloved Newfies since arriving in Ithaca.

Most importantly, President Skorton has had a transformative impact on Cornell. He oversaw the planning and development of a major medical campus in Doha, Qatar; the creation of Cornell Tech in New York City; the construction of the largest research complex in the history of our medical college; and the creation of the Weill Institute, Milstein Hall, Stocking Hall, the Physical Sciences Building, Klarman Hall, and the new Gannett



Transition of University presidents: David J. Skorton and Elizabeth Garrett

health services building on our Ithaca campus. He also markedly expanded student access through enhanced financial aid, invested in energy conservation and critical infrastructure, and renewed the faculty through a farsighted program that anticipated a wave of faculty turnover that Cornell is currently experiencing. Perhaps most impressive, all of this and much more was achieved despite the financial crisis of 2007/2008; David's steady and thoughtful leadership throughout that time will always be remembered. Carolyn and I will particularly miss David's humor and warmth, but look forward to many future interactions him in his new role as director of the Smithsonian.

I am also delighted to report my enthusiasm and optimism about the arrival of President-elect Elizabeth Garrett. Beth is a brilliant and energetic scholar who has impressed everyone with her incredible grasp of this complex University. As the former provost and senior vice president for academic affairs at the University of Southern California (USC), Beth drove major initiatives in undergraduate and professional schools and has a global perspective on higher education. She combines rare attributes as a highly accomplished scholar, an extraordinarily successful leader at USC, and someone with extensive experience in the federal government and in global affairs. I have had the opportunity to get to know President-elect Garrett and am excited by her focus on strengthening Cornell's academic stature and investment in faculty recruitment. I cannot imagine a more promising presidential appointment or a smoother transition in leadership at Cornell.

Let me say a few words about leadership transitions within the College of Veterinary Medicine. In addition to our losing the leadership and energy of Professor Davisson, July will mark the

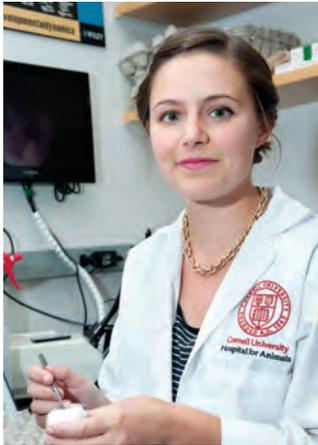
retirement of Professor Alfonso Torres, who will leave behind a legacy of excellence. Alfonso's guidance in international affairs and his mentorship to students interested in, and faculty engaged in, global veterinary medicine have been tireless. We are lucky to have had Professors Davisson and Torres in our midst!

Of course, we will also say goodbye to the fabulous Class of 2015, as well as many of our terrific graduate students, residents, and interns. The DVM Class of 2015 has been particularly impressive and creative. I would like to highlight the initiators of the Dance Collective, Kate Bibi, Stephanie Gambino, and Kat Schuhmacher Vissio; the creator and tireless sponsor of the student/faculty basketball game, Andrew Massaro; the comedy team of Sam Dicker and Alina Ali; our Cornell Daily Sun correspondent, Nikhita Parandekar; Student Chapter of the American Veterinary Medical Association (SCAVMA) leaders Brett Robinson and Patrick Satchell; our construction planning committee representative Andrew DiSalvo; our Cornell University Hospital for Animals (CUHA) Student Advisory Committee members Jordan Calabro, Elizabeth Brock, Susan Smith, Emily Cornwell, and Patrick Satchell; and the Vet Funk group (watch their 'Vet School Funk' here: <https://goo.gl/DIWeQv>). This group, and all the Class of 2015, kept us entertained and informed, and made us proud.

We hope you'll enjoy this issue of 'Scopes, and that you'll take pride and interest in the people and programs that help to make the College a leader—in education, discovery, and care.

News Briefs

LEADERSHIP SNAPSHOTS



ALEXIS WENSKI-ROBERTS



VET STUDENTS EXPLORE LEADERSHIP, CAREERS IN RESEARCH

By Merry Buckley

Veterinary students from around the world visit the Cornell College of Veterinary Medicine every summer to participate in the Leadership Program, a ten-week, research-oriented learning experience. Participants from veterinary colleges in the United States, Canada, Europe, and Australia work at the bench in laboratories all over the College for ten weeks and participate in modules, workshops and group discussions all aimed at encouraging responsible leadership, critical thinking and the development of teamwork skills.

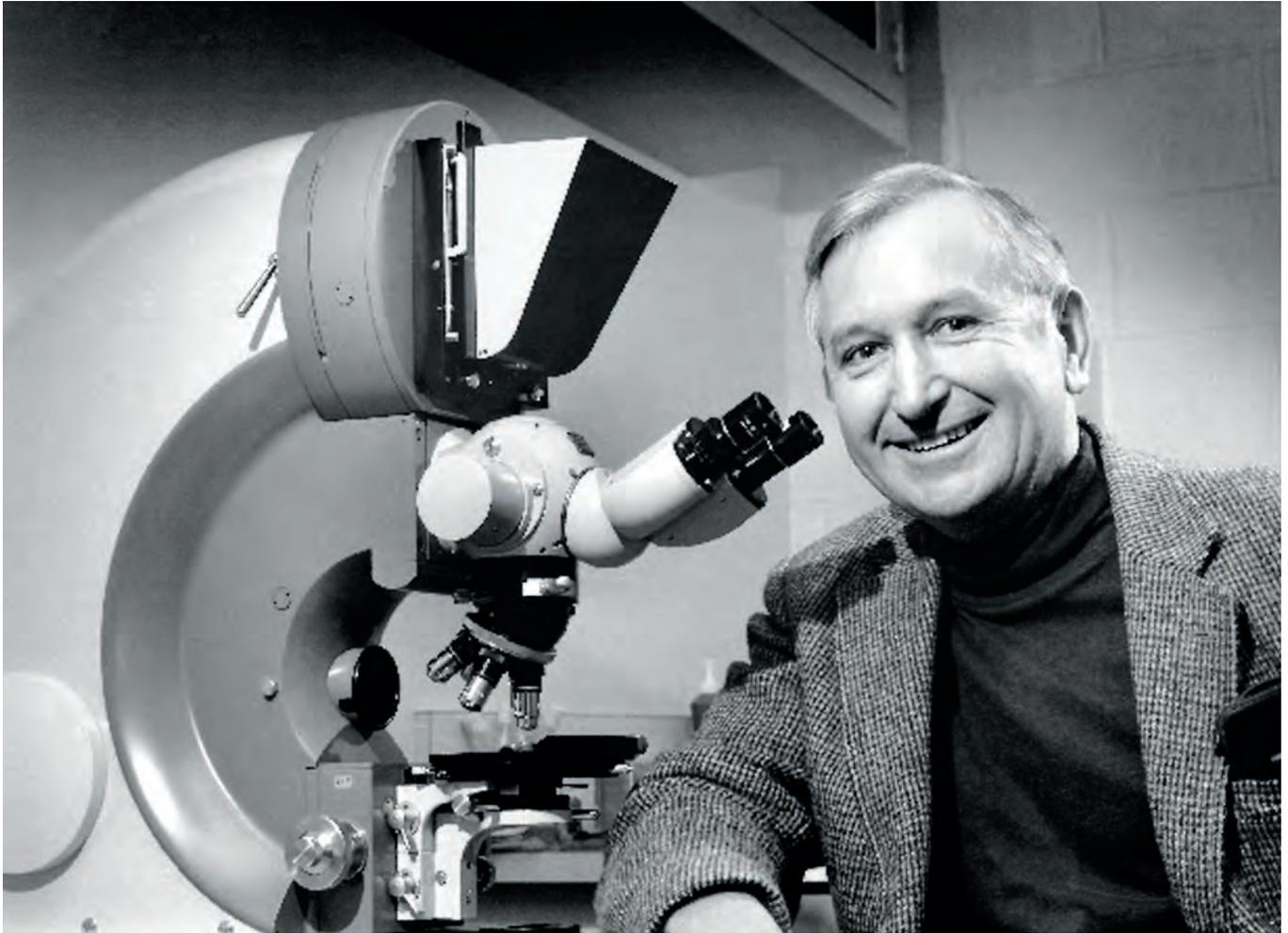
Like last year's participants, this year's crop of Leadership students will attend workshops hosted by the National Institutes of Health and by the Walter Reed Army Institute of Research, where they will learn about those organizations' veterinary science programs, and have the opportunity to meet influential leaders in biomedical research.

"We want our Leadership students to have an appreciation that research is an integral part of the veterinary profession," says program director John S. L. Parker, BVMS, PhD,

associate professor of Virology. "We combine their research experiences with a lot of career counseling to expose them to the many options that are available to them outside clinical practice."

"We want our Leadership students to have an appreciation that research is an integral part of the veterinary profession."
—John S. L. Parker, BVMS, PhD

Clockwise from top: Sebastian Bunte from Tierärztliche Hochschule, Hannover; Amy DiDomenico from North Carolina State University; Callum Bennie, University of Sydney; Isabel Ralle from Tierärztliche Hochschule, Hannover; Fabian Lean (Zhi Xiang), The University of Queensland; Lucy Watson from Royal Veterinary College; Emily Hobson from Texas A&M University



REMEMBERING JAY GEORGI: CRAFTING SCIENCE

By Olivia Hall

Whenever Jay Georgi, DVM '51, PhD '62, looked through a microscope, he saw art as much as science. "I remember him saying of a certain egg, 'It's like a piece of Steuben glass,'" retired teaching support specialist Marguerite Frongillo, PhD, said. "His lab was an amazing place to learn about parasites."

As was his classroom. In his 25 years in the Department of Microbiology and Immunology, Georgi was known to memorize the names and faces of all incoming students, and if necessary, he would begin his lectures on time by chasing overly loquacious speakers out of the

room with a tune from his harmonica.

To this day, students around the country read Georgi's *Parasitology for Veterinarians* – considered a standard textbook – which he co-wrote with his wife Marion, DVM '52, and partially illustrated himself.

The former Air Force veterinarian with a background in radiation biology made his scientific mark with significant insights into the life cycles of various parasites, one of which he described in a single-author publication in *Science*.

More widely, however, Georgi is known for the "artificial dog," a flea-rearing

incubator he invented with fellow parasitologist Susan E. Wade, PhD '81, and built from Plexiglass in his workshop.

"They made a huge and lasting impact on the world of flea biology," said Dwight Bowman, PhD, professor of parasitology in the Department of Microbiology and Immunology. "Jay built all sorts of apparatus and devices to assist in his research. He was an exceptional fellow who had the brightest twinkle in his eyes of any person I have ever met."

"His lab was an amazing place to learn about parasites."

—Marguerite Frongillo, PhD

PLANTING THE SEED FOR TENURE

By Olivia Hall

Bethany Cummings, DVM, PhD, and Kathleen Kelly, DVM, PhD, both assistant professors in the Department of Biomedical Sciences, are recipients of 2013-2014 Affinito-Stewart Grants, awarded by the President's Council of Cornell Women (PCCW) to give junior women faculty a boost in their quest for tenure.

"Seed grant programs such as this one are hugely helpful in jump-starting a research program," said Cummings, who studies mechanisms by which bariatric surgery causes type 2 diabetes remission.

"Biomedical research and establishing a lab are expensive," added Kelly, whose work focuses on how

inflammatory mediators contribute to cardiac dysfunction in chronic inflammatory diseases. "I'm using this grant to fund preliminary experiments important to my transition to independent research in my field of cardiac pathophysiology."

Both researchers hope to gain valuable data and publications that will help them to secure funding from external sources in the future.

Chair of the PCCW Grants Committee Wendy Schoppert, MBA '89, for one, has every confidence in her grantees: "Bethany's work to address the epidemic of type 2 diabetes and Kathleen's work to address cardiovascular disease are excellent examples of passion and leadership in action to improve the lives of people around the world. We are very proud of both of them!"

"Seed grant programs such as this one are hugely helpful in jump-starting a research program."

—Bethany Cummings, DVM, PhD



Bethany Cummings, DVM, PhD



Kathleen Kelly, DVM, PhD

"TRAILBLAZER" WILLIAM O. JONES BROKE RACIAL BARRIERS

By Olivia Hall

When William O. Jones, DVM, PhD '71, passed away in January, his obituary lauded him as "a trailblazer in the veterinary medical field."

Indeed, the Cornell grad and native of Westminster, S.C. became the first African-American veterinarian (receiving his DVM from Tuskegee University in 1963) to earn board certification from the American College of Veterinary Pathologists, and his distinguished career included service in the Veterinary Corps of the United States Army Reserve, as well as more than 30 years on the faculty of Tuskegee University. Jones extended his leadership to dozens of academic, fraternal, and service organizations, rising to prominence in a variety of these groups.

But the path he blazed did not end with his passing. Numerous awards for teaching excellence speak to the impact he made on the next generation of veterinarians.

"He was such a dynamic

"He was such a dynamic instructor, and the way he taught was an eye-opening experience," "He was the man who inspired me to be who I am today."

—Athema Etzioni, DVM

instructor, and the way he taught was an eye-opening experience," said Athema Etzioni, DVM, the first black woman to be board-certified as a veterinary clinical pathologist. "He was the man who inspired me to be who I am today."

David E. Brooks, DVM, another former student, added: "His office door was always open and, more important, his heart."



William O. Jones, DVM, PhD '71, left, as a representative of the United Supreme Council, 33rd degree Masons, presented a scholarship check in veterinary medicine to TUSVM in 2009.



BEST program paves way for PhDs to explore new career options

By Sherry Negrea

Wisler Charles, '16, arrived at Cornell in 2011 to start a PhD in Immunology and Infectious Disease, hoping he would eventually become a professor. But the odds that a PhD graduate in science, engineering, or health will find a faculty teaching or research position within five years of graduating are just one in five nationally, according to the National Science Foundation. As Charles spoke to other graduate students about the prospects of landing a tenure-track position, he decided to focus on launching a startup company, though he hasn't given up on his dream of becoming a professor. "Graduate students have control of their own destinies," Charles said. "But most of them focus on what's been done by our predecessors. It's a linear way of thinking that if you do this, this, and this, it's going to be fine. It doesn't work that way anymore."

What helped Charles, now serving as a BEST advisory board member, shift his goals was Cornell's one-year-old BEST (Broadening Experiences in Scientific Training) program, which allowed him to meet four like-minded graduate students who are helping him create an immunology-based online educational game.

As one of 17 universities awarded a BEST program grant by the National Institutes of Health, Cornell has become a national leader in reframing the training of PhDs in the sciences so that they gain transferrable skills that meet employers' needs. Including additional support from Cornell, the grant is investing \$1.8 million to retrain graduate students and post-docs in STEM fields on campus for careers beyond academic teaching and research.

The impetus for the national pilot project was a 2012 NIH report that showed the number of academic positions, primarily in the biomedical field, had remained flat. "We're training far more people than there are positions as tenure-track academics," said Susi Varvayanis, senior director of Cornell's BEST program. "PhDs have many other skills, and they are useful in other areas."

The mission of Cornell's BEST program is to "change the culture" at the university so that graduate students and post-docs are empowered to prepare for a variety of careers beyond academia, Varvayanis said. The funding supports the initiative for five years.

Since its kickoff in March 2014, the program has offered a series of workshops, mini-courses, and panel discussions in four separate tracks: science communication; science policy; industry entrepreneurship and management; and governance, risk, and compliance.



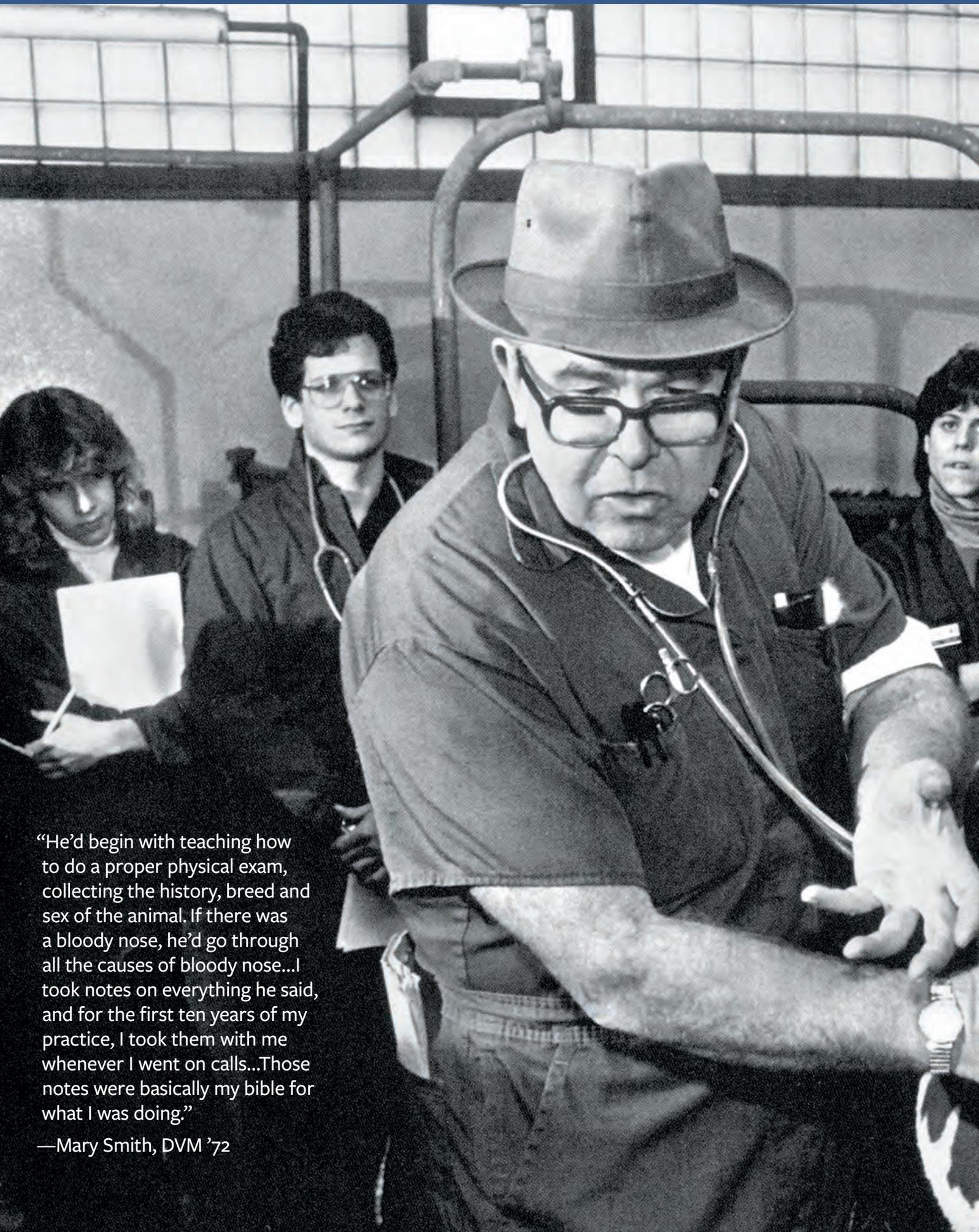
BEST Advisory Board Members, (l to r): R. Alex Coats, Division of Nutritional Sciences; Tiffany St. Bernard, Biomedical Engineering; Ken Yancey, Biological and Environmental Engineering; Lena Bartell, Applied Engineering & Physics; Wisler Charles, Biological and Biomedical Sciences. Not pictured: Kristine Kolkman Champion, Neurobiology

Including additional support from Cornell, the grant is investing \$1.8 million to retrain graduate students and post-docs in STEM fields on campus for careers beyond academic teaching and research.

Ashley Campbell, who received her PhD in microbiology in May 2015, came to Cornell in 2009 to train for a career in academia but wanted to explore how science communication might fit into her future plans. A year ago, she joined the BEST program and began a mentorship with Merry Buckley, PhD, education and outreach coordinator for the Baker Institute for Animal Health and the Cornell Feline Health Center.

During their mentorship, Campbell and Buckley co-wrote two articles on science-related topics for *The Cornell Chronicle*. Campbell now plans to work as a post-doc studying climate change at the Lawrence Livermore National Laboratory in California, but is considering other career options relating to science education and outreach.

"Most people who get a PhD have to pursue a career outside of academia, but don't have the skill sets to do that," she said. "I think the BEST program is important for building those skill sets they need."



“He’d begin with teaching how to do a proper physical exam, collecting the history, breed and sex of the animal. If there was a bloody nose, he’d go through all the causes of bloody nose...I took notes on everything he said, and for the first ten years of my practice, I took them with me whenever I went on calls...Those notes were basically my bible for what I was doing.”

—Mary Smith, DVM ’72

THE DYNAMIC DIAGNOSTICIAN: Dr. Francis H. Fox's legacy lives on



If people want proof that Francis Henry Fox, DVM '45, was a larger-than-life teacher and practitioner, all they need to do is peruse *The Fox Chronicles: Stories of Saint Francis, The Great White Healer*, a collection of humorous, yet admiring, stories written

by past students, clients, and colleagues, gathered together in a 99-page PDF available from Cornell's online library collection. "We have compiled these stories in the hope that they will bring a chuckle to Fox as he peruses them," the preface to the compilation begins. "We also hope that they will clearly show that the great man was outfoxed on more than one occasion in his illustrious career." To read through these tales and talk with his colleagues, it's clear that Fox, who passed away this spring at age 92, leaves behind a well-earned legacy that continues to influence those who knew him.

Fox, who taught at the College as a professor of Large Animal Medicine from 1947 to 1992, had a long list of other notable leadership positions at Cornell. He served as director of the Ambulatory Clinic at the College, and chair and chief of medicine of the Department of Large Animal Medicine, Obstetrics and Surgery. He also served as chair on the Tompkins County Board of Health; president of the American Association of Bovine Practitioners; executive board member and chair of the American Veterinary Medical Association; and charter member of the American College of Veterinary Internists.

However, if you ask his students and colleagues, it was Fox's remarkable diagnostic skills and teaching that most set him apart as a leader among his cohorts. "His biggest legacy was as a diagnostician," says Mary Smith, DVM '72, former student of Fox's and professor of Ambulatory and Production Animal Medicine at the College. "He'd begin with teaching how to do a proper physical exam, collecting the history, breed and sex of the animal. If there was a bloody nose, he'd go through all the causes of bloody nose... I took notes on everything he said, and for the first ten years of my practice, I took them with me whenever I went on calls... Those notes were basically my bible for what I was doing."

As a teacher, Fox instilled this diagnostic talent in his protégés. "He was excellent at communicating his techniques to his students," says former student and colleague Robert Hillman, DVM '55, senior clinician emeritus in the Department of Clinical Sciences. Jerry Bertoldo, DVM '77, a senior extension associate with Cornell Cooperative Extension, recalls Fox's larger-than-life reputation as a teacher. "He was a dynamic kind of lecturer, with a big, booming voice," says Bertoldo. "He always emphasized the power of observation, and for his students to use all of their senses."

This rigorous instruction in the importance of observation left indelible impressions on his students. "When Fox's students left [Cornell], they left with the mindset that they could do an expert physical examination of the patient," says Smith. "That knowledge and ability stuck with the people who had lectures from him and went on calls with him. It's a very important part of his legacy."

By Lauren Cahoon Roberts



Mastering scientific survival skills

By Carrie Koplinka-Loehr



“Our duty is to get people to look out of their silos. New endeavors *have* to be collaborative. This is what’s happening with these students, and it’s enlightening to see them work together.”

—James Casey, PhD

BIOAP6100 students participate in team-building exercises during orientation.

About a dozen students entering the Biological and Biomedical Sciences (BBS) program each fall have a rare opportunity: to submit a research proposal to a review panel, then listen (and jot notes furiously) as the panel critiques it. What panel members would encourage this? Their classmates, in an exercise modeled after the National Science Foundation (NSF) grant review process. It's a core activity in a course that develops leadership called BIOAP6100—By Scientific Design: Skill Building for a Career in the Life Sciences.

BIOAP6100 is taught by a trio of faculty: David Lin, PhD, associate professor of neurobiology, Holger Sondermann, PhD, associate professor of molecular medicine, and James Casey, PhD, associate professor of virology. “The goal is survival skills for graduate students,” said Lin. “The class promotes leaders in that we want students to speak up, take control of their learning, and be active members of the scientific community.” Students learn how to give a presentation, state a hypothesis, design an experiment, interpret data, and analyze literature. “They have to write grants, and if they're eligible to submit, they do it,” said Lin. “That provides real world context and urgency.”

In four years of offering BIOAP6100 in its current format, 27 students affiliated with the course have applied to the NSF Graduate Research Fellowship Program. Seven received the prestigious three-year award and eight received honorable mentions. In 2014 alone, nine applied, one received an award, and four received honorable mentions.

BIOAP6100 mirrors the hands-on, interdisciplinary nature of BBS, an umbrella program for 85 doctoral students. It embraces five related fields aimed at improving human and animal health. “We allow students to pick faculty mentors from across Cornell according to their interests,” said Lin, “and most other programs here don't do that. They can meld nutrition and microbiology; they can build their own program.”

All of the BBS students are in the Cornell College of Veterinary Medicine. Each student is mentored by an older student; they form a cohort and learn to collaborate—a critical step for their careers, given that the focus of BBS is to prepare students for research in academia, government, or industry. “Our duty is to get people to look out of their silos,” said Casey. “New



endeavors *have* to be collaborative. This is what's happening with these students, and it's enlightening to see them work together.”

Last fall, second-year BBS student Melissa McDowell wrote an NSF proposal and asked a team of her former BIOAP6100 classmates to review it before submission. On April 1st, NSF announced that McDowell would receive a graduate research fellowship for “Characterization and Engineering of Therapeutic Delivery Methods For The Human Peripheral Blood Derived Mesenchymal Stem Cell Secretome,” placing her among 2,000 awardees from a field of 16,500 applicants.

Through her two-part project, McDowell will identify and characterize the factors in secretions of equine mesenchymal stem cells in the hopes of understanding the role they play in healing wounds. She will also determine how porous capsules containing the stem cells could deliver their cell-signaling factors.

Potential applications of this technology range from delivering insulin as a diabetes treatment to certain cancer therapies. “There are so many ways we can benefit health once we know what the cells are secreting,” explained McDowell. “Utilizing that and safely delivering it could really make a difference in humans and animals.”

McDowell said that BIOAP6100 fostered teamwork and gave her the foundation needed for writing proposals. In addition, she believes the professors, who themselves were writing grants, modeled openness and honesty. Said McDowell, “we learned to be able to say why our grant is important and what it could do for society.”

“The class promotes leaders in that we want students to speak up, take control of their learning, and be active members of the scientific community...They have to write grants, and if they're eligible to submit, they do it. That provides real world context and urgency.”

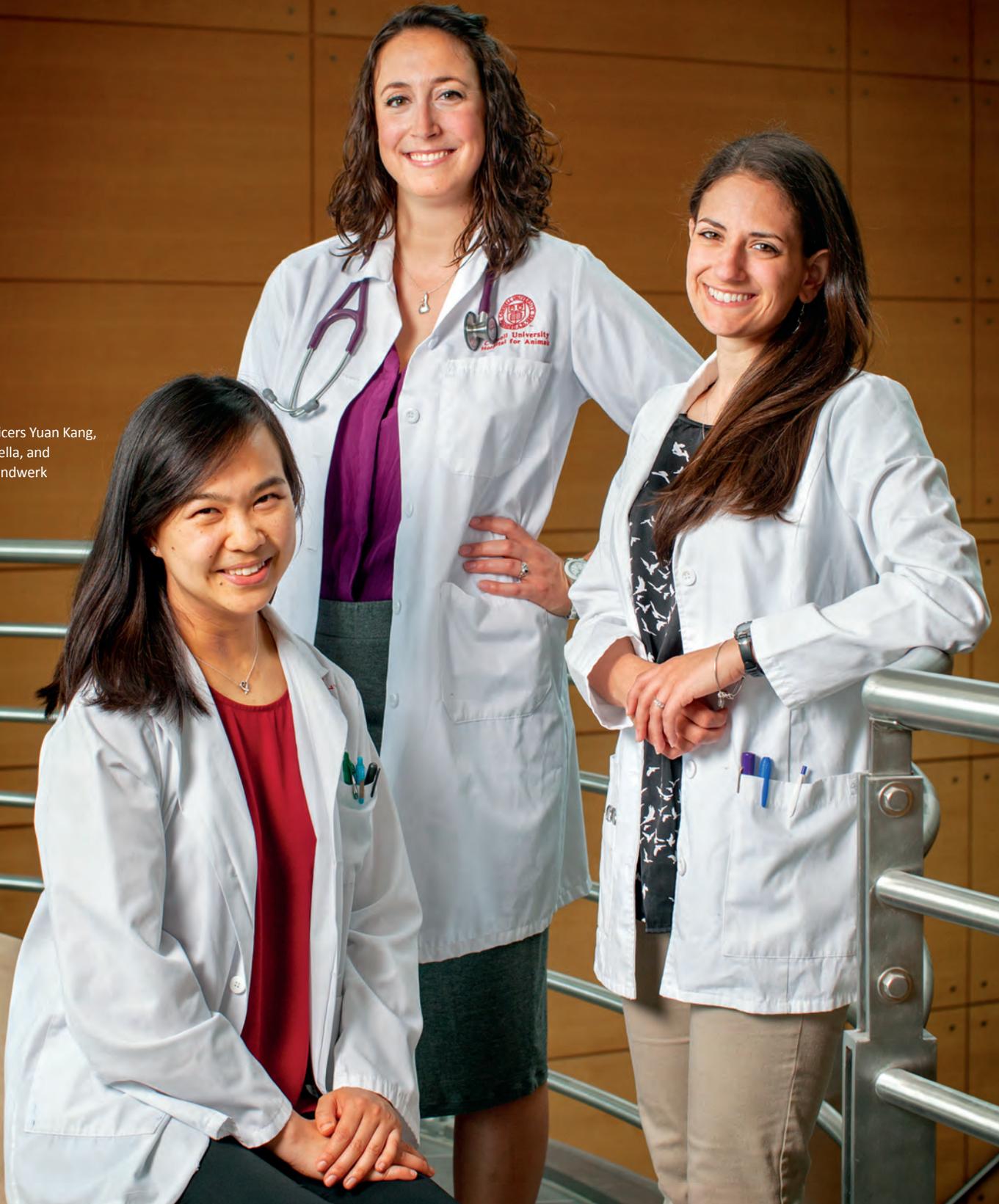
—David Lin, PhD



Students in Biological and Biomedical Sciences take part in leadership course BIOAP6100—By Scientific Design: Skill Building for a Career in the Life Sciences.

LEANING IN TO LEADERSHIP

WWVLDI officers Yuan Kang,
Michelle Forella, and
Anastasia Handwerk



Game changers: Cornell's student chapter of the Women's Veterinary Leadership Development Initiative wins prestigious Cook Award for 2015

By Donald F. Smith, DVM, Austin O. Hooey Dean of Veterinary Medicine, emeritus

Editor's note: a different version of this story first appeared in Smith's blog, "Veterinary Legacy" in March 2015.

On March 11, 2015, President David Skorton presented the four officers of the Cornell Student Chapter of the Women's Veterinary Leadership Development Initiative (WVLDI) with one of Cornell's most prestigious awards; the Alice H. Cook and Constance E. Cook Award is given to faculty and students "who have made significant contributions to changing the climate for women at Cornell University."

The WVLDI is a national organization that started following the summer 2013 meeting of the American Veterinary Medical Association. The Cornell Student Chapter officers are the first veterinary students ever to receive the Cook Award in its 19-year history.

"It was an honor to be recognized for our efforts in promoting diverse leadership in the veterinary field and opening up a forum for students to discuss gender-specific issues," Yuan Kang '17, treasurer of the group, commented after the award ceremony.

A year ago, Kang and her colleagues, including Michelle Forella '17 (president), and Anastasia Handwerk '17 (secretary), established the first ever student WVLDI chapter after the Women's Leadership Seminar to continue to promote the advancement of women with the College of Veterinary Medicine student body. "...Our goals mirror that of the national organization, which are to support women in seeking and achieving leadership, policy, and decision-making positions within all areas of professional veterinary activity," says Forella. "We are helping further these goals across the country by serving as a model for new student chapters at other veterinary colleges."

"I have come to realize . . . just how present gender-inequality is in today's society, affecting mindset and paycheck alike. I have also come to realize that it will take both women and their male counterparts to work for change."

—Anastasia Handwerk '17

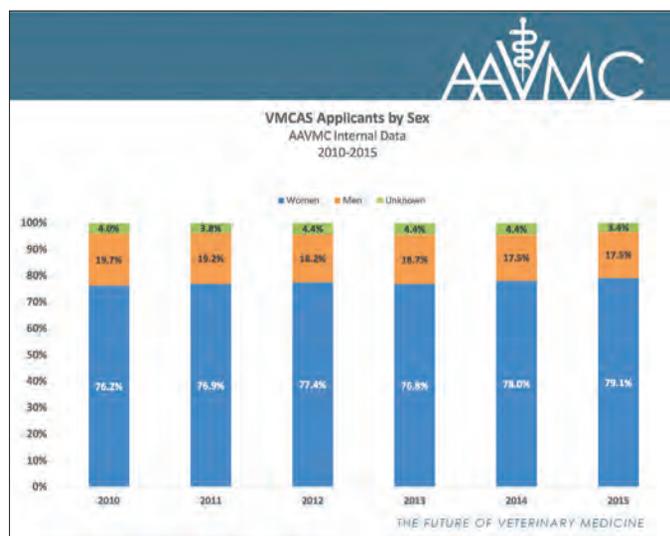
gender-inequality is in today's society, affecting mindset and paycheck alike. I have also come to realize that it will take both women and their male counterparts to work for change. While our organization is still new, we have managed to hold some

Handwerk added, "I am known to be a behind-the-scene person, quietly accomplishing my tasks and seeing what I can do to help others and advocate for them... But WVLDI forced me out of that comfort zone, encouraging me to speak my mind in our small group discussions and TED talks. I have come to realize, along with some of the other student members, just how present

extremely meaningful events and I believe we are truly changing the mindset of our female and male colleagues in our Cornell vet medical community."

Last year, the Cornell WVLDI hosted a lecture and discussion by WVLDI founder and president, Karen Bradley, DVM. Other programs continued through the year, and culminated in April with a class on Sheryl Sandberg's popular book, "Lean In," presented by the immediate past president of the North American Veterinary Community, Charlotte Lacroix, DVM, JD.

WVLDI began as an impulsive, spur-of-the moment project and has turned into one of my most meaningful extracurricular activities," said Kang. "I took on the role of Treasurer to challenge myself with an unfamiliar job. Asking for money is not my greatest strength, and the responsibility of securing funding for this fledgling club has challenged me to be more assertive about seeking out resources. Furthermore, organizing WVLDI events has given me valuable opportunities to reach out to impressive women at Cornell and at the national level. Studies show that women are more apt to advocate for others than for themselves, though I hope my extracurricular leadership experiences will translate into a more proactive personal search for externships and jobs."



Women make up the majority of veterinary school applicants, according to statistics from the *Annual Data Report 2014–2015, A Report of the Association of American Veterinary Medical Colleges*.



Leading the way: Alex Travis heads up new Center for Animal and Public Health

By Merry Buckley

The Cornell University College of Veterinary Medicine has long been a leader in this country, and now, with Alex Travis, VMD, PhD, heading up the new Center for Animal and Public Health and taking the position of associate dean for International Programs, the College is poised for leadership in veterinary science through initiatives around the globe. In his new role, Travis will guide a program that places Cornell veterinary medicine students in developing nations for experiences to augment their instruction in Ithaca; spearhead partnerships between the College and schools of veterinary medicine in other countries; and help launch a new Master of Public Health program for Cornell.

The Center for Animal and Public Health brings several different initiatives under one umbrella, Travis says, and coordinating these programs, along with being associate dean, will be a big job. “We have many, many faculty working internationally, and this office can help people connect with those individuals and help them meet their goals,” he says. “I’m excited to help develop these programs in a way that really does effect change.”

In addition to the position with the Center for Animal and Public Health, Travis will continue leading his lab at the Baker Institute for Animal Health, where he and his trainees study subjects ranging from reproductive biology to nanodevices. Travis is also faculty director for the Environment at the Atkinson Center for a Sustainable Future and founder of the Cornell Center for Wildlife Conservation.

“My passion has historically been wildlife conservation, but we’re never going to meet our wildlife goals if we don’t address the challenges of human poverty, hunger and health. With these new positions I can try and achieve all of those goals together,” says Travis.

A crucial priority for Travis is to support the Expanding Horizons Program, which offers veterinary students research, clinical, and outreach opportunities in developing countries for a summer. This is a unique program among veterinary schools, says Travis, and he’s seen the positive effects these experiences can have on students and on the communities they serve. “It really does make a difference, if you look at the careers of the students who go on these trips. It gives them a view of the possibilities of living internationally and of the roles veterinarians can play in the issues impacting developing countries,” says Travis.

Travis will also foster collaborations with international universities. The College of Veterinary Medicine has established partnerships with the City University of Hong Kong in China and with Obihiro University of Agriculture and Veterinary Medicine in Japan. Travis will help coordinate Cornell’s activities



Left to right: Jacquelyn Nelson-Harrington (lab manager), Chinatsu Mukai, PhD, and Skylar Sylvester, with Alex Travis, VMD, PhD

“My passion has historically been wildlife conservation, but we’re never going to meet our wildlife goals if we don’t address the challenges of human poverty, hunger and health. With these new positions I can try and achieve all of those goals together.”

—Alex Travis, VMD, PhD

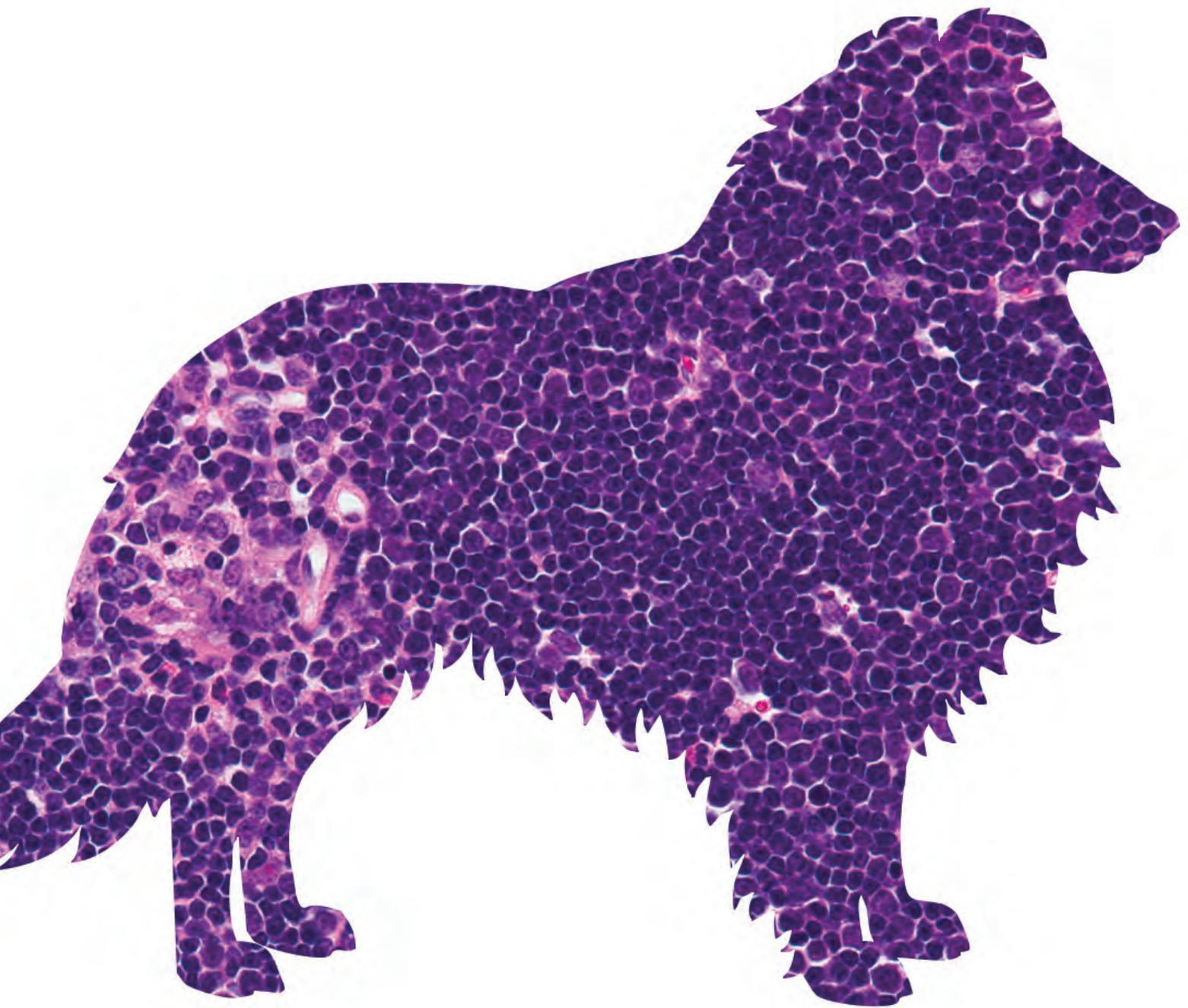
in developing their programs and improve the quality of international veterinary training.

Travis is also developing the Master of Public Health program. The historical roots of the veterinary profession are in public health, he says, and as scientists, clinicians, and policy makers become increasingly aware of the importance of wild and domesticated animals to public health, it makes sense for the College to prepare students to integrate these

fields of knowledge so that they can tackle the issues in the future.

Travis is optimistic that the Center for Animal and Public Health can not only help enhance international programs at the College, but will also raise the profile of these efforts and attract new students. “The College has done an incredible job of getting our students involved internationally, but it’s not widely recognized across campus or outside the University. Prospective students are increasingly going to want to function in a globalized world, and they should be looking at Cornell University,” he says.

Left: Alex Travis, VMD, PhD, with Chinatsu Mukai, PhD



Forging a new path:

Cornell scientists take the lead
in lymphoma research

By Lauren Cahoon Roberts



Left to right: Kristy Richards, BS '90, MD, PhD, Robert Weiss, PhD, with graduate student Tim Pierpont

Lymphoma is one of the most common cancers in dogs. It is also usually deadly; when a dog gets the disease, it is treatable, but the disease usually relapses within a year. Researchers at Cornell University College of Veterinary Medicine and Weill Cornell Medical College are working to change this. The two have partnered to create the Progressive Assessment of Therapeutics program, or P.A.Th., which aims to build an efficient method for developing new drugs to fight lymphoma in both humans and canines. “The goal with P.A.Th is to make it faster, cheaper, and more efficient in general to develop these drugs,” says program leader Kristy Richards, BS '90, MD, PhD, associate professor of biomedical sciences.

Richards oversees the College’s comparative cancer program, and will co-lead with Weill Cornell’s lymphoma researcher Dr. Leandro Cerchietti, to leverage three powerful screening techniques to improve and expedite lymphoma drug research.

The first-stage screening method will use 3D cell-culture models known as ‘organoids’ which more accurately mimic the structure and microenvironment of the lymph node than the traditional cells-in-petri-dish approach. The technology, developed by Cornell engineering’s Ankur Singh, PhD, will allow for thousands of customized organoids to be ‘printed’ and used for mass screening of potential therapeutics. “The P.A.Th. program could first run thousands of drug combinations through these organoids,” says Richards, “and then select the best combinations to be tested in mouse models.”

P.A.Th. will employ two types of mouse models; one model type comprises genetically-engineered mouse models (GEMM) overseen by molecular genetics professor Robert Weiss, PhD, and his lab group. These mice more closely imitate the hallmarks of human and canine lymphoma. Recent technical advances, which are now available to Cornell scientists through a core facility directed by genetics professor John Schimenti, PhD, at

the College, allow these mice to be much more easily and quickly generated, greatly facilitating more efficient drug development. The other type of model is known as a patient-derived xenograft (PDX) mice. These mice have highly impaired immune systems, allowing for researchers to directly transplant human tumor specimens into the mice, where the engrafted tumor (or xenotransplant) can be serially transplanted into multiple recipient mice. “We could potentially have whole rows of mice with the same xenograft, and feed each mouse a different candidate drug to see how they will respond,” says Richards. “In the future, you could have a customized PDX mouse for every cancer patient, and tailor their treatments based on results from each patient’s mouse avatar.”

“The goal with P.A.Th is to make it faster, cheaper, and more efficient in general to develop these drugs.”
—Kristy Richards, MD, PhD

“The final piece to the program involves incorporating pet dogs that already suffer from lymphoma into clinical trials for lymphoma drugs. “This is still an underused way to test new agents,” says Richards. “There are probably as many dogs in this country that get lymphoma every year as people.” Humans with the most common subtype of lymphoma have about a 60% chance of cure with current drugs. Dogs receive the same drugs in lower doses, but only for palliative effects. “So there’s a lot of room for improvement in dogs,” says Richards.

Clinical trials using canine lymphoma patients is ethically and logistically simpler, allowing for streamlined development of human-ready drug candidates, while simultaneously enabling the discovery of life-saving therapies for the dogs themselves. “We’re still at early stages with this project,” says Weiss, “but all the elements are operational—and we can do all those elements well. That’s very rare, and it enables us to be able to put this comprehensive program together.”

NEMO'S LEGACY: Cornell's farm animal hospital named after beloved pig patient

By Claudia Wheatley

The Cornell University College of Veterinary Medicine Farm Animal Hospital now goes by a new name. In recognition of the gift from George Goldner and Nancy Krieg of Bedford Hills, N.Y., the hospital is named after their beloved black-and-white Hampshire pig, Nemo. Nemo made headlines in 2013 as the first documented swine patient to undergo a chemotherapeutic protocol for B-cell lymphoma used in dogs, cats, and humans.

College oncologists treated the four-year-old Nemo with chemotherapy, modifying the delivery method for a 730-pound pig. This involved James A. Flanders, DVM, associate professor of Small Animal Surgery, and Susan Fubini, DVM, professor of Large Animal Surgery and associate dean for academic affairs, to prepare an intravenous medication delivery system via a catheter in Nemo's neck to a port behind his ear. Emily Barrell, DVM, resident in the Large Animal Internal Medicine Program, was in charge of selecting and delivering the chemotherapeutic drugs to treat the pig. Nemo's cancer went into remission for more than a year, which he spent at the hospital enjoying the company of staff and other patients.

The gift from Goldner and Krieg, commemorated at a June 23 dedication ceremony, ensures that the College's farm animal hospital will continue to be a leader in cancer research and treatments. At the celebration, Dr. Michael Kotlikoff, Austin O. Hooey Dean of Veterinary Medicine, thanked Goldner and Krieg for their donation. "Your gift will enable us to provide the kind of care, education, and research into better treatments that Nemo experienced here," he said. The dean also admitted to being a member of the pig's unofficial fan club: "Nemo captured the hearts of faculty, staff, and students in the hospital. I cherished my visits with him."

Goldner praised hospital personnel for the high quality of their care for Nemo. "Extending his life, helping make [it] better, generally without pain or discomfort; this was done through great intelligence, knowledge and compassion," he said. "There can be no higher achievement than of relieving the suffering and extending the lives of those who cannot speak for themselves, and you do that every day here through your work with animals, your research, and your training of young people."





“We are deeply grateful to George and Nancy for their generous gift in memory of Nemo. It will help us to remain at the forefront of cancer research, to purchase the necessary technology and to recruit the very best talent to carry out this vital work.”
—Dean Michael Kotlikoff



Carolyn McDaniel, VMD; Emily Barrell, DVM; George Goldner; Cheryl Balkman, DVM; Nancy Krieg; and Dean Michael Kotlikoff celebrate at the hospital dedication ceremony.



“We wanted to inspire others to recognize how important follow-up care and rehab are to a successful recovery.” — Robert Fox



The Foxes' granddaughter, Sloan, with Dolly (left) and Daisy (right).

A gift of healing: Westie pup inspires donation to boost Sports Medicine and Rehabilitation service

By Lauren Cahoon Roberts

When her owners adopted her, Daisy was just like any other West Highland Terrier puppy—“a little, rowdy, sassy Westie,” says Lisa Basil-Fox. A few months later, Basil-Fox and her husband, Robert Fox, noticed Daisy’s gait looked off. This began a long journey for the puppy, who would undergo major surgery and daily physical therapy at the Cornell University Hospital for Animals (CUHA). This experience inspired the Foxes to donate to the hospital’s Sports Medicine and Rehabilitation service. “We were very impressed with the creative thought processes that the staff brought to bear in addressing Daisy’s journey back to health and quality of life,” says Fox.

The Foxes’ local vet referred them to Cornell after Daisy’s problem worsened. There, the CUHA neurology team diagnosed her as having a spinal malformation which resulted in poor control of her hind legs. “The doctors made it clear—if we didn’t operate, her situation would worsen,” says Basil-Fox. “Yet, there were no guarantees that the surgery would allow her to get full mobility back. It was heart wrenching—we were determined and committed to do everything that we could do to help Daisy.”



Daisy, (right) with the Foxes’ other Westie, Dolly.

CUHA neurosurgeons operated on Daisy’s vertebrae to correct the malformation. Following surgery, Daisy’s gait worsened temporarily (an expected post-operative outcome, particularly after her type of condition). Since she was unable to walk, physical therapy was the ideal next step for Daisy’s care. However, at the time, there were no suitable facilities where the Foxes lived.

(continued on page 26)

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Reunion 2015



What a wonderful weekend! The College of Veterinary Medicine saw more than 300 alumni and guests join in the celebration, with President David Skorton and Dean Michael Kotlikoff welcoming alumni and guests to Cornell during the DVM Welcome Reception. During Cornell's Sesquicentennial celebration, the College of Veterinary Medicine offered a number of presentations and events to highlight the Sesquicentennial. Celebrating 100 years of the farrier program, head farrier at Cornell Steve Kraus shared farriery history and changes over the years and provided tours of the farrier shop. Professor and dean emeritus Donald Smith shared information about Cornell and the Veterinary College's rich history during "Cornell's Veterinary Folklore and More." An interdisciplinary panel of Cornellians (Drs. Alex Travis, Garrick Blalock, Danielle Buttke and Kristy Richards) examined some of the dimensions of the comprehensive field of One Health with "One Health for One Planet, Many Species" panel presentation. Panelists shared how issues of animal and human health, sustainable populations, and thriving ecosystems are being tackled. (View by livestream: <http://livestream.com/cornellalumni/onehealth>)

Additional tours included the Animal Health Diagnostic Center, Teaching Dairy Barn and the Cornell University Hospital for Animals. The always popular and well-attended State of the College address was offered by Dean Kotlikoff on Saturday morning, and on Saturday evening class dinners provided alumni and guests an opportunity to reconnect, reminisce, and watch American Pharoah win the Belmont!

The Class of 1965 won the Dean's Cup (the award to the class out of school for 50 years or fewer) with the highest percent of the class donating to the College. Forty-five percent of the Class of 1965 made a gift.

To encourage giving by the younger classes, a new award called the "25 Club Cup" was introduced. This award was shared by the classes out of school for 25 years or fewer, which reached 25% or higher in participation in a reunion year. Congratulations to the following classes: 1990 with 29% participation; 1995 with 34% participation; and 2000, with 26% participation.

At the time of reunion, 1995 had the highest giving of the reunion classes, totaling \$94,063.



Dean Kotlikoff



Dr. Potter, here for his 75th Reunion, pointing to a photo of his father, Class of 1918.

Reunion 2015



President David Skorton at the College



Class of 1940 with family



Class of 1965 with family



Class of 1970



Class of 1985



Class of 1990 with family

SUE SHEERER



Class of 2005 with family



Class of 1955 with family



Class of 1960 with family

SHEILA REAKES



Class of 1975 with family



Class of 1980 with family

SUE SHEERER



Class of 1995 with family



Class of 2000 with family

SHEILA REAKES



Class of 2010 with family

In Memoriam Since the February 2015 issue of 'Scopes, the College has been notified of the passing of the following:

- | | |
|--|---|
| Dr. Ara Ayanian '59, January 1, 2015 | Dr. William H. Keaton '49, January 15, 2015 |
| Dr. Donald R. Davidsen '59, January 10, 2015 | Dr. Mark A. Kranz '80, February 21, 2015 |
| Dr. Francis H. Fox '45, March 13, 2015 | Dr. Gilbert Lewis '45, December 30, 2014 |
| Dr. Jay R. Georgi '51, April 3, 2015 | Dr. Jordan D. Lewis '53, December 29, 2013 |
| Dr. George E. Gorse '52, February 22, 2015 | Dr. Robert S. Martin '52, February 7, 2015 |
| Dr. Clinton M. Greenwood '58, October 17, 2014 | Dr. John J. Missenis '67, February 25, 2015 |
| Dr. Harry V. Hagstad '52, April 11, 2015 | Dr. George D. Vineyard '53, April 13, 2015 |
| Dr. Robert J. Harris '50, February 21, 2015 | |

(A gift of healing, continued from page 21)

“Daisy was extremely fragile, and also required strict kennel rest for eight to ten weeks,” notes Basil-Fox. “It’s not easy to keep a Westie puppy still!” After consulting with Daisy’s medical team, they found an unconventional solution: Daisy would stay long-term at the hospital to continue monitoring by the neurology team, while also receiving intensive physical therapy at the Sports Medicine and Rehabilitation service, run by Dr. Joseph Wakshlag, DVM ’98, PhD ’05. This hand-off between the ICU and the rehabilitation service proved to be the inspiration behind the Foxes’ donation.

“She returns to Cornell for periodic check-ups and hugs from her friends. We were so grateful for the exceptional care that Daisy received—it inspired us to give back!” —Lisa Basil-Fox

During her long-term stay, Daisy received laser therapy and massage, and later exercised on an underwater treadmill and balance boards to build muscle strength. The neurology team, in particular Dr. Meghan Slalina, monitored Daisy’s daily progress, along with neurology faculty and many other CUHA staff and students who worked to ensure Daisy’s recovery.

“Daisy was spoiled, coddled and encouraged by her entire Cornell family!,” says Basil-Fox. After four months of daily work and collaboration, Daisy was deemed ready to go home after spending almost half of her life as a puppy in the ICU.

This experience inspired the Foxes to donate to CUHA—in particular, to the Sports Medicine and Rehabilitation service. “We noticed that the rehab service seemed to need the funds,” says



Joseph Wakshlag, DVM ’98, PhD ’05, with a patient.

Fox. Indeed, the program’s headquarters are currently in CUHA’s old large animal breezeway—a thoroughfare with considerable pedestrian traffic and poor climate control. With their gift, distributed over five years, the Foxes hope to kickstart more giving to the service. “We wanted to inspire others to recognize how important follow-up care and rehab are to a successful recovery,” says Fox.

Since the Foxes’ first donation, the program has been able to purchase crucial equipment and provide physical therapy for other canine patients in need.

As for Daisy, “she has continued with physical therapy and is walking beautifully on her own.” says Basil-Fox. “She returns to Cornell for periodic check-ups and hugs from her friends. We were so grateful for the exceptional care that Daisy received—it inspired us to give back!”

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Commencement 2015



President David Skorton speaks at the commencement ceremony.



Hooding ceremony



Taking the oath



Dean Kotlikoff at the hooding ceremony



Robin Davisson at the commencement ceremony

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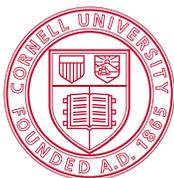
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