SWINE WELFARE RESEARCH AT NEW BOLTON CENTER OFFERS PROMISE FOR PIG AND FARMER

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ABOUT THE COVER:
Research by Thomas Parsons, VMD, PhD at the Swine Teaching and Research Center on Penn Vet’s New Bolton Center Campus is having far-reaching impact on swine husbandry and production.

Correction: In the Number76/Winter 2012 issue of Bellwether, we misnamed the ICU technician pictured holding German shepherd puppy, Basil. The technician should have been identified as Jessica Bosco.
Recently, 125 Penn Vet students walked across the stage at The Annenberg Center as members of the Class of 2012. I am, as always, exceptionally proud and incredibly humbled by this annual procession as year after year our scholars become even more impressive.

These young peoples’ ambition and goals for their futures also encourages me.

As was the case when I began the role of Dean in 2006, in 2012 the profession is at a crossroads. The finances of our profession and of veterinary medical education specifically are highlighted as extreme concerns. No school at Penn has been through challenges as severe as Penn Vet and we are working to both diversify our own sources of revenue and also to increase student aid to reduce student debt. Our strong faculty, remarkable students and alumni position us to lead the profession.

We are also proactively working with the legislators in Harrisburg to position our profession as a lead player in ensuring the public health and welfare of animals as well as humans. This issue of Bellwether is dedicated to answering the question of “What does a vet do?”

Three times a day, more than 12.7 million Pennsylvanians sit down to a meal, confident that the food before them is safe and nutritious.

Every morning, tens of thousands of Pennsylvania farmers begin their workday with the assurance that their livestock is free from infectious diseases and that the dairy products, eggs and meat they produce are wholesome.

Every payday, hundreds of thousands of Pennsylvanians bring home a paycheck, with the comfort of knowing that the $61 billion agriculture and agribusiness industry in which they work will continue to help support them, their families, their neighbors and their communities.

They can do so because of the vital role Penn Vet plays in protecting our food supply.

Penn Vet has graduated more than 6,000 veterinarians since its first graduating class of 1887. The vast majority of Pennsylvania’s practicing veterinarians are Penn Vet grads, and their most vital tasks include ensuring food safety and providing critical research and care to our animal agriculture industry.

Penn Vet and the veterinarians it trains protect the health and well being of livestock, diagnosing and curbing many infectious diseases that are communicable between animal and man, such as Avian/Swine Influenza, West Nile Virus, Lyme disease, Salmonellosis, Listeriosis and E coli.

Penn Vet’s research transcends the animal world, advancing basic understanding in the areas of cancer, infectious diseases, regenerative medicine and neuroscience and working to apply that new knowledge to design better treatments for diseases of animals and people alike. The school is a global leader in research that links animal science to human welfare, advances food safety and provides vital defense from bioterrorism and global pandemics.

In this issue of Bellwether, you’ll read examples of this work from across the school. This issue’s cover story highlights the important work of Dr. Tom Parsons who leads our Swine Teaching and Research Center. Dr. Parsons is making huge strides in alternative, welfare-focused swine housing facilities while also addressing the need to feed an ever-growing global population. His work has not gone unnoticed by industry leaders. Read more on page 4.

My article on page 8, about my recent trip to India, is a perfect example of Penn Vet’s global reach. I aim to institute formal veterinary exchange programs in India and China and am laying the groundwork to make these programs a reality.

You’ll also read on page 12 about the day-to-day work of Field Service veterinarians and how herd health plays a vital role in ensuring animal health as well as human health. The Shelter Animal Medicine Club sometimes travels with Field Service veterinarians to provide often ignored but much-needed care to barn cats, including spays, neuters, vaccinations and treatment for illness and injuries.

I hope that when you have read this issue of Bellwether you’ll have a greater appreciation for your local veterinarians and a better understanding of what it is, exactly, that we do.

And for our alumni, I hope it is a refreshing reminder of the complex, amazing and sometimes misunderstood roles we play in our profession.

—JOAN C. HENDRICKS, V’79, GR’80
THE GILBERT S. KAHN DEAN
OF VETERINARY MEDICINE
Larry Harnish has his hands full. As the owner of a family farm in Oxford, PA, Harnish cares for 700 sows almost all by himself. With the exception of a few hours of help each week from his wife, and occasional assistance from a hired hand, he does it all. He can manage, he said, because of the system he uses.

Harnish was one of first farmers to adopt the “Penn” Gestation Housing and Electronic Feeding System developed by Thomas Parsons, VMD, PhD, director of Penn Vet’s Swine Teaching and Research Center (STRC).

ADOPTING A NEW STYLE OF FARMING

More than 90 percent of gestating mother sows in this country are raised in a gestation stall or crate. Widely accepted by swine farmers about 35 years ago, the gestation stall provided a solution to many of the vexing challenges related to the issues of social hierarchy when sows were housed in groups. Dominant animals got all the limited resources, such as feed, and became over-conditioned, while the more timid sows suffered from malnourishment and were at risk of career-ending injuries resulting from aggression and fighting.

These stalls, however, were small. On average, a gestation stall measures seven feet long and only two feet wide, preventing the sow from being able to turn around for the entirety of the near four months that she is pregnant. Many people today find that restriction on a pig’s movement and limits to other natural behaviors as untenable.

Dr. Parsons’ system, however, replaces the use of this kind of gestation stall and instead implements a pen system whereby the mother pigs have more freedom of movement.

This non-crate method of raising pigs, driven by animal welfare concerns, is the focus of research at the STRC. Opened in 2001 on Penn Vet’s New Bolton Center campus, the STRC was one of the first swine facilities at a veterinary school in the US with a mission of applied swine research and the teaching of swine production medicine. And it’s here, at the 16,000-square-foot STRC facility at New Bolton Center, that alternative models for the housing of pregnant and lactating sows are investigated.

Led by Dr. Parsons, the research here is influencing producers nationally — about 1 percent of all sows in the US are now raised according to the Penn Vet model, and interest is growing internationally.

Harnish is among the 1 percent. His father had a small pig business and believed that a non-crated system was quieter because the pigs were less agitated. When Harnish heard about this new system developed at Penn Vet, he consulted with Dr. Parsons to talk about how the method could be utilized on his Oxford farm.

AN OPEN CONCEPT IN OXFORD

At the center of the Harnish facility is what looks like a comfortable family room with a computer, printer and an overstuffed easy chair. Through a window, the gestation side of the operation can be viewed. It’s an open space — enough to allow each sow about 20 square feet of space on average.

“It’s enough,” said Harnish, “for one sow to get away from another if need be. It keeps aggressive behavior down.”
The sows wander about, lie on the concrete loafing slabs lining one side, or push their way, one by one, into the electronic feeding mechanism. They appear relaxed and, apart from the occasional squeals accompanying disputes about territory or hierarchy, are quiet. There is plenty of natural light and ventilation.

At the other side of the building are two large maternity or farrowing rooms where the sows and piglets live until weaning, each family unit occupying a space about 35 square feet, where piglets play with one another, suckle or nap. Harnish keeps the piglets until they are weaned, at age 21 days. They are then sent to another local producer to be raised into adulthood.

A LIVING LAB, A WORKING CLASSROOM

The Harnish facility resembles that at the STRC where the gestation area consists of partitioned bays for sleeping and loafing. Renovated in 2010, the STRC has areas with different bedding substances and an outdoor loafing area, both providing opportunities for behavioral research.

At the STRC, there is also a large window looking out onto the gestation area, and another for observation of farrowing enclosures for mother sows and their piglets. These windows are on either side of a 1,000-square-foot classroom. Here researchers, students and guests, with the help of a video monitoring system, can observe the pigs without disturbing them.

At the center of both locations – on Harnish’s farm and in the STRC – is the electronic sow feeder (ESF).

It’s a computerized feeding system that includes micro-chipping a sow’s ear to identify her and ensure the daily delivery of a precise amount of food to each gestating sow. The implementation of ESF was based on Dr. Parson’s study of European farms, where consumer demands have strongly influenced the development of alternative husbandry practices.

In traditional housing, sows in crates spill feed, and neighboring sows are often able to steal; some pigs are getting too much, while others are not getting enough, and a percentage is always lost.

At his farm, Harnish walks the barn carrying an electronic tag reader. If a sow looks like she could use a little additional feed, he scans the ear tag and makes a note on the handheld device. When he returns it to the docking cradle attached to his computer in the office, it will update the information and that sow’s ration will be increased. The system also allows Harnish to easily mark or sort animals, selecting individuals or groups that might need vaccinations or other care.

These labor-saving features mean decreased costs for producers.

“We know that we can match the status quo system from a cost and production perspective,” said Dr. Parsons. “We believe that there are upsides to this technology, but we’re not sure we’ve captured all the benefits yet.”
WELFARE AND EFFICIENCY

In 1997, the European Union banned gestation stalls, leading to a 15-year phase-out of this husbandry practice that is mandated to be complete in all member states by December 31, 2012. To date in the US, Florida, Arizona and California have banned gestation stalls through voter referendums. And in Maine, Michigan, Colorado, Oregon and Ohio, similar laws have been passed. The phase-in period for implementation of these measures varies from state to state and ranges from seven to 15 years.

In this country as in Europe, where gestation models with pens rather than stalls were first initiated, the movement was driven by concerns for animal welfare. Adoption of the model, however, is spreading because it is proving to be efficient as well.

“We are seeing developing countries starting to adopt the practices that we are developing here,” said Dr. Parsons. “Industry leaders from China have come here to our STRC to train.”

Similarly, Dr. Parsons does his fair share of traveling, taking his knowledge on the road.

GAINING MOMENTUM

In addition to the state laws being passed and slated for implementation, consumer concerns about sow housing are driving demand for crate-free pork in the marketplace.

Smithfield and Hormel, both suppliers for branded pork products, have committed to eliminating gestation stalls on their farms. In the food service sector, the Compass group and Bon Appetit have announced plans to eliminate the use of pork produced from animals housed in gestation stalls.

Several retailers of pork products including the grocer Safeway are also taking notice of consumer preferences, and such popular fast food restaurants as McDonald’s, Burger King, Wendy’s and Denny’s have all taken strides to require their pork producers to transition from the use of gestation stalls. Burger King, in particular, has set guidelines to require this transition be completed by 2017.

So it’s not surprising that Dr. Parsons’ work has also been noticed – and supported – by a number of organizations through the funding of three research fellows for STRC. Each entity is working with Dr. Parsons to investigate different aspects of the swine ethology, the behavioral patterns of pigs.

The post-doctoral fellows, funded separately by the American Society for the Prevention of Cruelty to Animals (ASPCA), the Pig Improvement Company (PIC) and Swiss Village Farm (SVF) Foundation, will be studying both the social behavior of gestating sows and the maternal behavior of lactating sows.

Suzanne McMillan, director of the ASPCA’s Farm Animal Welfare Campaign said, “The ASPCA is proud to contribute to Penn’s important research to improve the welfare of pigs. Farm animals should be treated with dignity and compassion, and provided with conditions that cause as little suffering as possible. Tom’s research is an important step in that direction.”

For PIC, the collaboration with Dr. Parsons and the Penn Vet STRC provides an opportunity to investigate genetic improvement to pork chain customers through technology, health and services.

PIC, which works with pig producers to improve breeding stock by identifying desirable hereditary traits, is interested in animal welfare, but also understands the need to maintain or increase productivity. That is, a system must not only care for the animals in a new way, it also must make sense to a producer and provide economic stability and sustainability.

“PIC understands that compromising animal wellbeing does not result in efficient production for our customers,” said Craig R. G. Lewis, PhD. “Our research program aims to optimize our understanding of the management of our animals and accelerate genetic gain with the primary result of contributing to profitable production for our customers. Of course, with our customers having profitable sustainable production, then we are doing our part in providing a safe and affordable protein source for an expanding global population.”

SVF is also interested in genetics and heredity of the swine, but for them it’s about preserving heritage breeds.

“The collaboration and the use of heritage breed swine in this project will help us convey a very important story to the public: After decades of breeding for weight gain and confinement farming, we have likely bred out many important traits. As in this case, mothering ability,” said Peter Borden, executive director of SVF. “When Dr. Parsons asked if we could assist, we immediately saw this as a tool to educate the public about our mission — the preservation and ultimate use of potentially
lost genetic traits. The better educated the consumer, the more support these heritage breed farmers will receive for their efforts.”

For 10 years, SVF has focused its cryopreservation efforts on cattle, sheep and goats, but will now be working swine into its program.

“The Penn project seemed like an ideal way to encourage ongoing conservation efforts that support the marketing of heritage breeds of swine,” said Borden. “If we can successfully convince swine farmers to use Dr. Parson’s humane handling system with heritage breeds, it is a win-win for the animals, the individual consumer and our national food safety.”

CHOOSING THE RIGHT PIGS
Where design of animal housing and electronic delivery of food have been the emphasis of the first generation of the STRC research at Penn Vet, the next generation will focus on the animals.

“For 30 or 40 years, the industry has been selecting animals for crate-based housing. Now we want to know what is the right animal to use in alternative systems,” said Dr. Parsons.

One of the operating hypotheses is that different personality types can be identified in pigs. If that’s true, he posits, then there may be an optimal mix of different personality types that yields the most functional social group in a pen gestation system — a piggy Myers-Briggs test of sorts.

“There is an entire genetic pool that has been away from the selection pressure of commercial industry,” said Dr. Parsons, referring to the heritage breeds in which SVF is so interested.

It is possible that personality traits more suited to pen gestation could be found in those breeds. They are also important for another reason: lack of genetic diversity creates a liability. With so much of the industry reliant on a concentrated genetic profile, the industry is potentially vulnerable to decimation in the event of a serious infectious disease outbreak. Heritage breeds, on the other hand, might harbor unique resistance to disease or have other advantageous traits that distinguish them.

“This is all part of the broad spectrum of research focused on finding the right animals for these new and emerging housing systems,” said Dr. Parsons.

FEEDING THE GLOBAL APPETITE
Parsons recognizes that the goal of increased production and improved welfare is a long road.

“We knew 10 years ago that changing the mindset about gestation crates would be the challenge,” said Dr. Parsons. “In the past five years we have seen 1 percent of the industry utilize our system. We saw the first change in farms with 100 sows, but now we are seeing this model implemented on farms with thousands of sows. In fact, 60,000 sows in the United States are now living in crate-free or in the ‘Penn gestation’ housing system. Our focus now has to be: what will the industry need in order to grow in the next 10 years?”

While Dr. Parsons works closely with some local farms, like Harnish’s, he appreciates the global impact of his research and recognizes that the global demand for animal protein continues to grow at an unprecedented rate.

That need is a consideration driving all food production industries worldwide.

China, the most populated country in the world with one of the fastest growing economies, is seeing a doubling of per capita consumption of animal protein every 10 years. Pork is a mainstay of Chinese cuisine, and is the most consumed animal protein in the world — accounting for 36 percent of the world meat intake.

“Our goal is to help animal agriculture reinvent itself to meet the changing expectations of a local society without compromising production solely needed to meet burgeoning global demands for animal proteins,” said Dr. Parsons.

THE IMPORTANCE OF PEOPLE
In the meantime, Dr. Parsons keeps in close touch with Harnish, visiting the Oxford farm regularly, sending students to learn from him, and in some cases accessing the computer remotely, to help ensure that Harnish is fully capturing the upside potential of the technology.

“The health of this herd has been great, and they seem comfortable. And our productivity is up. We are seeing 28 or more piglets weaned per sow per year, almost a 40 percent increase from what we had on my father’s farm,” said Harnish.

While the numbers are impressive, that was not the only motivation for Harnish to embrace the pen gestation system.

“As human beings we are called on to do the best that we can for our animals. They, in turn will respond in a positive way with increased productivity,” he said.

“The varied degrees of success on our farms with crate-alternatives reinforce the notion that a sow’s life is not necessarily improved by the simple ability to turn around,” said Dr. Parsons.

On the other hand, our experience has documented that there are commercially viable, crate-free farms out there where the welfare of the sows is undoubtedly improved.”

Harnish’s farm is proof positive.

“In these situations,” said Dr. Parsons, “the farm staff has quickly responded to champion the new challenges associated with pen gestation — such as managing the effects of the social hierarchy.”

Parsons’ experience from establishing pen gestation on over 35 farms across the country emphasizes that it is the people and not only the housing system that makes for a happy pig.■
PROTECTING

humankind

Making a Global One Health Impact

BY JOAN C. HENDRICKS
THE GILBERT S. KAHN DEAN OF VETERINARY MEDICINE
Penn Vet has a global future built on its global past.

Our founding dean, Rush Shippen Huidekoper, left his position in the medical school to train in veterinary medicine at Lyons, France in order to take his position as our first leader.

One of our most beloved deans and Penn Vet alum Leonard Pearson, V’1890 was honored for his international research program and even more for the difference he made in developing a model program to eradicate bovine tuberculosis and defeat the zoonotic spread of this condition.

Martin M. Kaplan, V’40 served as secretary general of the 1995 Nobel Peace Prize-winning Pugwash Conferences on Science and World Affairs. Dr. Kaplan also played an integral role in leading an international effort to restock livestock in Europe after World War II.

Emeritus Dean Alan Kelly advocated for international programs during his tenure, which laid the foundation for many opportunities that have since been further developed.

And I fully intend to build on this global legacy with the explicit goal for Penn Vet to be a Global One Health leader.

All of us – from Dr. Huidekoper to Drs. Pearson, Kaplan, Kelly and me – worked or are working from a common belief: that the veterinarian is a vital component in protecting all of humanity from the threats of plague and famine.

The Vet’s Role

Veterinary medicine, as stated in our oath, is the single profession that serves both animals and the humans who own them and benefit from them. We are scientifically trained comparative medical professionals — the only profession who can make this claim. Veterinarians innately care about humans but also about nature — the natural world affects the health and well being of human society, domestic animals and, of course, wildlife.

Because of this understanding, and because of our already-established global reputation, Penn Vet is uniquely positioned to lead the Global One Health Initiative — an extension of the already established One Health Initiative.

The One Health Initiative (www.onehealthinitiative.com) has been embraced and is gaining momentum nationally and internationally. Penn Vet is uniquely and ideally situated to play a leadership role in this initiative thanks to our unique origins of being founded by the School of Medicine and our proximity to superb biomedical institutions, including Penn’s nationally ranked Schools of Medicine, Nursing and Dentistry. We have broad and deep collaborations in research with all of these schools and across the University through many centers and integrative programs — a hallmark of Penn and crucial component of President Gutmann’s Penn Compact — Integrating Knowledge.

Global Engagement

When I was reappointed as dean in 2011, I made a decision to be purposefully open to opportunities for global engagement that would further Penn Vet’s mission to become a leader in Global One Health. In order for this to be successful, I set guidelines: Penn Vet would only be involved in areas where we could make a lasting impact. And we would only engage where a permanent, financially sustainable program that was mutually beneficial to the home country and to Penn Vet was possible.

Specifically, I was interested in opportunities in India and China.

With this in mind, I was eager to learn more when Narayan Avadhani, PhD, chair, animal biology, mentioned his close ties to the BAIF Development Research Foundation (www.baif.org.in), an organization established in 1967 by Dr. Manibhai Desai (a disciple of Mahatma Gandhi), which promotes sustainable living in rural India.

First Stop — India

After months of planning, Dr. Avadhani and I headed to India in February of this year to focus on learning about the Foundation’s livestock programs. We met up with past-president of BAIF, N.G. Hegde in Mumbai.

Throughout the 10-day visit, Drs. Avadhani and Hegde provided an outstanding tour that went from Mumbai and Pune to Kolkata and a local village outside Burdwan. Our trip concluded in Delhi with a visit to the National Dairy Research Institute. We visited with faculty from three of India’s 28 veterinary schools as well as with officials from the Indian Council on Agricultural Research (ICAR), the national body that oversees all veterinary education and also all agricultural research throughout the country.

By far the biggest personal impact and, I believe, the biggest potential for professional impact were the visits to villages where BAIF’s programs enhance the genetics
and husbandry of livestock (both dairy cattle and also goat-rearing projects).

The empowerment of the women in these areas, the clear influence on their families, and the shining health of the animals spoke louder than any data — but the data are being collected, as well.

Penn Vet’s opportunities to work together with this well-respected non-government organization and through the Indian government will be explored as we complete a memorandum of understanding with the ICAR.

Parallel Tracks
Immediately after my visit to India, Dipti Pitta, MVSc, PhD, assistant professor of ruminant nutrition, and several Penn Vet students were conducting complementary visits to the country.

Dr. Pitta, a native of Hyderabad, is an expert in understanding how rumen microbial ecology affects productivity, which perfectly positions her and Penn Vet to contribute to knowledge to enhance food security in the US and abroad.

Penn Vet’s outstanding and long-term excellence in improving nutrition to optimize economics, animal health and productivity, and environmentally friendly waste management, will be key to our planning and our ability to effect positive change. These opportunities are likely to involve formalized faculty and student exchanges, and organized projects in specific locations, in partnership with the ICAR and at least one Indian veterinary school.

Making Possibilities a Reality: Positioning Penn Vet as a Global One Health Leader
At Penn Vet, we have exceptional trailblazers in the areas of infectious disease study and prevention as well as in food security, both with many alliances across the University and globally. With that in mind, I have asked a few key people to lead our visibility in Penn Vet’s commitment to the Global One Health initiative.

Gary Althouse, PhD, DVM, chairman, department of clinical studies at New Bolton Center, is very globally connected and has a vigorous international consulting program in swine reproduction. Dr. Althouse has agreed to be our global activities director to keep momentum around this initiative.

In addition, I have asked David Galligan, VMD, MBA, professor, animal health economics and director of our Center for Animal Health and Productivity (CAHP), and Shelley Rankin, PhD, associate professor of microbiology, to work with me and Dr. Althouse to identify areas where School and University support can have a particularly significant impact as well as advance our mission.

Dr. Galligan and the entire CAHP group have long focused on food security and are increasingly engaging across Penn with like-minded colleagues from other schools and centers; Shelley Rankin and colleagues in Penn Vet and the Perelman School of Medicine, among others, are leaders in zoonotic surveillance and prevention of epizootics, especially focusing on the food-borne and zoonotic scourge, Salmonella.

This Penn Vet leadership structure will work with an exciting new University Global Strategic Initiatives vice provost — Zeke Emanuel, MD, PhD, one of the world’s leading scholars of bioethics and healthcare who was the founding chair of the department of bioethics at the Clinical Center of the National Institutes of Health.

In our very first conversation with Dr. Emanuel, it was readily apparent he is enthusiastic about Penn Vet’s ability to provide global progress in the areas of food security and safety. Penn Vet has so far garnered two awards from the Global Engagement Fund that Dr. Emanuel has founded.

The first award was provided to Dr. Galligan and Eugenie Birch, MSUP, PhD, the Lawrence C. Nussdorf Chair of Urban Research and Education at Penn’s School of Design, and will be put to use to support a major international conference titled “Food Security in a Rapidly Urbanizing World.” Slated for the spring of 2013, more information will be made available in the coming months.

Secondly, we have funding for visiting professors from India and China who will translate our leading nutrition program — CPM/Dairy — and we will continue to build the international market for this superb software that optimizes production, economy, animal well being and environmental impact of waste products.

Student Impact
With this flurry of global engagement, we also have a serious interest in expanding our longstanding openness to international students and advanced training candidates.
The national applicant pool for veterinary schools is stagnant or declining, while entry-level positions for veterinary schools in the US and abroad are increasing. Penn Vet continues to have a superb applicant pool, but in order to maintain our excellence and build on our relationships around the world, we see a wonderful opportunity to ensure that the very best international students are welcomed.

As is already true in our international graduate and advanced clinical training programs and faculty, a cosmopolitan community such as Philadelphia only enhances the learning environment for our US-born-and-raised student body while also increasing opportunities for global engagement.

Furthermore, we are looking to increase opportunities for continuing education and possibly introduce professional master’s programs and online training that would facilitate international engagement.

In 2007, we established a veterinary public health certificate program. This new elective in public health is offered by our epidemiologist and leading investigator on multiple grants addressing global pan-zootic/pandemic threats, Gary Smith, DPhil, chief, section of epidemiology and public health, and quickly fills with students every time it’s offered.

Our aim is to formalize programs that will be available globally, such as, for example, a master’s in public health, in areas where we lead such as clinical trials, food production training, and biomedical research techniques in a comparative medicine setting.

Moving Forward

All of this activity – ongoing research to ensure food safety and security; my trip to India and the relationships that may come to fruition; establishing and strengthening relationships worldwide; creating and updating curricula to reflect a global impact – will certainly benefit not just the animals with which we work, but people.

From students training to be veterinarians, to alumni who are in the field and on the front line of protecting public health, to community members directly impacted by their ability to raise and sustain their own livestock to those individuals who rely on animal protein to survive, Penn Vet will indeed continue its tradition of global reach and impact that was set by its very first dean.

We are just getting started. And I hope you’ll continue to be a part of this exciting, important journey.

We have broad and deep collaborations in research with all of these schools and across the University through many centers and integrative programs — a hallmark of Penn and crucial component of President Gutmann’s Penn Compact — Integrating Knowledge.
A Day in the Life

Riding along with Penn Vet’s Field Service

BY SALLY SILVERMAN

The sun is barely over the horizon, and the Penn Vet William B. Boucher Field Service, based at New Bolton Center, is well into its first call. Michaela Kristula, DVM, MS, a Field Service clinician for 28 years who now serves as the section chief, along with three senior students, is preparing to perform pregnancy checks at Mason’s Chrome View Dairy. This dairy is a regular weekly stop for Field Service. Dr. Kristula and her students suit up in insulated overalls, with waterproof covers. The 29 cows are lined up in a palpation rail.

“These cows were bred 33 to 39 days ago,” explains Dr. Kristula.

In order for cows to consistently produce milk, they must become pregnant every year, and an efficient reproductive program is reflected in the business’s bottom line.

The classic way to determine pregnancy is through palpation of the uterus, through the rectum. Dr. Kristula moves from student to student asking what they feel. “It takes a lot of experience,” she explains as she works with each student to confirm their exam findings. The dairy manager stands by with a clipboard to record findings for each cow. Those cows that are not carrying a calf receive an injection of prostaglandin as part of a routine resynchronization program and will be bred again in three days. When the job is finished, Dr. Kristula declares, “It’s a great day because we found a lot of pregnancies!”

A PRACTICE ON THE MOVE

Boucher Field Service is a fully equipped ambulatory veterinary practice. Each year, food animal Field Service provides routine and emergency health care for about 20,000 cows, and an assortment of small ruminants within a 30-mile radius of the New Bolton Center campus in Kennett Square. The nine veterinarians, three of whom are residents, are divided into equine and food animal specialties, offering primary and preventive health services.

When the Field Service vehicle arrives at Mason’s Dairy, resident Kim Crowe, DVM is already on site. Dr. Crowe is a veterinarian in residence at the Dairy participating in a post-graduate training program. The work experience she gains from this special program will help her bridge the gap between understanding daily farm activities and veterinary medicine. Specifically, she is responsible for routinely monitoring the health status of the herd and briefs Dr. Kristula on what needs to be done after the reproductive examinations are completed.

Checkups on Pregnancy

“This is usually how our days start in food animal Field Service,” says Dr. Kristula. “For dairy farms, we make regular weekly visits and start with reproductive exams. Our arrival time is precise, coinciding with the time the cows exit from the milking parlor so as not to disturb them the rest of the day when they are eating or resting. After the reproductive exams, we check sick cows and address any other problems.”

Ensuring Herd Health

Standing in a chute is #1909. The students start their examination and Dr. Crowe records their findings on a special form. Dr. Crowe guides the students through their examination findings. Both she and Dr. Kristula deflect questions back to the students, encouraging them to come up with answers themselves. This is as much a teaching opportunity as a clinical one, and #1909 is the beneficiary of the process. Students are an everyday part of Field Service. In fact, even though Field Service is an elective
It’s a quaint image: a rural vet in a pick-up truck driving down a country lane to treat a sick cow or horse.

Charming though this depiction may be, it belies the thoroughly modern nature of the University of Pennsylvania School of Veterinary Medicine’s Field Service. While the nine veterinarians who comprise the Field Service still function as the “old country vets” for the local community, aspects of their practice — including advanced diagnostic services, dairy-production medicine and even acupuncture — bring the Service squarely into the 21st century.

Operating out of Penn Vet’s New Bolton Center in Chester County, Field Service has provided preventive, routine and emergency care to large animals within a 30-mile radius of the campus since 1956. Each year, the Service sees approximately 20,000 cows, 6,000 horses and an assortment of other animals, from llamas to goats.

Back in the 1950s, Field Service vets were generalists. But following a trend in the field of veterinary medicine, most of Penn’s Field Service vets are specialized by species today and have advanced training in areas such as internal medicine, sports medicine, preventive medicine and milk quality.

“Most of our equine vets just look at horses and most of our food-animal vets just look at food animals,” said Michaela Kristula, DVM, MS, section chief of the Field Service and an associate professor of medicine in Field Service for Penn Vet. These specialties serve the vets well in Chester County, a wealthy, rural area home to discerning clients that include world-class equestrians and progressive family-owned dairy farms.

On the food-animal side, the Field Service cares for cattle at roughly 18 dairy farms and 15 beef farms. Some of these are small operations, producing ice cream, cheese or meat for local markets, while others are large dairies with as many as 800 cows. At these farms, vets work proactively to ensure that herds stay healthy and productive.

“We work with the farms to establish protocols so they can identify disease early and maximize treatment success,” Dr. Kristula said. “We’re really focused on promoting health.”

Last year, for example, Field Service was called to a dairy farm that was having a problem in the herd. A referring vet had diagnosed widespread mastitis, an infection of the udders that reduces milk quality. When Penn’s vets visited, they noticed that the cows were very uncomfortable when they were being milked and that their teats were sore and swollen.

Field Service vets traced the problem to the set-up of the milking parlor and recommended that the farm operators make adjustments to the milking equipment. Their suggestions improved teat and udder health and resulted in improved milk quality.

“The cows were comfortable and the owner was very pleased,” Dr. Kristula said. “It’s really a win-win situation, because if the animals are healthy they give more milk and that affects the farmer’s bottom line.”

Field Service vets must pay keen attention to economics when caring for food animals, Dr. Kristula said.

“Ultimately, whatever recommendations you make have to pay for themselves in either milk or meat.”

When treating horses, on the other hand, economic constraints tend to be different, and diagnostics can be extremely high-tech. Indeed, some of the diagnostics that Field Service veterinarians utilize on pet horses and performance horses resemble advanced human health care and include digital imaging, ultrasound and endoscopy.

According to Dr. Kristula, who has been with the Field Service since 1984, there is a “unique longevity” to many of the Service’s clients.

“We’ve seen farms passed from one generation to another, and many have been with us on the dairy side and the equine side since we started in the 1950s,” Dr. Kristula said. “I guess it’s pretty old fashioned, but we don’t have a Facebook site, we don’t do any social media. In the end it’s really the relationships that you develop with people as to why they keep using you.”

WWW.VET.UPENN.EDU/BELLWETHER
clinical rotation, the hands-on clinical training Field
Service offers is the main reason the rotation is always
fully enrolled.

A diagnosis of ketosis and uterine infection is made
for #1909. The team decides to administer IV dextrose,
antibiotics, and 10 gallons of water enriched with alfalfa,
yeast and propylene glycol. All the treatments the cows
receive are entered into the farm’s computer record
keeping system, which acts as a safety net to ensure no
drug residues enter the food supply.

The next cow to be examined is separated from the
herd, and as she is guided through the labyrinth of gates,
she displays a severe limp. The specialized chute allows for
the cow’s foot to be lifted from the ground and presented
for trimming. An abscess is found in the left hind foot,
and Dr. Kristula does the majority of the hoof trimming
before handing the knife to a student to finish.

A TEAM APPROACH

It has been a full morning but the Field Service team
will next meet with the dairy’s owner and management
group to review the herd’s metrics and discuss current
issues on the dairy. In addition to Drs. Kristula and
Crowe, Mason’s farm advisory team includes Jon Garber,
VMD of Field Service and the farm’s nutritionist, Linda
Baker, VMD of the Section of Center for Animal Health
and Productivity. All are rewarded with a hearty meal,
including home-baked cupcakes, prepared by Pam Mason.

Dr. Garber navigates his computer to Dropbox, a
cloud-based storage service that the advisory team uses
to share the farm’s files, and projects the herd monitor
spreadsheet onto a screen. Dr. Kristula reviews the metrics
on cow health, reproduction and milk production and a
discussion ensues about recent changes to the non-milk
producing ration made by Dr. Baker.

In order to compete economically, a dairy farm needs
to constantly set goals, develop plans to reach those
goals, and look for ways to be more efficient. The work
performed by the food animal Field Service section is a
valuable part of this successful equation. Some questions
that arise during these meetings are difficult to answer
and have led to research projects. Dr. Kristula and Billy
Smith, DVM, MS have conducted important research
projects on the Mason’s dairy related to cattle lameness
and reproductive efficiency.

It’s close to 4PM when the meeting concludes and the
Field Service crew heads back to the New Bolton Center
campus.

NEXT STOP: QUARRYVILLE...

A couple of days later, Dr. Smith, who has been a Field
Service clinician for 14 years, slides a portable ultrasound
unit onto the backseat of his truck. Two vet students and
Matt Stock, VMD will join him on this visit. Dr. Stock
is a Penn Vet grad who became interested in food animal
veterinary medicine and surgery during his clinical year.
The Field Service post-graduate training program has
allowed him to become eligible for board certification in
food animal through the American Board of Veterinary
Practitioners.

Their first call is a small dairy farm just south of
Quarryville, and a collie-mix and an aging Lab hustle
towards the arriving truck, eager for the dog biscuits
that Dr. Smith hands out. Steve Wagner, the farm’s
owner, has a special interest in producing cows of the
highest genetic quality. His Brown Swiss dairy cows,
a breed that produces lower volume but richer milk
than their Holstein counterparts, are frequent successful
international contenders at the annual World Dairy Expo
in Madison, WI.

Another Method to Check on Pregnancies

Wagner prefers to have pregnancy tests performed with
an ultrasound exam, rather than the traditional palpation
per rectum.

“It’s a choice that we are able to offer to our clients.
Ultrasound exams takes a little longer and are therefore a
little more expensive,” explains Dr. Smith.

While ultrasound and rectal palpation are both accurate
methods for pregnancy diagnosis, ultrasound is more
accurate for ovarian structure determination and this
farm’s reproduction protocol relies on this information for
subsequent heat detection and breeding.

Dr. Stock slips on a pair of science-fiction-looking
goggles, hands the ultrasound machine, about the size of
a laptop, to Dr. Smith, and inserts the ultrasound probe
into the rectum of the first cow. Dr. Stock directs the probe via the image that appears on the goggles while Dr. Smith uses the screen to explain to the students what the ultrasound indicates. The students will follow behind Dr. Stock and palpate the ovarian structures, making this a valuable learning opportunity for a beginner.

In another section of the barn, they check some cows that had embryo transfers and have already been declared pregnant. Pregnancies from 55 to 65 days are the best for fetal gender determination. When Dr. Stock confirms that one of the cows is having a female calf, everyone in the barn – vets, students and Mr. Wagner — cheer enthusiastically. Naturally, on a dairy farm, female calves are desirable.

When all of the reproductive exams are finished, attention is turned towards a weaned calf. “Harley” has already visited the George D. Widener Hospital for Large Animals, where she was diagnosed with a pharyngeal abscess. On antibiotics, the calf’s temperature is down, but the swelling persists. In the follow-up treatment, the students drain the lesion and flush it.

... THEN OFF TO LANCaster

With no time for a sit-down lunch break this day, the group stops for a quick bite to eat and then heads towards Lancaster to a farm owned by a gentleman new to raising Angus cattle. This new client may not be dealing with the trials of milk production, but there are different challenges facing this operation.

Dr. Smith explains the difficulty of purchasing cows to start a herd. “Often when you buy animals, you buy trouble,” he says.

This client had inadvertently purchased a calf persistently infected with bovine viral diarrhea virus. Although the virus may easily be identified using diagnostic tests, the infected cows often do not show clinical signs and continuously shed the virus causing havoc in the rest of the uninfected cows.

“Now he is working on cleaning up the herd. Owners and veterinarians develop a great relationship with each other when they work together to improve the health of the animals,” says Dr. Smith.

The fencing is still fresh and new, and the cows are moved into an enclosure that narrows, filing one-by-one into a chute. These animals are considerably feistier than the Holsteins and Brown Swiss cattle that the students worked with earlier, and are visibly more agitated at being restrained. It is only with quick, confident movements that the students are able to insert ear tags for identification, snap ear notch samples for bovine viral diarrhea testing, and deliver vaccinations.

**TEACHING MOMENTS**

Most clients visited by Field Service appreciate the teaching aspect of the service. “They are happy to have us there because they recognize the importance of educating young vets,” said Dr. Smith.

When the hard part of the job is over, the team treks to a run-in shed set up on a hill. Two calves have been born overnight, and the students perform newborn calf checks. The students gently listen to the newborns’ hearts and lungs and take ear skin samples. Since the Field Service veterinarians cannot be there for the birth of every calf, the owner is trained to perform a health check and obtain the skin sample for testing. Over time, all newborns will be tested for the virus.

While much of the day-to-day activities of food animal Field Service revolve around reproductive and animal health checks, the broader mission of the service is to have proactive approaches to prevention of disease. Emphasis is placed on both promoting health and treating illness appropriately. The veterinarians work to establish protocols on-farm that identify disease sooner and maximize treatment success. They engage with the farm management to train employees in protocol implementation pertaining to animal health and welfare, antibiotic usage, reproduction, milking routines, calving and care of the newborn. If they are not producing the desired results, existing programs and protocols are modified. The ultimate goal is to maximize cow health so they can be productive.

“It’s definitely a win-win situation because animals are healthier and this improves both the welfare of the animals and the bottom line of the farm,” said Dr. Kristula.

The benefits go beyond the clients to the consumers who ultimately enjoy safe, high quality milk and meat products, agree Drs. Kristula and Smith.

“We have been very fortunate in Field Service to have progressive clients to work with who welcome the students to their farms year after year, and allow us to give students an extraordinary breadth of primary care experiences,” said Dr. Kristula.
It is beautiful Saturday in March, and a team of three Penn Vet students in the Surgical Opportunities Program are driving from West Philadelphia to farm country in Maryland. The SUV is packed with an anesthesia machine, medical equipment for spay and neuter procedures, donated vaccines and medical supplies and polar fleece blankets.

“We expect to spay or neuter between 10 to 30 feral barn cats today, depending on how fruitful the capture efforts of the local farming community turn out to be,” said Rachael Kreisler, a new Penn Vet 2012 graduate who served as past-president of the Pennsylvania Student Chapter of the Association of Shelter Veterinarians (PSCASV) – more simply known as the Shelter Medicine Club. Dr. Kreisler was also the founder of the PSCASV’s Surgical Opportunities Program.

The PSCASV Surgical Opportunities Program is a student-directed clinic providing the manpower for every step in the process of high-quality/high-volume surgery, including performing or participating in the majority of the surgeries, every Saturday and Sunday at two Philadelphia shelters. Since its inception in March 2010, a total of 217 Penn Vet students have participated, and this year they’re on track to perform about 4,500 cat spays and neuters.

Typically, student groups are deployed at Philadelphia’s animal control facility, ACCT, and the Pennsylvania Animal Welfare Society – today is different. Instead of the densely populated urban shelters, the students are headed into the country. The Shelter Medicine Club has partnered with Penn Vet’s Field Service, which provides routine and emergency health care for equine and food animal clients within a 30-mile radius of New Bolton Center. Both groups have the same goal: to help local farmers manage their feral barn cat population and decrease risk of infectious disease, like rabies, on their farms.

We pass many farms on the way to our destination – some manicured and some more rustic. On a day like this, the Maryland farm country looks idyllic, but as we arrive at our destination, it becomes apparent that this community of farms operates on very modest resources. Those resources are spent on care of dairy cows and the farm itself; the feral cats that have made these farms their home get a roof over their heads, but they are otherwise self-reliant.

The farm owner gives us a warm welcome, and we see another recent Penn Vet graduate, Hillary Herendeen, and a Field Service Resident, Dr. Kim Crowe, setting up the spay/neuter field clinic in a large garage on the property. They have also recruited four local volunteers to help monitor cats as they wake up from anesthesia. Two small gray cats are already awaiting their health check and spay procedure in a chicken coop, and two large males are in cat carriers.

One of the community volunteers is canvasing the neighborhood to let all farmers know that Penn Vet has a
makeshift clinic down the road and to catch and bring their barn cats for sterilization and vaccines. Farmers are asked to pay a modest fee for the surgeries, necessary medications and vaccinations. All the proceeds are invested back into the Shelter Medicine Club for more supplies for future efforts.

**SCRUBBING IN**

Dr. Crowe has already set up an operating area, a recovery area off to the side with heating pads and fleece blankets, and a prep area for the patients. The students are scrubbed in, and the first cat is up – her surgeon is Dr. Herendeen, who has performed hundreds of cat and dog procedures, and has volunteered more than 40 times in the urban locations since March 2010. She handles her sleeping patient with great delicacy; her cuts are deliberate and meticulous.

Olivia Nathanson, V’15, the junior surgical coordinator for the Shelter Medicine Club, has spent more than half of her weekends since arriving on campus volunteering in this program. The cats’ caretakers stay and watch, and Olivia cheerfully explains the process and each step to them. To date, she’s performed more than 70 cat spays and neuters and is one of the on-site team leaders.

With Dr. Crowe’s on-site leadership, the entire event is well organized, and patients flow through each station and into recovery with efficiency. She makes sure to keep in constant contact with each student, the farmers and the volunteers. Rachael’s spay surgery is done in about six minutes; the entire process – from starting with the awake cat to awakening in recovery – totals about 30 minutes.

At the end of the day, 19 cats have been spayed or neutered, vaccinated for rabies and received treatment for ear mites and various conditions. In addition to sterilization surgeries, the students also cleaned and treated a large wound on one of the females, an infected abscess on one of the male cats, and three respiratory infections. Right after the end of this barn cat event, Dr. Crowe and Dr. Herendeen head back out on Field Service and turn their attention and skills upon a cow with a prolapsed uterus – a more typical patient.

“I love a day like this. It reminds me why I wanted to become a vet,” said Morgan Nabhan, V’15, on the ride back to Philadelphia. Morgan has completed more than 35 spays and neuters in the Shelter Medicine Club.

**GAINING AN ADVANTAGE**

The Shelter Medicine Club volunteers manage a full academic load, and still dedicate more than 12,000 hours (inception to date) of high-value surgical service to the local shelter and now farm communities. Penn Vet students participating in the Club’s Surgical Opportunities Program graduate having completed an average of 60 spays – 10 times the average performed on ST and/or shelter medicine elective rotations. Penn Vet is producing a group of confident, skilled professionals with a broad understanding of pet over-population and infectious disease challenges.

The collaboration between Penn Vet’s Field Service and the Shelter Medicine Club is a valuable opportunity to educate the future generation of veterinarians about a variety of issues involving homeless pets in different environments, all while helping farmers with limited financial resources to maintain safe, healthy farms. It is the close relationship between Field Service clinicians and the farmers with whom they work, and the spirit of collaboration among Penn Vet clinicians that culminated in this wonderful project.
Thank you very much Dean Hendricks. And my congratulations to the class of 2012 and your families.

Twenty five years ago – almost exactly to this day – I sat right where you are sitting, just about...there. Today, even though I have the extraordinary honor of being on the other side of this podium, I still have the same excitement and enthusiasm about my profession that each of you has today about your future as veterinarians.

We who become veterinarians are frankly different from other people. We have big hearts, and we are full of compassion for the other occupants of this fragile planet. Uniquely, we typically know from a very early age that this is what we must do with our lives. For example, when other little girls were playing with dolls, I was giving injections to my first patients – perfectly healthy stuffed animals – and soon my parents forbade me from ever again wrapping Ace bandages around the family dog.

In my 25 years as a veterinarian, most of them devoted to a unique practice of NYC house calls, this profession – your profession – has given me more than I could have ever dreamed those many years ago when I sat in your seats.

It is true that as a young vet I thought it was “all about the animals.” I have learned since that it’s also about something much bigger. It’s about what we can – and should – do, not only for the animals but also for their families and even for the wider world in which they live.

Let me tell you a story to illustrate my point. It is the story of Mrs. Blum, a long-time client in my housecall practice. Housecalls were perfect for Mrs. Blum because she was 90 years old, housebound and very frail. She lived all alone and no longer had any living friends or even family. However, she did have her companion Maggy, a sweet 18 year old toy poodle, whom she loved dearly.

Maybe too dearly. She had once said to me that she was staying alive just to care for Maggy. And I believe she was telling the truth.

Mrs. Blum called us one day to say that Maggy wasn’t eating. Stat blood tests revealed that Maggie’s problem was much more serious than simply being off her feed; Maggy was in both kidney failure and heart failure, and there was nothing I could do to treat Mrs. Blum’s precious companion. She agreed to put Maggy to sleep for her own good.

At home, I couldn’t stop thinking about frail Mrs. Blum, now totally alone and without her reason to live. I feared for her – truly – and so I went to see her about a week later and was shocked at what I found. She told me that she had not gotten out of bed for most of the week, and I was certain she hadn’t eaten perhaps since Maggy was put to sleep.

It appeared to me as if Mrs. Blum had indeed lost her reason to live.

I don’t need to recite to this group all of the research that proves that people live longer and healthier lives when they have pets. I knew I simply had to get Mrs. Blum another dog, but I also knew that Mrs. Blum would say no. I found and enlisted her priest to broach the idea with her. Then, I called in all of my favors from the dog rescue world and within 48 hours I had Pierre, an 8 year old, tiny toy poodle.

I brought him to her. Mrs. Blum thanked me sweetly, but said “No, I am too old to love again.”

I pressed. Again she said no, and finally she admitted in a small voice that she feared it would simply be cruel to Pierre to be left alone when she herself passed on, an event she plainly contemplated. I gently explained that Pierre’s alternative as a rescue was likely to be much worse.

I asked her to keep him just for a few days until I found a home for him with ‘younger’ people. Then, I just placed him in her arms and turned to walk out without waiting for her answer. As I did, I saw from the corner of my eye Pierre giving Mrs. Blum a big wet kiss.

The next morning I phoned her and before I could even say a word, Mrs. Blum said to me: “Dr. Amy, it’s a very good thing that you brought him to me; he needed a home”.

Remarks of Amy I. Attas, V.M.D., ’87
And a home is what he got. Pierre was Mrs. Blum’s constant companion for the next two years, during which time she had a remarkably happy – and healthy – life.

I know that all of you are smart, ready professionals. Our wonderful alma mater has seen to that. But it is possible to be more. Remember, often it’s the people – as well as the animals – who need you.

Sometimes this means going the extra distance to further the special bond between people and their pets. And sometimes – sometimes – this means speaking out about the wider world still.

In my life this means not only being on the board of my local veterinary association, but also working with the Humane Society to develop national programs to end the cruelty of puppy mills; and donating my services to animal rescue efforts; and raising awareness – and even money – from my own clients for international wildlife conservation and protection.

We are first and foremost animal health advocates. And this means not only treating and protecting them, but, also, giving our professional and big-hearted attention to their families and to the world in which they all live.

One of the beautiful surprises in our profession (which I’m tipping you off to today) is the realization that you as a veterinarian have a special voice as well as a unique opportunity to use it to make this world better.

So please use it; use this special voice in all its forms. You will be amazed how it enhances not only the world in which our beloved kindred creatures live, but also your own lives.

I want to thank you Dean Hendricks for this truly wonderful opportunity to share some of my inspirations with the Class of 2012. This is both a professional and very personal honor.

And so on behalf of the Board of Overseers of the University of Pennsylvania School of Veterinary Medicine, I wish you all as much joy and fulfillment in your careers as veterinarians as I have in my own. ♥
Clockwise from top left of opposite page, Penn Vet had a booth at the Pennsylvania Farm Show in Harrisburg, PA. This year’s theme was about the human-animal bond.

At the SCAVMA Teaching Awards, the Carl Norden-Pfizer Distinguished Teacher Award was presented to Dr. Roberta Di Terlizzi by SCAVMA president Ben Ouyang. The William B. Boucher Award was presented to Dr. Maria Schnobrich by Dr. Ray Sweeney.

During Alumni Weekend, second-year student Christopher Lapsley assists children of Penn alumni with mending hurt stuffed animals at the M.A.S.H. table. The Class of 1962 celebrated their 50th reunion at the alumni reception held at New Bolton Center. Celebrating their 25th reunion, the Class of 1987 gathered in the OldVet Courtyard at the alumni picnic.

Students provide free wellness exams to community pets at the 4th annual vaccination clinic on the Martin Luther King Jr. Day of Service. Penn Vet offered free vaccinations and exams to approximately 200 dogs and cats from local Philadelphia neighborhoods.

At the Phi Zeta Student Research Day, keynote speaker Paul McKellips speaks with Dean Joan Hendricks and Dr. Phil Scott. Kristine Stellato stands before her poster presentation with her mentor, Dr. Lisa Murphy.
n order to continue to attract the best and brightest students, Penn Vet must not only offer the highest level of training for the next generation of veterinarians, we must also make that education affordable. Currently, Penn Vet’s level of annual scholarship support is approximately $1.2 million, which falls short of the support provided to students by some of our peer schools which offer approximately $1.7 million per year.

Since the launch of the Making History Campaign in 2007, Penn Vet has raised more than $13 million towards its $20 million endowment goal to support scholarship.

Growing scholarship endowment will remain an ongoing goal even at the close of the Making History Campaign; the Dean has a goal of awarding $2 million per year in scholarship funds, which would require Penn Vet to secure an additional $16 million for endowed scholarship support.

With the close of the Campaign just six months away, we are thankful for those leadership gifts from Penn Vet Board of Overseer members who have recognized the real need to support students’ education in the field.

**SUPPORT FOR VMD/PHD PROGRAM**

Penn Vet Board of Overseer Chair Mindy Heyer, C’70, W’80 and her husband Andrew Heyer, W’79, member of Penn’s Trustees, have established the Heyer General Endowment Fund with $500,000 dedicated to establishing a matching endowment program for the School’s VMD/PhD program. Students accepted into the VMD/PhD program are fully funded for their dual degrees.

This Heyer Family Veterinary Challenge Fund encourages gifts to the VMD/PhD program by providing a one-to-one match for qualifying commitments.

Here’s her story about why she and her family support Penn Vet…

About seven or so years ago I noticed an ad in the Penn Gazette. It was a photo of dogs and cats sitting in classroom chairs. The caption read, “Buy a chair in honor of your pet.”

At the time, I had two golden retrievers, and wanted to immortalize them through a gift to the Vet School, and so I bought two chairs in honor of Dally and Midas. Little did I know that would launch my relationship with Penn Vet, Dean Hendricks, and all the wonderful and dedicated faculty and clinicians at the Vet School.

The folks at Penn Vet development invited me down to spend some time at both Ryan and New Bolton Center. I remember meeting Drs. Nicky Mason, Dottie Brown, David Holt, Gary Althouse and Dean Richardson. The research happening at the school and the advanced techniques in clinical care, bowled me over.

Up until that point I was unaware of the contributions that veterinarians make towards advancing human health.

Also, the passionate dedication for the veterinary profession was palpable and the enthusiasm was contagious.

After Dean Hendricks invited me onto the Board of Overseers my husband and I started to consider where to direct a capital campaign gift. Ultimately, we asked Dean Hendricks how best to direct the money. Years ago we had supported scholarship at the University level and knew that access was a core component of the Penn Compact.
In addition to their gifts, Board of Overseers members Louis Sallie and Lynne Tarnopol have also offered support of scholarship recently.

**Louis, through his role at the Farm Bureau, has led the organization’s commitment** in setting up an endowed scholarship that will support a student interested in pursuing farm animal medicine.

Totaling $100,000, the Richard W. Newpher/Farm Bureau Endowed Scholarship through the PA Friends of Agriculture Foundation will provide support to a Pennsylvania resident in his/her third year resident who is pursuing a dairy or large-animal and food production field of study. The scholarship was created in honor of Dick Newpher, who retired after nearly two decades of service with the American Farm Bureau Federation.

“For throughout his career, Dick Newpher has emphasized how veterinary science is essential to agriculture’s productivity and future. The Richard W. Newpher/Farm Bureau Endowed Scholarship at the University of Pennsylvania School of Veterinary Medicine will help to provide a sufficient force of veterinarians to serve our farms.”

— Louis Sallie, Pennsylvania Farm Bureau Administrative Secretary

**Lynne has recently offered $100,000 to support endowed scholarship at Penn Vet.**

“To me, it is important to support the University in any way I can and because of my love of animals, Penn Vet was a perfect fit. And because four years of vet school is so expensive, a scholarship is the best way to continue to attract the best students. I am happy to continue my support of Penn Vet.”

— Lynne Tarnopol, Penn Vet Board of Overseers
SUPPORT FOR ACADEMIC-MINDED STUDENTS

Another member of the Penn Vet Board of Overseers, Mark D. Spitzer, has also recognized the need for endowed scholarship and in 2012 established the Tracy and Mark Spitzer Endowed Scholarship Fund to provide financial support to graduate student/s who will pursue a career in academia upon graduating from Penn Vet. The commitment, $250,000 over five years, helps to offset tuition and loan debt.

Here’s his story about why he and his family support Penn Vet…

Education has been a bedrock value in our family for a long time. Nothing gives Tracy and I more satisfaction than to provide for the education of young people. For many young people, the large cost of an education at the Veterinary School puts that education out of reach. Others already carry a heavy burden from their undergraduate education. The cumulative cost of undergraduate and graduate study prevents graduates from pursuing a career path in the economically challenging area of research.

Tracy and I feel privileged to be able to help by setting up this scholarship fund for vet students that intend to pursue a career in research. This is especially meaningful to us since so much of Penn Vet’s research is translatable to human medicine. The students of today will ultimately be the groundbreaking researchers of tomorrow.

Last year I indicated to Linda Kronfeld, a good friend at Penn’s development office, that I wanted to become more involved at Penn. We discussed various paths and the match with the vet school was a very interesting possibility. Tracy and I breed thoroughbred horses for sale and the racetrack on our farm in upstate New York, so we had a working understanding of the large animal facility, New Bolton Center. But we had no real idea about how Penn Vet delivers education to students, the level and quality of research that is done through NIH funding, and how Penn Vet serves the community with its small animal hospital.

Tracy and I were invited to Philadelphia and we spent a wonderful day on campus with Dean Hendricks, several faculty members and administrators. We found even under the most stressful of fiscal constraints Dean Hendricks and the vet school are keeping to the highest standards for education and research and are also developing a strategic vision for the way forward.

We were deeply impressed with the extremely promising translational research that is ongoing at the school, the hospitality and warmth of everyone that we met and the broad and the extensive intellectual capabilities.

I was also extremely pleased to learn that Mindy Heyer is chair of the Board of Overseers. I served on a board with Mindy several years ago. Because of her longtime passion for and dedication to Penn I knew that serving on this board would be meaningful.

Penn Vet has a little magic in a bottle ready to burst forth under the hard work and leadership of Dean Hendricks, Mindy Heyer and the many superlative faculty members, administrators and employees. As a member of the Board, I am enjoying being just a small part of that effort.

Scholarship will continue to be an ongoing priority even after the close of the Campaign. If you are interested in supporting Penn Vet students in this meaningful way, please contact Jillian Marcussen, director of stewardship and special projects at 215.898.4235.

“I feel that providing scholarship funding is the single greatest way for a donor to give back to the school and institution by providing means for a future veterinarian to learn and develop into the career that they so selflessly chose. I truly appreciate every cent that I have received, and any donor can trust that all of the money is going to the development of future veterinary leaders and good in the community.”

– Andy Stas, V’2013, Latrobe, PA
“My passion to become a veterinarian evolved while I was in college doing research for the first time, and I discovered that through Penn’s VMD/PhD program I could realize my ambition to be at the translational forefront of both human and animal health; however, 8 years of education and the associated debt are virtually prohibitive without the financial support that has aided me through such rigorous training. I am incredibly grateful to those who have acknowledged the value of this unique path, and made that dream possible for me through their financial gift.”

— Rebecca Evans, V’16, Farmington, CT

Black & White Ball
WITH A TOUCH OF FUR

When: Saturday, July 21
Where: Le Meridien in Philadelphia, Pennsylvania
What: Attendees will enjoy music from local live bands and DJs, plus food, wine and spirits from 15 different restaurants

Presented By: Ground Zero Salons
Sponsored By: Aroundphilly.com | Sweat Gym | John Paul Pet
Benefitting: University of Pennsylvania School of Veterinary Medicine Shelter Animal Program
Tickets: Available now at www.blackandwhiteball2012.com
A team of researchers from Penn Vet has characterized a protein responsible for sperm tail formation that, when missing, causes male infertility, brain abnormalities and other problems in mice.

Jeremy Wang, PhD, associate professor of developmental biology and director of the Center for Animal Transgenesis and Germ Cell Research at Penn Vet, led the study, collaborating with postdoctoral researcher Jian Zhou and research specialists Fang Yang and Adrian Leu.

The work, published in the journal *PLoS Genetics*, has implications for providing genetic counseling and in vitro fertilization to men with certain infertility problems, as well as to the one in 16,000 people who suffer from a condition known as Kartagener syndrome, or primary ciliary dyskinesia.

Some men with infertility have sperm that cannot swim properly. One of the causes of this immobility may be a disruption in the function of cilia, hair-like structures that helps cells move themselves or other objects around. The root cause of primary ciliary dyskinesia, or PCD, also appears to be a defect in cilia function.

Delving into the complex structure of cilia, the Penn researchers examined a protein called MNS1 or meiosis-specific nuclear structural protein 1, which they found located in the sperm tail.

To get at the function of MNS1, the team created mice bred to lack the protein. Though the mutant mice grew normally, fewer were born than expected, indicating that the mutation might be lethal in some embryos or very young mice.

In addition, Dr. Wang said, “the mutation has a very interesting phenotype.”

Male mice that lacked MNS1 were sterile. Their sperm count was only 8 percent of that seen in normal mice, and the vast majority of sperm present had very short tails, impairing their ability to swim. The fact that the sperm had normal heads but malformed tails also indicated to the scientist that the MNS1 mutation affected formation of the sperm tail, which is a specialized type of cilium.

In working with the mutant mice, the researchers noticed that more than half bore another unusual trait: some or all of their internal organs were reversed in position, the heart on the right instead of the left and so on. This condition, known medically as situs inversus, is also seen in about half of PCD patients. The patterning and formation of internal organs is another process that is dependent in part on cilia.

With growing evidence that MNS1 played a role in cilia function, the researchers looked to other parts of the body where cilia are vital, including the brain, where cilia direct cerebrospinal fluid, and the trachea, where cilia help move fluid and mucus.

They found that the mutant mice developed hydrocephalus, or a swelled head, consistent with a lack of cilia function. And upon examining cilia in the trachea, they found abnormalities. In the MNS1-deficient mice, the cilia had only about half the normal number of dynein arms, structures that provide the power for cilia to move.

Dr. Wang and colleagues are now working to determine the mechanism by which MNS1 affects cilia function.

“We still don’t really understand how this protein works,” Dr. Wang said. “We’re trying to characterize a number of proteins that potentially interact with MNS1.”

They’re also planning to partner with in vitro fertilization clinics to screen infertile males for deficiencies in the MNS1 gene. If it turns out that some of these men have a mutation that renders MNS1 nonfunctional, Wang said, “they won’t be able to conceive naturally, but, in the clinic, technicians can just inject the sperm head into the egg and achieve fertilization.”

In addition, if scientists confirm that mutations in MNS1 are responsible for some of the effects of PCD, in the future the syndrome could potentially be treated with gene therapy, which has shown promise in ameliorating certain respiratory conditions.

This research was supported by the National Institutes of Health’s National Institute of General Medical Sciences and National Institute of Child Health and Human Development.
**RECENT PUBLICATIONS**


**GRANTS**

**William Beltran, DVM, PhD**, assistant professor of ophthalmology, has received a five-year, $7.9 million grant from the National Institutes of Health to study “Translational Gene Therapy for Rhodopsin Autosomal Dominant Retinitis Pigmentosa.”

**Nicola Mason, PhD**, assistant professor of medicine and pathobiology, has received a two-year, $440,000 grant from the National Institutes of Health to study “Identification of a Naturally Occurring Model for EBV-associated Lymphomagenesis.”

**Charles Vite, DVM, PhD**, assistant professor of neurology and neurosurgery, has received a $310,086 grant from the Mayo Clinic Rochester to study “Neurophysiologically Based Responsive Pharmacotherapy for Epilepsy.”

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**Penn Vet’s Veterinary Clinical Investigations Center is currently recruiting dogs and cats for a number of clinical studies.**

Some of these trials include:

- A potential new treatment for canine lymphoma
- Studying protein-losing enteropathy/nephropathy, Addison’s disease and renal disease in dogs
- Studying weight loss in cats with cancer
- Measuring Vitamin B12 and MMA levels in cats diagnosed with lymphoma

If you have a dog or a cat that may be eligible, or if you are a primary care veterinarian with a patient suffering from any of the above, please call 215-573-0302 or email VCIC@vet.upenn.edu for more information.

To see what other ongoing studies are available, please visit [www.PennVCIC.org](http://www.PennVCIC.org).
The tradition of awarding an Alumni Award of Merit began in 1974. That inaugural year, Evan Stubbs, V’1911, was honored for his outstanding contributions to his profession and to Penn Vet.

This year, the Dean’s Alumni Council Awards Group revised the criteria a bit, placing a heightened emphasis on service to Penn Vet in addition to service to the veterinary profession.

Up to five awards will be presented annually, the group decided, typically to alumni celebrating a reunion year, but all alumni are eligible and may nominate a fellow graduate.

The following 2012 Alumni Award of Merit recipients were celebrated at this year’s Penn Annual Conference:

**George Anstadt** is a member of the Class of V’57, although his history of service began in 1958 when Dr. Anstadt and classmate Charlie Koenig joined the US Air Force Veterinary Corps. This was just the beginning of an impressive veterinary career that included serving as a clinical professor at Wright State University School of Medicine, spending a year in Vietnam as chief of veterinary base services and establishing the Air Force Residency Training Program in Veterinary Surgery at the USAF School of Aerospace Medicine.

Dr. Anstadt is board-certified in the American College of Veterinary Surgeons as well as the American College of Laboratory Animal Medicine, has published more than two-dozen scientific research papers and designed and developed a patented instrument for direct mechanical ventricular assistance, the “Anstadt Cup.”

Dr. Anstadt met his wife Inge while at Penn (she was the head surgical nurse at the school). His son Sven, with whom he is in practice, is also a graduate of Penn Vet, V’85. Dr. Anstadt has been a loyal supporter of scholarship at the School since 1979.

**Susan Irene Jacobson** is a member of the Class of V’77 and has been doing her best since graduation to keep her classmates connected to the School. She has served as a member of the VMAS executive board, is a founding member of the Dean’s Alumni Council, and typifies the model class agent. She has also been a supporter of student scholarship at the School for 28 years and participated in the “Take a Seat” campaign for Hill Pavilion.

When she is not organizing class reunions, continuing education events and class newsletters, Dr. Jacobson operates the HHD Mobile Veterinary Clinic in Virginia and devotes considerable time to local animal shelter and animal control organizations. She is an active member of the American Veterinary Medical Association, American Animal Hospital Association and the Association of House Call Practitioners.❤️

Above, George Anstadt (far right) receives his Alumni Award of Merit from Dean Hendricks. Below, Susan Irene Jacobson (middle) receives her award.
Tracy Bale, PhD, associate professor of neuroscience, received the Society for Women’s Health Research Medtronic Prize for Scientific Contributions to Women’s Health in May.

Manuel Boller, Dr. med. vet., DACVECC was a speaker at the ACVIM conference in New Orleans where he spoke about Reassessment Campaign on Veterinary Resuscitation (RECOVER) initiative, which aims to analyze current CPR practices in veterinary medicine and generate practical consensus guidelines for CPR in dogs and cats.

Ralph L. Brinster, VMD, PhD recently earned the first Career Excellence in Theriogenology Award from The Theriogenology Foundation.

Sherrill Davison, VMD, MS, MBA was nominated and elected by the members of the Pennsylvania Veterinary Medical Association to serve as vice president for 2012. She will serve as president-elect in 2013 and president in 2014.

Marie Fecteau, DVM, assistant professor of food animal medicine and surgery, gave two invited lectures and presented a research poster at the 11th International Colloquium on Paratuberculosis, in Sydney, Australia in February.

Third-year resident Bill Gilsenan, VMD has passed the ACVIM certifying examination in large animal internal medicine.

ROB SIGAFOOS

Rob Sigafoos, inventor of the glue-on horseshoe, was inducted into the Farrier Hall of Fame in February. Sigafoos was the chief of Farrier Services at Penn Vet’s New Bolton Center from 1983-2006. He was among three farriers and three equine veterinarians from around the world honored for their “passion and dedication to promoting hoof care.” Sigafoos became known for his innovative approach utilizing glue-on horseshoes and synthetic polymers for hoof reconstruction. His work resulted in three patents and the establishment of the Applied Polymer Research Laboratory for the development of new materials and techniques for rehabilitation of the distal limb, now under the direction of the current chief of Farrier Services, Patrick Reilly.

Third-year medicine resident Michelle Harris, VMD has passed the ACVIM certifying examination in large animal internal medicine.

Mark Haskins, VMD, MS, PhD was mentioned in The Puppy Diaries, a book written by Jill Abramson, executive director of the New York Times. One of Abramson’s dogs, Dinah, was diagnosed with Krabbe disease. Abramson agreed to work with Dr. Haskins’ lab for testing and observation as Dinah lived out her life with the disease.

Tom Kaufmann joined the Penn Vet IT staff and provides support for administration and research.

M. Paula Larenza, DVM, Dr.med.vet., DECVAA, assistant professor of anesthesiology, was awarded a PhD from the University of Bern, Switzerland. Dr. Larenza’s thesis title was “Pharmacological aspects of S-ketamine in the equine species.” She was also invited to lecture at the Veterinary School of the Andres Bello University, Santiago, Chile on equine anesthesia for the second consecutive year.

Michael Moyer, VMD has been invited to chair the World Small Animal Veterinary Association’s animal Welfare and Wellness Committee at the WSAVA Congress and has been appointed as a Korean Animal Hospital Association International Academic Advisor.
Gordon Ruthel, PhD has joined Penn Vet as the manager for the Imaging Core Facility. Dr. Ruthel most recently managed a high end imaging core facility at the United States Army Medical Research Institute of Infectious Diseases (USAMRID).

Luiz Santos, DVM, MVSc has joined Penn Vet as a research associate in anesthesia. Dr. Santos is spending the majority of his time conducting research, but also participates in clinical services and teaching in the Department of Clinical Studies at New Bolton Center.

James Serpell, PhD, director of the Center for the Interaction of Animals and Society, was an invited lecturer on the history and ethics of animal-assisted therapeutic interventions at the WSAVA/FECAVA/BSAVA World Congress in Birmingham, UK in April. In addition, Dr. Serpell was invited to give a B. F. Skinner Invited Lecture at the 38th Annual Convention of the Association for Behavior Analysis International (ABAi), which was held in Seattle in May.

Dr. Gail Smith, along with Georgia Karbe, Kim Agnello and Misha McDonald-Lynch, recently authored a chapter for the textbook, Veterinary Surgery: Small Animal entitled “Pathogenesis, Diagnosis, and Control of Canine Hip Dysplasia.”

Jackie Watson, a technician at the Hofmann Center for Large Animal Reproduction at New Bolton Center, earned a bachelor’s in psychology and animal science.

John Williams joined the Penn Vet IT staff to support Ryan Hospital and AV needs.

DEATHS

Dr. Douglass (Dougie) Kirk, former assistant professor at Penn Vet, on December 27, 2011

Jerome Rosenthal

Penn Vet Board of Overseers member Jerome “Jerry” Rosenthal was honored recently by Project Animal Worldwide (PAW) at a gala event and fundraiser. Jerry is the executive director of the Monmouth County SPCA. He has been on the Board of the Monmouth County SPCA since 2008. Since becoming Executive Director of the SPCA in February 2012, Jerry has made tremendous inroads in many programs at the shelter.

In April, the MCSPCA celebrated the grand opening of the Homeward Bound Adoption Center in the Freehold Raceway Mall. Jerry has been instrumental in forging a partnership between the MCSPCA and Project Animal Worldwide.

Nikki Wright

Penn Vet’s A. Nikki Wright was recently named the recipient of the John Pitts Award by the Student American Veterinary Medical Association.

Named for Dr. John Pitts, one of the founders of SAVMA, the award was established to honor a veterinary student who has provided exemplary service to the profession.

“I am extremely honored and humbled to have been chosen as the 2012 recipient and I am very proud to represent Penn in this capacity,” she said.

Nikki’s peers nominated her based on her dedication to supporting diversity at Penn Vet and beyond.

 Writes Sabrina Geer, Nikki’s nominator, “Nikki Wright is an emerging leader in the veterinary profession. She has a passionate personality and is extremely committed in her service to our community, the profession and the world.”

Nikki is the president of the Penn Vet LGBTQ & Allies club as well as co-president of Veterinary Students as One in Culture and Ethnicity (VOICE). At VOICE, Nikki founded and implemented the K-12 outreach program, Vet Ambassadors, in which vet students talk with children in inner city schools, serving as mentors.

Also at Penn Vet, Nikki is a student member of the admissions committee and has participated in a trip to Haiti with World Vets. She is now working to develop a sustainable micro-finance goat production system there.

Nikki serves as a SAVMA delegate and on its Integrative Communication and Diversity Committee, founding the national Broad Spectrum (LGBTQ) Veterinary Student Organization and participates in the SAVMA legislative fly-in.
Dean’s Alumni Council Marks One-Year Anniversary with New Members and Awards at Penn Annual Conference

BY JILLIAN MARCUSSEN

AT THIS YEAR’S PENN ANNUAL CONFERENCE, THE DEAN’S ALUMNI COUNCIL WELCOMED THE FOLLOWING NEW MEMBERS:

Linda Aiken is a member of the Class of V’78 with strong ties to Penn. Licensed to practice in Florida, Dr. Aiken resides and has practiced in the small coastal town of Vero Beach for many years. Both of her grown daughters are Penn graduates: Mary (C’06) and Anne (V’06); her son-in-law, Gordon Roble, was a small animal intern at Ryan Hospital.

Gregg Arbittier is a member of the Class of V’06 and became a senior technical consultant for Elanco Animal Health after spending time as a small animal practitioner in general practice and emergency medicine in New Jersey. He has also served as a scientific services veterinarian for Royal Canin. While at Penn Vet he served as class president and continued as his class agent. He currently lives in New Jersey with his wife, children and their Cairn terrier, Molly.

Patti Glennon, DACLAM is a member of the Class of V’80. After graduation, Dr. Glennon enjoyed 10 years as a small-animal practitioner in the metropolitan New York area before returning to the academic environment. She completed a postdoctoral fellowship in laboratory animal medicine at the Rockefeller University and then held positions at several biomedical institutions. Dr. Glennon currently serves as college veterinarian for the City University of New York (CUNY). Dr. Glennon, her husband David Spears, and their twin teenage daughters reside in Manhattan.

THE 2012 PENN ANNUAL CONFERENCE ALSO FEATURED THE FOLLOWING AWARDS:

Created in 2011 by the Dean’s Alumni Council Awards Group, the Ralph Brinster Lifetime Achievement Award recognizes outstanding individuals who have shown innovation, excellence and leadership in the veterinary profession both nationally and internationally. Penn Vet’s Ralph L. Brinster, VMD, PhD was chosen as the inaugural recipient with future awardees to be selected as merit warrants.

For more than 10 years, we have been honoring educators with the Penn Vet Excellence in Teaching Award. The input of recent graduates has been instrumental to this award, which is given annually using the following criteria:

- The educator must be thoroughly knowledgeable on the subject taught.
- The educator must communicate the subject’s information clearly.
- The information must be given in an organized and understandable manner.
- The educator must spend the time to discuss and help students with the subject.
- The students must feel that they have benefited from the educator’s instruction.

Rose Nolen-Walston, DVM, assistant professor of medicine at New Bolton Center, was selected as the 2012 recipient. Dr. Nolen-Walston received her veterinary degree from the University of Georgia, completed both an internship and residency in large animal medicine and surgery at Tufts University, and is a Diplomate of the American College of Veterinary Internal Medicine. Dr. Nolen-Walston is also the past recipient of the Class of 2012 New Bolton Center Campus Teaching Award and the Charles Raker Opportunity Scholarship Award.
On March 27, 2012 the Connecticut Veterinary Medical Association (CVMA) honored Peter S. Conserva (V’74) as the 2012 Connecticut Veterinarian-of-the-Year. The award recognizes a distinguished CVMA member who has contributed to the advancement of veterinary medicine in Connecticut in one or more of the following areas of organized medicine, education, research, practice or regulatory service. Dr. Conserva was recognized for his instrumental role in developing a unique program under CVMA auspices, the Connecticut State Animal Response Team (CTSART) Equine Response Unit.

John Cullen (V’75) received the BSTP C. Gopinath Lecture Award from the British Society of Toxicologic Pathology at the annual meeting of the European Society of Toxicologic Pathology in Uppsala, Sweden in September 2011. Dr. Cullen has been at the North Carolina State University College of Veterinary Medicine with the pathology group since 1984 where he serves as professor.

Gaydos (V’94) has been elected chair of the science panel of the Puget Sound Partnership, part of a comprehensive effort to restore the nation’s largest inland sea. Dr. Gaydos is a senior wildlife veterinarian at the University of California Davis School of Veterinary Medicine’s Wildlife Health Center, where he serves as regional director and chief scientist of the SeaDoc Society. He has also been a member of the Northwest Straits Marine Conservation Commission since 2004.

Anne Hessinger (V’00), MPH, DACVPM recently married Scot Hector in Fort Bragg, NC. Major Hessinger is the group veterinarian for the US Army John F. Kennedy Special Warfare Center and School, Medical Group where she trains future Special Forces medics.

Aylin Atilla (V’04), DACVS married Beau Cleland in August of 2011. Penn Vet Class of 2004 classmates Bjorn Lee, Kate Vickery, Daphne (Downs) Tanouye and Nancy Park were in attendance. Dr. Atilla currently works at Calgary Animal Referral and Emergency Centre in Alberta.

Maureen Luschini (V’06) has been named medical director of the Veterinary Medical Center of CNY. Dr. Luschini is the area’s only veterinary Criticalist and has been the director of VMC’s emergency and critical care services since joining the practice in 2010.

DEATHS

1971 Frank Klimitas in April 2012.

Edgar Robert Marookian (V’54) of Clinton Township, NJ, passed away on May 18, 2012. Dr. Marookian was a veterinarian, pharmaceutical researcher, and business entrepreneur, retiring in 1992. He was also a United States Army veteran of World War II, serving during the Asiatic-Pacific Campaign and the liberation of the Philippines. Dr. Marookian was a familiar name and face on the Penn Vet campus having served as an adjunct professor and returning annually for the Marookian Lecture Series. He was also a dedicated supporter of the School, both through the creation of the Marookian Auditorium in the Hill Pavilion and the E. R. Marookian VMD/PhD Research Scholarship Fund.
New Director of Alumni Relations Named

Kristen McMullen joins Penn Vet team from Pinewood Prep in South Carolina

Kristen McMullen is joining the Penn Vet team as director of alumni relations, effective July 10.

Kristen brings more than 15 years of alumni relations, fundraising and career services experience and a passion for veterinary medicine to Penn Vet.

“I am thrilled to announce Kristen’s appointment to this vital role within the school,” said Melissa von Stade, assistant dean, advancement, alumni relations and communication. “Her experience, combined with her appreciation of veterinary medicine and affection for animals, will be a good fit for our faculty, staff, students and, of course, our alumni.”

Most recently, Kristen served as the director of alumni relations and communications for Pinewood Preparatory School in Summerville, SC, where she developed the school’s first alumni association and served on the school’s senior leadership team.

In her previous role as assistant director of executive MBA and alumni career services for Duke University she created, marketed and delivered professional development services for a globally diverse student and alumni population.

Kristen started her alumni relations career at Penn State where for seven years she served as director of alumni relations for the College of Communications. In this role, Kristen increased alumni involvement by 300 percent and developed innovative career service programming for more than 12,000 alumni and 3,000 students.

She remains an active volunteer for Penn State and recently completed a six-year term on the Penn State Alumni Council where she chaired the Alumni Volunteer Support Committee with the goal to provide support to more than 280 alumni affiliate groups. She also served on the planning committee and as a presenter at the May 2012 Penn State Alumni Leadership Conference and is an active member of the Penn State Alumni Career Services Advisory Committee.

Kristen earned a bachelor of science in health policy and administration from Penn State. She has completed the Penn State Management Institute certificate program and the The Penn State Leader: Excellence in Leadership and Management program. She also has her CareerLeader certification.

As director of alumni relations at Penn Vet, Kristen will be responsible for strategically enhancing current alumni programming, identifying opportunities to increase alumni and student engagement and managing the Dean’s Alumni Council. Kristen will also oversee Darleen Coles, special events coordinator, and work to build upon Darleen’s success with Penn Annual Conference.

Kristen is excited to bring her love for veterinary medicine to Penn Vet, which began in middle school when she completed an externship in a veterinary office, and her extensive experience working with graduate alumni to this new role.❤️

CONTACTUS

Have you received a promotion, gotten married, had a baby or received an award? Have you volunteered somewhere special, moved into a new building, ventured into a new business or discovered the cure for avian flu? Please share with us all of your good news to include in the CLASS NOTES section of the Bellwether and the vet.upenn.edu website. All residents, interns and fellows are also invited to share!

Forward all alumni news to Jillian Marcussen at jillian2@vet.upenn.edu or write Office of Alumni Relations, 3800 Spruce Street, Suite 172 E, Philadelphia, PA 19104.
YOU ARE CORDIALLY INVITED TO ATTEND THE pennsymposium

In honor of Ralph L. Brinster, VMD, PhD
Celebrating 50 years of scientific breakthroughs at Penn Vet

when
Friday, August 24 and Saturday, August 25, 2012

register
Space is limited. Register for the symposium online from www.vet.upenn.edu.

about
The University of Pennsylvania and the University of Pennsylvania School of Veterinary Medicine are proud to invite you to a two-day symposium in honor of Ralph L. Brinster, VMD, PhD, the Richard King Mellon Professor of Reproductive Physiology at Penn Vet. Dr. Brinster’s work has spanned five decades and he is often regarded as the father of transgenesis.

Most recently, Dr. Brinster was awarded the prestigious National Medal of Science for his life’s work to date.

Featuring top scientists from around the globe, including Nobel Laureate Michael S. Brown, the Penn Symposium will provide an opportunity for scientists from around the globe to come together in Dr. Brinster’s honor as well as provide an opportunity to hear the latest scientific developments in biology.

Learn more about the conference and read speakers’ bios.
When he’s trying to tell you something, you’ll do whatever it takes to translate. Our board-certified vets are particularly in tune with four-legged and feathered friends, with a connection that’s equal parts unconditional love and unparalleled expertise.

And when it comes to something urgent, our critical care veterinarians are available 24/7, armed with all the life-saving discoveries we’ve pioneered right here.

Find our ER and easy parking at 39th & Spruce Streets in Philadelphia.
Penn Vet alumni and donors receive Bellwether magazine free of charge.

Penn Vet is proud to print Bellwether magazine on FSC (Forest Stewardship Council) certified paper, which supports the growth of responsible forest management worldwide through its international standards.

**JUNE 2012**

**June 28, 2012**
Animal Lovers Lecture Series, a free educational lecture series for small animal owners

“CANINE EPILEPSY”
New Bolton Center, Kennett Square, PA – 7:00pm
Presented by Dr. Charles Vite, Neurology and Neurosurgery

**JULY 2012**

**July 21, 2012**
BLACK AND WHITE BALL (WITH A TOUCH OF FUR)
Ground Zero Salon hosts gala event benefiting Penn Vet’s Shelter Animal Medicine Program
Le Meridien, Philadelphia, PA – 9:00pm
Tickets on sale at www.blackandwhiteball2012.com

**AUGUST 2012**

**August 15, 2012**
Wednesday Exchange, a bi-monthly interactive professional education opportunity for primary care veterinarians

“MINIMALLY INVASIVE SURGERY – NEW APPROACHES TO OLD PROBLEMS”
Ryan Hospital, Philadelphia, PA
Presented by Dr. Kim Agnello and Dr. Jeffrey Runge, Minimally Invasive Surgery

**August 24-25, 2012**

PENN SYMPOSIUM IN HONOR OF RALPH L. BRINSTER, VMD, PHD
Celebrating 50 years of scientific breakthroughs at Penn Vet

Featuring speakers from around the globe, including Nobel Prize for Medicine and Physiology honoree, Michael S. Brown.

Vernon and Shirley Hill Pavilion
380 South University Avenue, Philadelphia, PA
Register online from www.vet.upenn.edu

**SEPTEMBER 2012**

**September 4, 2012**
First Tuesdays Lecture Series, a free educational lecture series for horse owners and horse enthusiasts

“NEW TECHNIQUES IN EQUINE FRACTURE REPAIR”
New Bolton Center, Kennett Square, PA
Presented by Dr. Dean Richardson, Surgery

**OCTOBER 2012**

**October 2, 2012**
First Tuesdays Lecture Series, a free educational lecture series for horse owners and horse enthusiasts

“AIRWAY SURGERY: IS IT ANY EASIER NOW FOR YOUR HORSE TO BREATHE?”
New Bolton Center, Kennett Square, PA
Presented by Dr. Eric Parente, Surgery

**October 17, 2012**
Wednesday Exchange, a bi-monthly interactive professional education opportunity for primary care veterinarians

“PROTEIN LOSING NEPHROPATHY: IS IT LYME THIS TIME?”
Ryan Hospital, Philadelphia, PA
Presented by Dr. Meryl Littman, Internal Medicine

For more information on any of these events, please contact Darleen Coles, special events coordinator, at coles@vet.upenn.edu or 215-746-2421.