Dear Friends,

It is my pleasure to provide an update on the Cornell Feline Health Center’s progress over the past year, during which we have seen exciting new developments in our programs and significant advances in our mission to improve feline health and welfare worldwide. Our ongoing efforts and strategically planned goals on behalf of all cats are an extension of the commitment and compassion of our devoted supporters, and as always, we are humbled by their dedication.

A major focus over the past year has been an update of our website. In today’s society, an effective web presence is essential to the success of institutions such as ours, and we have been working hard to revamp our site to give it a contemporary and entertaining aesthetic while continuing to serve as a source of valuable information to cat lovers everywhere. We have also begun unique initiatives to more optimally utilize our web presence as a resource for ongoing research into feline health issues. The creation and maintenance of a website, like the technology and knowledge that drives it, is a rapidly evolving activity, and we look forward to continued innovation in this vital medium for years to come.

We are also in the process of updating other educational materials that are an important component of our outreach activities. The new format of our educational brochures promises to bring a modern, appealing look to this trusted and valued source of information for cat enthusiasts. Feline Health Topics, our publication geared toward providing up to date and cutting edge information to veterinary professionals, has also undergone a makeover that provides a fresh, accessible look. We are very excited about the progress that we’ve made in these outreach formats, and we look forward to continuing to improve them and to serving as the preeminent source of information for cat lovers everywhere.

This past year has also seen significant accomplishments in Cornell Feline Health Center-funded research focused on understanding issues that significantly impact feline health. Two excellent examples of this are the work of Dr. Gary Whittaker, who has identified the mutation that transforms the relatively benign form of feline coronavirus into a form that causes the routinely fatal feline infectious peritonitis, and the work of Drs. Peter Scrivani and Manuel Martin-Flores, who have identified the cause of the temporary blindness that is seen in some cats that undergo anesthesia for dental procedures. Investigations like these form the basis for the improved diagnosis, treatment, and prevention of feline health problems tomorrow, and we look forward to the exciting new discoveries that the next year has to bring as we continue, with the strong foundation of our supporters, realizing our mission of improving feline well-being everywhere.

Best Regards,

Colin R. Parrish, PhD
Director, Cornell Feline Health Center
What makes a harmless virus turn lethal? For the deadliest infectious disease in cats, we now know. After gathering the world’s largest sample collection for feline infectious peritonitis (FIP), Dr. Whittaker’s lab uncovered the holy grail of a 30-year quest for the mutation that turns it fatal. Their study provides a long-sought breakthrough, opening the door to development of the first working diagnostics, vaccines, and treatments for FIP.

**Dramatic and usually fatal, FIP develops when feline enteric coronavirus (FECV), a common benign intestinal virus, mutates into the malignant FIP virus (FIPV). The mutant moves from intestinal cells to macrophages, white blood cells that travel through the body. It kills most cats within weeks. Kittens and cats in animal shelters are particularly vulnerable. Current tests cannot distinguish between the common FECV and the killer FIPV.** There are no effective vaccines or therapies.

"FIP is a tragic disease," said Dr. Whittaker. "Comparing viral genetics, our lab found what changes when FECV mutates into FIPV. This knowledge will prove pivotal in developing tests, vaccines, and treatments to protect cats from this devastating disease."

For the last three decades scientists have searched for this mutation, an onerous process like looking for a needle in a haystack. Unlike previous studies, Dr. Whittaker’s lab focused on one specific functional part of the virus. Coronavirus particles brim with crowns of spikey proteins that activate the virus when chopped off by the right enzymes in the host cell. FECV prefers enzymes from intestinal cells. When FIPV hijacks macrophages instead, Whittaker suspected its spike proteins have changed shape to respond to macrophage enzymes, as opposed to intestinal cells.

Using biochemical and comparative genomic analyses, they focused on the area where enzymes cut spike proteins. They amassed an unprecedented collection of samples of feline coronavirus donated by pet owners, veterinarians, and Cornell’s pathology vault.

Comparing the same region in FECV and FIPV, they found distinct differences in the spike proteins and the genes that code them. These mutations coincided with FIPV’s malignant change and appeared across samples consistently.

“We’ve found the first known molecular basis for FIP,” said Dr. Whittaker. “This could have implications for similar coronaviruses in ferrets and humans and finally unlocks the door to developing the world’s first effective diagnostics, preventions, and therapies for FIP.”
Charles Darwin may well have been imagining feline calicivirus (FCV) when he introduced the concept of survival of the fittest. The sometimes deadly virus has endured for decades, evolving to evade host immune responses, environmental changes, and vaccines.

The virus’ persistence and the opportunity to develop a vaccine effective at preventing disease symptoms and infection, which may effectively eliminate the disease, have captured the attention of Dr. John Parker, Associate Professor of Virology, and his research team. With funding from the National Institutes of Health, the Morris Animal Foundation, and the Feline Health Center, Parker and his team are investigating several aspects of FCV’s ability to infect and kill. Together, the knowledge gained will further our understanding of the factors involved in virus immunity and persistence, opening the door to options for new viral control strategies.

During 2013, Dr. Zhengchun Lu, a postdoctoral associate in the Parker lab, made mutant versions of FCV and found that some of these mutant forms prevent the virus from binding to its receptor. Because infection requires that the virus first attach to a specific receptor on a susceptible cell’s surface, Lu’s insights bring us one step closer to identifying opportunities to prevent FCV from penetrating the cell’s membrane.

In complimentary work, Meleana Hinchman, a technician in the Parker lab, investigated FCV’s ability to bind to and infect cells. Her research has confirmed that sometimes, FCV binds to cells but does not infect. Working at the molecular level, Hinchman identified residues on the surface of the virus coat that are linked to FCV’s ability to bind and undergo conformational change, a process that is necessary for FCV to penetrate the cell. A better understanding of where on the surface the binding and penetration occur is a necessary step toward the development of potential therapeutics.

Amanda Fischer, a Cornell veterinary student also seeking a master’s degree, worked with purified versions of the virus and receptors to develop chemical substances and tests that will detect FCV. Fischer is also working with one of Parker’s collaborators at Penn State, Dr. Craig Cameron, who is studying enzymes involved in the replication process. Together the collaborative team hopes to determine whether growth properties of mutant versions of FCV are different and to use their findings as a proof of principle to develop an effective vaccine.

In addition to these projects, Dr. Parker also supported Dr. Emily Desmet’s efforts to explore fundamental cellular processes, including how protein synthesis occurs in cells infected by reoviruses. Because all viruses are parasites, they rely on the host cell’s processes for their replication. Dr. Desmet found that viruses duplicate and isolate the machinery needed for protein synthesis, effectively shielding their life support from antiviral attacks launched by the cell.

Overall, in 2013, Parker’s research team was committed to understanding how viruses operate, how they leverage their host cells to satisfy their own needs, and how the host responds to viral invasions.
Some cats have been found to wake from anesthesia as the victims of a tragic mystery. Veterinary literature reports cases of cats undergoing routine anesthetic procedures and waking up blind. While anesthesia is used in many different procedures, the problem seemed to occur only after dentistry and endoscopy, which both require keeping the cat’s mouth open for the duration of the procedure.

“We suspected something about how the mouth was kept opened might be the root of the problem,” said Dr. Manuel Martin-Flores, who is working with radiologist Dr. Peter Scrivani at Cornell’s Hospital for Animals to find the problem’s cause and possible solutions.

Using electroretinography, which measures the eye’s response to light, they found that existing methods of opening cats’ mouths wide enough for dentistry and endoscopy could inhibit the neurological signals needed for sight. Magnetic Resonance Imaging showed that in such cases, blood flow to parts of the head was obstructed, suggesting the blindness may originate from a compressed artery. Published in The Veterinary Journal, their study was the first to give evidence for a physiological cause of post-procedure blindness.

Next came the question of exactly which the artery was pinched. They conducted 3D reconstructions of computed tomography scans of the feline head to find where the compressed artery goes and which structures were responsible for the pinching. Using an imaging technique called fluoroscopy, they injected cats with a harmless contrast medium allowing them to trace pinch-prone arteries into the cat’s brain and see where blood flow stops.

They found that the pinching occurred between the mandible, the lower jaw bone, and the tympanic bulla, found near the ear. In a rare new advance in our understanding of feline anatomy, these Feline Health Center sponsored researchers found that when cats’ mouths open widely, these bones can come together and compress an artery between them, cutting off blood flow to portions of the brain and eye. In fall 2013, these findings were accepted for publication in the Journal of Radiology and Ultrasound.

Having found the problem, Dr. Martin-Flores is now testing solutions to see if veterinarians can use different tools for open-mouth procedures that reduce the risk of cutting off blood flow.

“We’re finding that in most cats, devices that don’t open the mouth as wide as those currently used may not cause artery constriction or any neurological problems,” said Dr. Martin-Flores. “But this doesn’t mean they’re always safe. We’re testing different designs with the hope of finding those that can enable these important procedures with the lowest risk.”
The Cornell Feline Health Center has established a Rapid Response Fund to support the investigation of emerging issues in feline health. This fund will be used to support researchers investigating a wide variety of emerging feline diseases and husbandry issues in a timely manner. These scientists are on the forefront of basic scientific and clinical research that, by its very nature, does not follow the prescribed timelines of typical grant funding agencies.

Many of the organizations dedicated to supporting research require an application process that takes months to complete. The application process for this fund will be streamlined to provide financial support rapidly, within a time frame that will increase the likelihood of identifying, mitigating and possibly eradicating factors that negatively influence feline health.

“Health issues do not usually follow a convenient schedule,” said Dr. Bruce Kornreich, Associate Director of the Feline Health Center. “With the constant influence of population shifts, environmental changes, technology, and politics, they continue to emerge and evolve with every passing moment. Because of this, it is important for the scientific and health care communities to be vigilant and responsive to new problems as they arise. The Center’s Rapid Response Fund will allow researchers connected to the Center to do just that.”

Since the fund has been established, it has supported Cornell research into the U.S. prevalence of a virus that was identified in Hong Kong. The virus, called morbillivirus, may cause inflammatory renal disease in cats. Early identification of morbillivirus in cats in the U.S. may provide the opportunity to more clearly understand its mechanism of action and to prevent or treat the disease. Although not identified in U.S. cats yet, vigilance is important. The Rapid Response Fund is designed to provide a mechanism to support this vigilance.
The Cornell Leadership Program provides students, from veterinary colleges around the world, with learning experiences that clarify and reinforce their commitment to careers in science. For Hendrik Sake, the Leadership Program was an excellent way to broaden his horizon in many ways. “Getting in contact with so many different people, cultures, and career opportunities was something I really enjoyed. Before I came to Cornell I had not been exposed to research at all, but this program gave me the unique opportunity to explore different veterinary career paths that differ from the traditional clinical pathway.” We hope that you enjoy Hendrik’s personal account of his summer research project at Cornell.

The Role of Matrix-Metalloproteinases in Feline Infectious Peritonitis virus (FIPV) infection: Feline infectious peritonitis (FIP) is a deadly infectious disease of cats. It is caused by a feline coronavirus called FIPV that derives from a benign enteric (gastrointestinal) coronavirus (FECV) by mutation. The clinical presentation of the disease is divided into a wet and a dry form. Fluid accumulates in body cavities as a consequence of increased leakiness of the blood vessels in the wet form of the disease.

My research project this summer focused on the role a type of enzyme called matrix metalloproteinases (MMPs) in the disease progression of FIP. We hypothesized that MMPs play an important role as an activator for virus-entry into monocytes, a type of white blood cell, and whose activation causes a series of events that ultimately leads to increased blood vessel permeability. Using DNA-based techniques I was able to find evidence that the production of two types of MMPs in monocytes is increased following FIPV infection.

CAREER GOALS
“Although I do not have a fixed career goal, I intend to combine my interests in virology and genetics. I would love to investigate how genetic diseases arise, how they impinge on the organism, and whether there is a way of treating them with viruses. Therefore, I would like to obtain a doctoral degree in the field of virology and later work at a research institute.”

Student Scholarships

FELINE HEALTH CENTER SCHOLARSHIP
Thanks to the generosity of an anonymous donor, the Feline Health Center Scholarship is awarded annually to a veterinary student with demonstrated financial need, who is in good standing academically and who has an identified interest in feline medicine. Preference is given to a fourth-year veterinary student.
2012-2013 Recipient – Amy Wong ’13

MILDRED G. FREDERICO SCHOLARSHIP
Established in 2004 by the Mildred G. Frederico Trust, this scholarship is awarded to a deserving student who has a demonstrated financial need, has been judged by faculty to be in good standing academically, and has a demonstrated interest in feline medicine. Recipients are recommended by the Director of the Community Practice Service in the Companion Animal Hospital and approved by the Feline Health Center.
2012-2013 Recipient – Abigail Milligan ’14
Camuti Memorial Feline Consultation Service

CONSULTANTS

Cat lovers and veterinary professionals from anywhere in the world have a one-of-a-kind way to get a veterinarian’s expert input on cat care and health. The Feline Health Center’s Camuti Consultation Service is Cornell’s unique phone line that anyone can call for personalized feline veterinary information and support.

The Feline Health Center (FHC) consultants on call include veterinary generalists and specialists, from oncologists to behaviorists, all with years of clinical experience and enthusiasm for discussing topics ranging from specific disease issues to how to manage weight loss or hairballs. The team fields calls from across the US and abroad. It has grown over the last two years, welcoming oncology resident Dr. Vanessa Rizzo and Cornell’s Community Practice Service (CPS) Director, Dr. Brian Collins ’94, on board during this period.

“All of our consultants are excellent communicators, extremely dedicated, and very thorough,” said FHC Associate Director Bruce Kornreich. “People really appreciate the consultation line because there’s nowhere else they can get this kind of service. It’s very gratifying to help people in times of need when their kitties aren’t doing as well as we’d like. It’s an honor and a pleasure to provide this service.”

Brian Collins, DVM ’94
Dr. Collins has taught Cornell veterinary students for years, including working with students who assisted local practices, serving as president of Ithaca’s Shelter Outreach Services board, and volunteering with the Tompkins County SPCA helping teach students shelter medicine. As its current Director, he is expanding the scope of the College’s Community Practice Service (CPS) to include supervised surgery experience for students. His professional interests include life-stage medicine, surgery, and dentistry.

Ryane Englar, DVM ’08
Prior to joining the FHC as a consultant, Dr. Englar had already begun contributing her feline knowledge to Cornell’s monthly newsletter, CatWatch. Her special interests in feline medicine include pain management, pediatrics, and end-of-life palliative care. When not working in her private practice or assisting students in clinical rotations in her role as Kirk Practitioner-in-Residence at Cornell, she enjoys looking after her own two Tonkinese cats.

Vanessa Rizzo, DVM
Oncology Resident Dr. Vanessa Rizzo has possessed a passionate desire to help animals since childhood. Graduating from veterinary school with honors, she received the Veterinary Cancer Society Senior Student Award and went on to complete a rotating internship. She is very grateful to now be a member of the Cornell team and considers it a privilege to be able to help pets and their families when they receive the sometimes overwhelming and disheartening diagnosis of cancer.

Paul Maza, DVM, PhD
Dr. Maza has a long history of supporting the FHC, of which he has served as past co-director. As faculty at the College, he teaches in the preclinical veterinary curriculum, leads a feline anatomy course, consults for the student-run CPS at Cornell’s Hospital for Animals. He also co-runs a program through CPS teaching students techniques to spay and neuter free-roaming cats and cats at shelters, helps local farmers with farm cat overpopulation issues, and leads trips abroad with veterinary students to aid animal welfare organizations.

Mia Slotnick, DVM
After receiving her masters degree in Animal and Nutritional Sciences at University of New Hampshire, Dr. Slotnick graduated from the Ohio State College of Veterinary Medicine in 1990 and became a clinical instructor at The Royal Veterinary College at the University of London. For the past 17 years she has been in small animal practice in Ithaca, NY. Her main interests include preventative medicine and nutrition.
Sue Williams has worked at the College of Veterinary Medicine for almost 26 years, nearly 14 of them at the Baker Institute, and more recently, the Feline Health Center. She has helped in a variety of administrative roles, including many in public relations. In October 2012, she became the intake specialist for the Camuti Consultation Line, Cornell’s phone line that anyone can call for personalized feline veterinary information and support.

When callers phone in for advice and up-to-date information regarding cats, Williams compiles the requests and forwards them to the appropriate veterinary consultant. For some questions, the consultants may research the veterinary literature or consult fellow experts before returning the call to discuss the issue at hand and address any concerns.

“Cornell has a good reputation for staying current with the latest medical information, due in part to the education and research conducted here,” said Williams, noting that calls to the consultation line should not replace visits with hometown veterinarians. “I think our callers really appreciate the opportunity to talk to an expert, and I enjoy being part of something that’s helping owners to make more informed decisions regarding the health of their cats.”
The 24th annual Fred Scott Symposium was an engaging and entertaining mix of information, innovation, and interaction with experts in the fields of feline medicine and research. In 2012, the focus was on feline infectious diseases, with experts from the veterinary colleges at Cornell University and the University of Tennessee leading the discussions that delved into some of the most current feline clinical practice issues as well as cutting edge research destined to form the basis of feline medicine in the future.

Dr. Melissa Kennedy, who has published extensively on the identification and control of viral diseases in a wide variety of both domestic and non-domestic species, presented her innovative work within an overview of infectious diseases of cats. Continuing along this theme, Dr. Gary Whittaker offered the keynote address, presenting the annual James R. Richards Memorial Feline lecture. Dr. Whittaker highlighted his investigations into the molecular mechanisms underlying the pathogenesis of feline infectious peritonitis, research that has the potential to significantly improve our ability to diagnose and treat this devastating disease of cats (see story on page 2). The Symposium also featured experts who presented updates on infectious diseases as they relate to several clinical specialties, including ophthalmology, neurology, nutrition, anesthesia, and dentistry. This year’s event also included an interactive clinical pathology dry lab and presentations addressing important health issues in non-domestic cats.

As always, the learning was not limited to the presentations. Through a variety of networking and social events, Symposium participants reconnected with and learned from each other.
Making A Difference

JANE AND PAUL CASHMAN

Returning from graduate school in California to marry in their East Coast home turf, Jane and Paul Cashman were in for a wedding gift that would change their lives. The newlyweds, who had never had pets before, were surprised to find friends handing them a six-week-old kitten.

“We were dubious about how it would work out. We were about to drive back across the country in a U-Haul with this little creature,” said Paul Cashman, who earned his undergraduate degree at Cornell in mathematics in 1973. “Turns out the kitten, Figaro, travelled better than we did! We became cat people and fell in love with cats, adopting more over the years, with a current population of five.”

Now seasoned cat owners, the Cashmans learned about the Feline Health Center (FHC) from two close friends who are Cornell College of Veterinary Medicine alumni and by subscribing to the Center’s newsletter, CatWatch. In 1993, they returned to Cornell for Paul’s 20th Reunion and sought out this place they’d heard so much about. On their way, they met Dr. Jim Richards, the Center’s Director at the time.

“He gave us a wonderful tour and introduced us to Dr. Mew, the office cat,” said Paul. “We talked to him for a long time about our own cats and had a wonderful visit with him. We were very impressed. The FHC was right at the intersection of two of our strong interests: Cornell and cats. So we started to contribute every year.”

When the Cashmans adopted a new cat, Boodles, they learned he had many medical problems. They contacted Dr. Richards and asked if he could look over Boodles’ record and make any recommendations. The record was two inches thick, yet when they sat down with Dr. Richards at a subsequent Reunion they learned he had spent significant time studying the files.

“He sat with us for an hour, explained things, and suggested options for treatment,” said Paul, noting that the suggestions came with a recommendation to have their cat seen by their local veterinarian. “It was so helpful. We were amazed.”

Years later they got the shocking call informing them that Dr. Richards had passed away in a motorcycle accident. They contributed to a memorial fund for him and in 2010 decided to donate a major portion of their estate to the FHC.

“We got a chance to tour the Center’s new home at my 40th Reunion in 2013 and were blown away by how its activities have grown,” said Paul. “We had a great time with Dr. Bruce Kornreich, who explained all the FHC’s exciting research. It was fascinating to see where our money was going and how we were helping the long-term health of the animals we love.”

Photo: For years, Jane Cashman has crocheted little blankets for cats. Here, she presents several to Dr. Kornreich.
Membership

AND FINANCIAL INFORMATION

REVENUE
- Consultation Service (2%)
- Endowment Income (26%)
- Gifts (47%)
- Memorial Program Gifts (18%)
- Miscellaneous (7%)

EXPENSES
- Admin Cost Recovery (12%)
- Administrative (34%)
- Consultation Service (7%)
- Memorial Program Gifts (8%)
- Miscellaneous (4%)
- Research (35%)

MEMBERSHIP
For veterinarians and cat lovers interested in receiving the most up-to-date feline health information while supporting the Feline Health Center, we offer affordable membership plans geared toward professionals and individuals. Your membership dollars help support outreach and educational materials, including informative brochures on feline health issues, CatWatch newsletter, and the Camuti Consultation Service. You can also give the gift of membership to a friend or colleague. For more information, please visit www.vet.cornell.edu/FHC and click on Membership or call 607-253-4055.
Feline Memorial Program

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Dr. Harold M. Zwerighaft*

*Deceased
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Ms. Jaclyn A. Spear
Dr. Gayle Elizabeth Sternefeld
Ms. Jo Ann Strnad
Ms. Joan Susha
Dr. Carvel G. and Mrs. Lorraine Tiekert
Mr. Donald Tunasimson and Mrs. Tone Roslund
Mr. Daniel R. Volkmutth
Dr. Tina Louise Wiltke
Mr. and Ms. Gregory W. Warmuth
Mr. J. D. Woods
Mr. Thomas R. Yarborough

$250 – $499
AstraZeneca Pharmaceuticals, L.P.
Mr. William D. Bartow
Ms. Marcia L. Berner
Dr. Ruth C. and Dr. John L. Carter
Dr. Colleen E. Currigan
Mr. Anthony F. Dannible
Ms. Martha Jane Dodge
Ms. Susan E. Fisher
Mr. John Irvin Frederick
Dr. Andrew Goldstein
Dr. John R. Kennedy
Ms. Shirley R. Martin
Ms. Theresa A. McGregor
Ms. Nancy J. McMullen
Merck Company Foundation
Dr. Mari Morimoto
Ms. Michelle M. Okonski
Dr. Colin Parish and Dr. Debra Nero
Ms. Susan M. Roberts
Ms. Amy R. Roth
Ms. Dorothy H. Schulz
Ms. Sandra L. Simpson
Ms. Ingrid A. Spatt
Ms. Nancy H. Stetson
Mr. Roger Thomas
Mr. Henry P. Travinck
Ms. Claire Wicha rovski
Opportunities FOR SUPPORT

Your support provides the key to the success of the Feline Health Center. Everything from educational brochures for cat owners to cutting edge discoveries in cat health to scholarships that provide assistance to the next generation of feline veterinarians are made possible by contributions from lovers of cats. We are truly grateful for our friends’ support of our efforts to improve the health and well-being of cats everywhere.

GIVING WHERE THE NEED IS GREATEST
Unrestricted contributions of all sizes provide the financial resources necessary for the Feline Health Center to address the needs of cats and provide owners and veterinarians with the latest health information. Please visit our website at www.vet.cornell.edu/FHC/ and click on Giving/Membership or call 607-253-4055 to ask how you can help.

JAMES R. RICHARDS, JR. MEMORIAL FUND FOR FELINE HEALTH
We welcome contributions to the James R. Richards, Jr. Memorial Fund, which was established with donations given in memory of Dr. Richards, the second Director of the Feline Health Center, by friends and colleagues following his death in 2007. Income from this fund honors the outstanding contributions of Dr. Richards to the field of feline medicine. Each year the fund helps offset the cost of feline-focused lectures featuring leaders in feline health.

DR. LOUIS J. CAMUTI MEMORIAL FUND
Dr. Camuti, a well-respected veterinarian in the New York metropolitan area, was the first in the country to devote his practice entirely to cats. Legendary for his 60+ years of house calls to feline patients, friends honored his memory through the creation of this fund following his death in 1981. The Camuti Fund helps defray the cost of the telephone consultation service, named in his honor.

MEMORIAL PROGRAM FOR FELINE COMPANIONS
The loss of a feline companion can be devastating, and thoughtful gifts to the Feline Health Center are a wonderful way to honor the memory of a beloved cat. Gifts can be made online at www.vet.cornell.edu/FHC/giving/memorial.cfm or by calling 607-253-4055.

ENDOWMENT GIFTS
Help build the foundation for the future. Endowment gifts are managed as part of Cornell’s long-term investment pool, generating funds to be used in perpetuity in support of the Feline Health Center. The current minimum to establish a named endowment is $100,000, providing lasting tribute and support to the Center.

NAMED GRADUATE SCHOLARSHIP
A minimum gift of $100,000 will endow a scholarship for a future feline practitioner at Cornell’s College of Veterinary Medicine. Financial aid can make a significant difference in the life and future career of a vet student by helping to alleviate the burden of loan debt.

NAMED CLINICAL RESEARCH FUND
A named clinical research fund ($100,000 minimum) will generate income to help support the Feline Health Center’s competitive grants to faculty at Cornell’s College of Veterinary Medicine. Research funds aid in the investigation of underlying causes of feline diseases and discovery of prevention, treatments, and cures. Research conducted by many of the nation’s leading scientists at Cornell often has implications for human health as well.

NAMED RESIDENCY
Residency training prepares post-doctoral students for careers in highly skilled fields such as oncology, neurology, surgery and other fields that have a significant impact on feline medicine. A minimum gift of $1,000,000 can endow a named residency and provide income for the stipends and grants that accompany this intensive three-year training program.

BEQUESTS AND PLANNED GIFTS
You can help ensure better health for future generations of cats by naming the Feline Health Center as a beneficiary in your will or by considering one of many gift planning options through which you can:
• Earn income, pay fewer taxes, and secure your retirement
• Enhance your net estate
• Create a personal legacy

If you would like to discuss any of these options below, please contact Cornell’s Office of Gift Planning at 1-800-481-1865.
Elizabeth’s Wish List

If you are able to lend a helping paw, Elizabeth appreciates all gifts, great or small. If you can help, please contact Amy Robinson at 607.253.3742 or amy.robinson@cornell.edu or donate online at www.vet.cornell.edu/FHC/giving/, letting us know which item you would like to purchase.

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aqua Heating Pads with rolling stand</td>
<td>$537</td>
</tr>
<tr>
<td>Will be used by our Oncology service to document treatment in the Hospital.</td>
<td></td>
</tr>
<tr>
<td>Therapy for cats with certain types of cancer.</td>
<td></td>
</tr>
<tr>
<td>Documentation is an important part of appropriate therapy for cats with certain types of cancer.</td>
<td></td>
</tr>
<tr>
<td>Panasonic Lumix DMC F260 Digital Camera</td>
<td>$350</td>
</tr>
<tr>
<td>Will be used by our Oncology service to document the size and appearance of tumors over time. This documentation is an important part of appropriate therapy for cats with certain types of cancer.</td>
<td></td>
</tr>
<tr>
<td>Portable Otoscope &amp; Ophthalmoscope</td>
<td>$883</td>
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<tr>
<td>Used by our Oncology service to keep anesthetized/sedated cats warm during their transportation and treatment in the Hospital.</td>
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<tr>
<td>Doppler Blood Pressure Unit</td>
<td>$670</td>
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<tr>
<td>An accurate means of measuring blood pressure in cats which will be very useful for monitoring cats being treated by our Oncology service.</td>
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<tr>
<td>HSL 150 Hand-held slit lamp</td>
<td>$1,375</td>
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<tr>
<td>A slit lamp biomicroscope that veterinary students can learn to use to look at feline eyes and that they can afford to buy when they enter practice.</td>
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<tr>
<td>Financial support for the Community Practice and Shelter Outreach Services students teaching programs – $500</td>
<td>$500</td>
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<tr>
<td>These funds will be used to purchase vital equipment and to defray transportation costs by the Shelter Outreach Services Program at the Cornell University College of Veterinary Medicine. This outstanding program provides low cost spay/neuter services to local organizations interested in controlling owned and unowned cat populations while providing veterinary students with invaluable surgical experience.</td>
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<tr>
<td>V-Gel feline veterinary airway management devices – $2,000</td>
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<tr>
<td>Specialized airway devices designed specifically for use in delivering anesthetic gases to cats. They are useful in a variety of situations, including short procedures and repetitive anesthesia, minimizing tracheal irritation.</td>
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<td>Tonopen – $4,000</td>
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<tr>
<td>This device is used to measure the intraocular pressure (the pressure inside the eyeball) of cats and is critical in the diagnosis of glaucoma, a condition in which these pressures become elevated. Glaucoma may lead to significant eye problems including blindness.</td>
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<tr>
<td>H$L 150 Hand-held slit lamp</td>
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<tr>
<td>2.0 mm locking plate instrumentation – $1,533 (Locking plates with storage case – $373)</td>
<td>$1,533</td>
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<tr>
<td>These plates provide a more stable fixation, fewer implants, and the ability to deal with aged bone. The locking plate’s technology has significantly improved the treatment of fractures in cats and would provide a considerable benefit to cats presented to our Orthopedic Surgery service for fractures. The storage case would benefit the veterinarians using the plates by keeping everything organized and in one place.</td>
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<tr>
<td>Specialty Locking Plates 10.0 mm with Storage Case – $1,733</td>
<td>$1,733</td>
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<tr>
<td>Will be used in surgical procedures performed in our Community Practice Service. This will not only benefit cats that are in need of spaying, neutering, and other basic surgical procedures, but will also be an important contributor to the education of veterinary students and interns interested in feline surgery.</td>
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<tr>
<td>Financial support for FARVets – $500</td>
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<tr>
<td>The FARVets program coordinates trips abroad to work with foreign feline welfare organizations in their spay/neuter efforts to control feral cat populations. Led by Cornell veterinarians, students travel to countries such as Mexico, Belize, and Costa Rica. They are provided with vital surgical experience while helping address the considerable feline welfare issues in these countries.</td>
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<tr>
<td>Financial support for the Farm Cat Project – $500</td>
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<tr>
<td>The Farm Cat Project provides sterilization surgery and vaccination clinics to regional farms, aiding farmers with barn and feral cat overpopulation and feline health issues. Led by Cornell veterinarians, veterinary students are immersed in a practical, intensive experience that provides them with surgical exposure while improving feline well-being.</td>
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<tr>
<td>Financial Support for Feline Genetic and Genomic Resources – $1,000</td>
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<tr>
<td>Additional support for the recently established feline genetic database. This exciting opportunity will help defray the considerable technical and logistical costs associated with obtaining, storing, and analyzing DNA samples in this promising project.</td>
<td></td>
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</tbody>
</table>
OUR MISSION:

To improve the health and well-being of cats everywhere by

- Finding ways of preventing and curing diseases of cats by conducting and sponsoring breakthrough feline health studies
- Educating veterinarians and cat owners about feline health by providing timely medical information and by promoting public understanding and awareness of feline issues
- Aiding veterinarians when new or unknown feline diseases occur