University of Illinois at Urbana-Champaign

College of Veterinary Medicine

2003-2004 Annual Report

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discovery • integration • dissemination • application of new knowledge

College of Veterinary Medicine
Annual Report

Executive Summary

The University of Illinois College of Veterinary Medicine was founded more than 50 years ago to meet this state's need for veterinary medical education. We remain the only college of veterinary medicine in Illinois and one of only 32 in the United States and Canada.

In the past 50 years the field of veterinary medicine has evolved to encompass such areas as comparative biomedical research, environmental health, food safety and security and the sociological implications of the human-animal bond. All these areas work together in the effort to improve both human and animal health. Indeed, contemporary biomedical research no longer sees divisions between human, veterinary and ecological medicine but embraces a *one medicine* philosophy.

Likewise, our college's contributions to the state and university now reach far beyond our core responsibility of educating new and practicing veterinarians. The activities of our college extend to all parts of the university's mission of research, teaching and public engagement, and our faculty contribute significantly to interdisciplinary programs across the university.

Drawing on recent state and national studies as well as input from faculty retreats and external advisory committees, the college has defined its role in advancing the many aspects of veterinary medicine and biomedical research. It is our intent to be responsive to the needs of the state and region, to participate actively with state and national agencies, and to be recognized in the top tier of colleges of veterinary medicine.

As we prepare strategies and take steps to achieve national prominence, we recognize we can succeed only in partnership with the University of Illinois. We therefore request an indication that the university shares our commitment to this goal.

Impact of FY03 Budget Rescissions/Reductions (8% recurring + 2% nonrecurring):

The College of Veterinary Medicine received a high budget reduction in the FY03 budget cycle. In order to protect our full accreditation status and the quality of this unique state resource, we must preserve the professional curriculum of our college and maintain significant scholarly activity.

FY03 Budget Reductions of 8% (does not include 2% nonrecurring reduction)		
Personnel/Budget Category	FTE	$ Reduced
Tenure System Faculty	5.8	$443,685
Academic Professionals	5.82	$211,930
Support Staff	17.8	$563,297
Wages/Graduate Assistants	9.0	$41,253
Expense		$157,725
TOTAL	38.42	$1,417,890

The FY03 budget reduction required the elimination of 38.42 FTE from state funds. These reductions affected all units within the college. Notices of nonreappointment were issued to 6.11 staff.

The impact of this reduction can only partially be appreciated by a financial assessment. The true programmatic impact includes significantly diminished ability to provide professional education, public service, and scholarship.

Veterinary education is a highly time intensive curriculum and, due to the nature of the curriculum, it is taught by tenure-track faculty in a lock-step manner, so any losses in faculty are keenly felt.

In the past four years, the college had made modest progress in securing new state funding to hire adequate numbers of veterinary technicians to reduce the menial labor load for faculty and students during clinical training, thus allowing them to concentrate on the educational component. With the budget reduction, this progress is lost and the burden of labor, most efficiently performed by technicians, is shifting back to students and faculty, seriously hampering instruction.

Gains in research programs are at significant risk. Through resignations, the college lost three faculty who were very successful researchers. Since they were not considered core to the delivery of the professional curriculum, their positions were not refilled and the funds were used for a portion of the budget reduction. The loss of these faculty positions has negatively affected the college's recurring ICR funds.

The service and public engagement missions of the college have also been negatively impacted by the budget reductions. As an example, in the Veterinary Diagnostic Laboratory (VDL), the increasing reliance on fee-generated income will significantly reduce our role in surveillance of animal diseases in Illinois. Increased fees become a deterrent for submission of animals to the laboratory from economically stressed livestock operations. Reluctance of animal producers to pay for veterinary care, with associated laboratory fees, was one of the reasons that Foot and Mouth Disease went undetected for several weeks in England in 2000-2001.

The college's multicultural scholarship program for up to eight professional veterinary students has been eliminated. This will severely limit our ability to increase diversity within our student body and, over time, the veterinary profession.

To offset the forecasted long-term, negative implications of the FY03 budget reductions to our veterinary medical curriculum, the college has proposed an 8% tuition increase beginning with the 2004 academic year. The proposal protects current students. Operating on the assumption that the additional tuition funds will be returned to the college in full, they will be used to regain critical funding for the professional curriculum and enable us to maintain a quality veterinary education. Specifically, these additional funds will be invested in educational infrastructure, elective courses, supplies and specimens for teaching laboratories, technicians, teaching associates and faculty. *The tuition increase will not generate revenue to address a budget reduction in FY04.*

Impact of Projected FY04 Budget Rescissions/Reductions:
Due to the decisions and commitments made by the former administration, the college entered this period of retrenchment with limited cash reserves. Another budget

reduction will further negatively impact the professional curriculum, research programs, and service to the community. *Reductions will compel us to terminate clinical faculty and non-tenured, tenure-track faculty.* All changes in faculty size will decrease our ability to provide specific student educational experiences and reduce students' flexibility in choosing electives in their areas of interest. *No research faculty will be replaced as we will only be able to replace faculty essential to the professional curriculum.* Initiatives with bioengineering and in biomedical sciences will be on hold as we will not have the funds to recruit the faculty critical to the success of such programs. Programs, service centers, staff, and academic professional positions will be evaluated across the college, and only those performing a role vital to the professional curriculum will be retained.

For FY03, a deficit spending plan has been implemented as it is projected that the CVM Academic Salary Account will end $250,000 in deficit this fiscal year. The problem becomes much worse in FY 04, with a projected deficit of $600,000 by year end. Due to one-year notices for academics, a budget reduction of 8% in FY04 will cause us to have an Academic Salary Account deficit of $950,000 which will take until FY07 to recover.

Our current budget relies on a level of hospital and diagnostic laboratory income that cannot be sustained. In some instances, income generation has peaked and the revolving accounts cannot sustain the staff salaries. It may become necessary to terminate staff positions even without a budget reduction. In the case of faculty on self-supporting accounts who participate in the professional veterinary curriculum for third- and fourth-year students, this will mean another loss for teaching.

Internal Reallocation & Economies of Scale:
In order to identify internal sources of funding for the enhancement, expansion, or initiation of our identified future opportunities, the college is exploring and evaluating opportunities for the reconfiguration of current programs, identifying partners from corporate and private sectors, forming partnerships with our university colleagues. The College continues to evaluate the effectiveness of service centers and the value they bring to achieving the College's mission. Following the evaluation, it may be appropriate to consolidate or eliminate specific services and reallocate their budgets to support new programmatic initiatives. Examples of program consolidation could be joint planning with the College of ACES and Division of Animal Resources in evaluation of the Dixon Springs Agricultural Center and the Veterinary Research Farm, and joint planning with multiple colleges for biomedical communications. *If the college is assessed another 8% budget reduction in FY04, the further development of these initiatives will be significantly jeopardized since the identified resources will be required to address the budget reduction.*

Future Opportunities:
All College of Veterinary Medicine programs are based and rooted in a vibrant and vigorous clinical, diagnostic and basic science faculty who are actively engaged in the art and science of veterinary medicine and comparative biomedical research. Programs grow out of our professional curriculum and are integrated into University-wide priorities. These include:

Development of a Department of Comparative Pathobiology. Discussions are occurring between the College of Veterinary Medicine and the College of Medicine in an effort to merge the Department of Pathology, College of Medicine, into the Department of Veterinary Pathobiology to form a new Department of Comparative Pathobiology. This merger has the potential to transition into a more significant Department of Comparative Biomedical Science that would also include the College of Veterinary Medicine Department of Veterinary Biosciences and other basic science programs in the College of Medicine. The merger would group a critical mass of faculty and add depth to research programs. The intellectual hybrid will invigorate faculty dynamics. Additionally, as this department evolves, we will evaluate opportunities to develop similar joint initiatives with other colleges, including the College of Applied Life Studies, College of ACES, and College of Engineering.

Interdisciplinary & Collaborative Program Development with the Department of Bioengineering. The College of Veterinary Medicine initiated discussions with the Bioengineering Advisory Committee to collaborate in the development of the Department of Bioengineering in the College of Engineering. There are numerous opportunities for joint faculty appointments, as well as the development of joint student programs that might include preprofessional preparation or a DVM/Master's degree in Bioengineering.

Infectious Diseases and Biosecurity Research. With expertise in the Illinois State Natural History Survey and the Colleges of Engineering, Liberal Arts and Sciences, Agricultural, Consumer and Environmental Sciences, and Veterinary Medicine, the Urbana campus has long been a leader in biological research, including infectious diseases of animals and humans, infectious diseases of plants, bioengineering, biosecurity, diagnostics, arthropod-borne diseases, toxicology, transgenic animals, economics and public policy. The Division of Animal Resources and the Division of Environmental Health and Safety are also important collaborators. With the revitalization of the Center for Zoonoses Research and the faculty expertise in the Veterinary Diagnostic Laboratory, the College of Veterinary Medicine is poised to be a leader in the areas of new and re-emerging infectious diseases, toxicologic agents, bio-terrorism, and antibiotic resistant microbial organisms. Research in these areas combats threats to the health and well-being of the people and agricultural animals of Illinois and the nation. In addition, we can work with agricultural industries to ensure the public of the safety of genetically modified plants and other biological organisms. This initiative complements the cross-campus initiative on food security.

Engaging the Greater Chicago Area:

Establishment of a Specialty Referral Clinic. The college is pursuing collaborative opportunities to engage the greater Chicago population with a specialty referral clinic in companion animal medicine as well as equine medicine. There will be multiple benefits to having a significant, constant presence in the Chicagoland area. These include increased and better clinical service to our referring veterinarians and their clients; increased visibility, engagement, and development opportunities for the college; opportunities to provide continuing education programs for veterinarians, animal health workers, and the public in the most populous part of the state; greater numbers and variety of clinical cases for professional and graduate instruction; an expanded ability to conduct clinical research trials. In short, the college believes establishing a Chicago-based clinical presence creates unparalleled opportunities not only for professional and

graduate instruction and faculty research but also for the veterinarians and animal owners of Illinois and for overall college and university visibility.

Expansion of the Zoologic Pathology Program. The Zoologic Pathology Program (joint program between College of Veterinary Medicine, Brookfield Zoo, Lincoln Park Zoo, John G. Shedd Aquarium) has matured into an integral element of the zoological community and is a nationally recognized program ranking second in the United States for the number of specimens and animals examined and first in diversity of species examined. This program is on the cusp of being a national leader in its ability to contribute to the intellectual vitality of comparative zoological medicine worldwide. In response to the zoological societies of Chicago (see letters appended to the Veterinary Diagnostic Laboratory annual report), the college is pursuing the development of a plan to stabilize funding for the program in order to expand its national and international value.

Formulation of a Unified Biology Program. The potential of modern biology to dramatically improve the outcome of human and animal disease is, to a large extent, unrealized. An initiative that integrates work in comparative genomics, proteomics, bioinformatics, bioengineering, chemistry, and model biological systems could bring dramatic strides in our understanding of health and thus greatly raise the profile of the university and the state. The College of Veterinary Medicine's role in the unified biology program will be to build expertise in comparative/experimental pathology, physiology, and bioinformatics.

Exploration of Degree Programs. The College of Veterinary Medicine will actively investigate needs and opportunities for greater participation at the undergraduate level, with the possible development of undergraduate minors or majors (biomedical sciences and/or environmental toxicology). A preliminary, informal survey with pharmaceutical and chemical industries and from some governmental regulatory agencies (including FDA and EPA), indicates there is a significant need in the employment market for exceptionally well educated scientists in these areas.

Additional degree programs that are under investigation include a joint DVM/MPH (Master's of Public Health) degree program with the University of Illinois-Chicago, as well as the formation of the Midwest Consortium for Toxicologic Pathology Education with other Big 10 institutions and industrial partners such as Eli Lilly and Pfizer.

Programs Addressing Social Issues Related to Domestic Violence. The college, through its relationship with the Anti-Cruelty Society and its own program, A Pet's Place, is well positioned to study these issues. Potential collaborative partnerships would include faculty from the School of Social Work and from departments in the Colleges of Liberal Arts & Sciences and Agricultural, Consumer, and Environmental Sciences.

Notable Research Advances by the College in FY03

The college's identified areas of research focus include cancer biology, comparative cardiovascular sciences, conservation medicine, environmental toxicology, infectious diseases and biosecurity, molecular pharmacology and endocrinology, orthopedic biology and reproductive biology. Interdisciplinary and/or collaborative initiatives span the college. The Department of Veterinary Biosciences has 14 faculty involved in

collaborative research programs with 48 faculty members on the UIUC campus. The Department of Veterinary Pathobiology has 21 faculty involved with no fewer than 47 Illinois faculty. The Department of Veterinary Clinical Medicine has 10 faculty involved with approximately 17 Illinois faculty. (Appendices 1,2, 3).

While not meant to be inclusive, several notable achievements in the college's research programs include:

Infectious Diseases: Faculty experts in the Center for Zoonoses Research (CZR), the Geographic Information Systems Laboratory (GIS) and the Veterinary Diagnostic Laboratory played an important role in responding to the West Nile virus epidemic in Illinois through disease surveillance and diagnosis as well as public education. Additionally, the college is leading the state's surveillance of chronic wasting disease, which has affected surrounding states. Construction of new laboratories and offices to centralize the college's expertise in infectious diseases and biosecurity issues is under way, with a $2 million grant from NIH and $2 million in matching funds from the state, campus and college.

Environmental Toxicology: Dr. Sue Schantz received a $5 million federally funded research center grant that brings researchers from five institutions together to study the effects of exposure to toxicants in fish being eaten in large quantities by Laotian and Hmong refugees in Green Bay and Appleton, Wisconsin. The researchers will be looking specifically at the effects of eating contaminated fish on the motor, sensory, and mental development of the refugees' children. In addition to studying the health impact of chemicals in the fish, researchers will be educating the communities about safe fishing locations, which species of fish are safe to eat, and preparation and cooking methods to limit exposure to the toxicants.

Reproductive Biology: Under the leadership of Dr. Paul Cooke, the reproductive biology group identified a substance in soy-based human infant formula that could cause deleterious health effects. Studies using animal models revealed changes in the thymus and immune system of developing mice at intake levels similar to those reported in soy-fed human infants, suggesting a possible human health hazard of soy formula.

Expert faculty from the areas of reproductive biology and environmental toxicology continue to administer the NIH-sponsored training program in reproductive toxicology, now in its third year. This training program encompasses expertise from areas across campus, including the Departments of Animal Sciences, Food Science and Human Nutrition, Biochemistry and Biophysics, and Molecular and Integrative Physiology.

Conservation Medicine- Working with the Illinois Department of Natural Resources, Dr. Tony Goldberg and Dr. David Philipp, of the Illinois State Natural History Survey Center for Aquatic Ecology, have identified the presence of an emerging iridoviral disease in populations of largemouth bass that could be devastating to the bass population in the state. They have launched a three-year national study funded by the Conservation Medicine Center of Chicago. This research has catapulted the college to national prominence in the growing area of aquaculture and conservation.

Bioengineering: Dr. Dominique Griffon has been collaborating with Dr. R. Jamison to

develop material matrices that will be able to support the cellular differentiation of mesenchymal stem cells as a method to repair cartilage damaged through injury or arthritis. Use of animal systems allows groundbreaking experimentation that is not permitted with human tissues.

Conclusion

It is clear that the investment of state funds in the College of Veterinary Medicine has a high return; however, between FY02 and FY03, the college sustained the highest net loss (-5.92%) to its state budget of any UIUC colleges. Over half of the CVM faculty provide clinical and diagnostic service and outreach generating 29.2% of the college's total budget in FY03, more than any other academic unit on campus. Academic faculty delivered 97.4% of the instructional units within the college. Despite the faculty devoting a high percentage of their time to service and teaching, the college ranked fifth in grants and contracts dollars per faculty FTE and third in ICR generation per faculty FTE. (Appendix 4.)

It is recognized that budget reductions and reallocations may be necessary; and if applied to the CVM, it will necessitate faculty reduction which will impinge upon the return of the state's investment as well as threaten the college's full accreditation status. As the sole veterinary college of the state, we ask that during the FY04 budget process, the university acknowledge its mandate by the state to support veterinary medical education.

Current collaborations between VB faculty and faculty on campus:

Summary: Fourteen members of the VB faculty have current research collaborations with 52 different faculty members on the UIUC campus. The following campus departments are represented, with some of the collaborators holding appointments in more than one department. The number in parentheses represents the number of collaborating faculty from that department: Molecular and Integrative Physiology (4), Electrical and Computer Engineering (4), Nuclear Engineering (1), Materials Sciences (4), Civil and Environmental Engineering (5), Theoretical and Applied Mechanics (2), Kinesiology (3), Bioengineering (3), Natural Resources and Environmental Sciences (1), Psychology (4), Food Science and Human Nutrition (5), Cell and Structural Biology (2), Speech and Hearing Sciences (2), Community Health (1), MRI facility (1), Micro- and Nano-technology Center (2), Hazardous Waste Center (1), Natural History Survey. This listing does not include interdepartmental collaborations within the CVM nor does it include the significant numbers of off campus and international research collaborations that are ongoing.

The following list provides details on the UIUC on-campus collaborations:

Indrani Bagchi:

Milan Bagchi; Molecular and Integrative Physiology- Sex steroid effects on nidation and early embryonic development

Val Beasley:

Chris Phillips; Natural history survey- amphibian research
Marv Piwoni; Waste management research center- chemical analysis of environmental toxicants
Anton Endress; NRES-collaborating on the development of a center for restoration ecology
Jeff Brawn; NRES-Director of Program in Ecology and Evolutionary Biology (PEEB), Dr. Beasley recently joined the faculty of this program

David Bunick:

Janice Bahr; Animal Sciences- Cause of epididymal stones and reduced fertility in chickens and a second project investigating the effects of steroids on the male reproductive tract
Matt Wheeler; Animal Sciences- Production of a hormone receptor knockout mouse
Yuqing Li; Molecular and Integrative Physiology- Production of a hormone receptor knockout mouse

Paul Cooke:

Bill Helferich; Food Science and Human Nutrition- Immunological effects of phytoestrogens in soy milk diets fed to newborn & development of a program project on phytoestrogens
Jeff Woods; Kinesiology & Nutritional Sciences- Genestein effects on immune function
John Katzenellenbogen; Chemistry- Development of a program project on phytoestrogens
Janice Bahr; Animal Sciences- Sex steroid effects on the female reproductive tract

Jo Ann Eurell:

Russell Jamison; Materials Science and Engineering- Development of new orthopedic biomaterials
Amy Wagoner Johnson; Mechanical and Industrial Engineering- Material and biological properties of hydroyapatite constructs
David Kuehn; Speech and Hearing Science- MRI and histology of tongue musculature

Tom Eurell:

Steve Boppart; Electrical and Computer Engineering/Beckman- Biomaterials and functional OCT imaging
Debra Leckband; Chemical and Biomolecular Engineering- Host/materials interactions
Bruce Wheeler; Electrical and Computer Engineering and Bioengineering- Host/materials interactions

Greg Timp; Electrical and Computer Engineering/Beckman- Nanoprobes for cellular monitoring
Russ Jamison; Materials Science and Engineering-Implantable biomaterials
Mark Shannon; Mechanical and Industrial Engineering/Beckman- Cohesive intercellular forces and cellular differentiation
Kyekyoon Kim; Electrical and Computer Engineering- Silica-based coating to produce cellular biosensors
Munir Nayfeh; Physics-Specificity of nanoparticle and cellular interaction
Ilesanmi Adesida;U of I Micro and Nanotechnology Center-Use of nanotechnology to monitor cellular physiology
Sahraoui Chaieb; Theoretical and Applied Mechanics- Artificial membrane integrity

David Gross:
Enrico Gratton; Physics-*In vivo* evaluation of a near infra-red system for detection of changes in hemoglobin saturation and oxyhemoglobin content of specific organs
Robert Moser; Theoretical and Applied Mechanics- Initial development of a cardiovascular simulator for evaluation of ventricular assist devices
Marcelo Garcia; Civil and Environmental Engineering- Development of a model hydraulic system to mimic cardiovascular system behavior for testing and evaluation of total artificial hearts
David Ruzic; Nuclear Engineering and Material Sciences- Development of biocompatible artificial surfaces
Bruce Wheeler; Electrical and Computer Engineering & Bioengineering- Host/materials interactions and assisting with development of the Bioengineering program
Phil Best; Molecular and Integrative Physiology- Joint faculty recruitments and graduate student education

Larry Hansen:
Gary Bordson; Hazardous Waste Control Center- Detection of PCB's in the environment

Rex Hess:
Janice Bahr; Animal Sciences-Numerous collaborative studies on normal and abnormal testicular function
Masaaki Nakai; Animal Sciences-Immunohistochemical techniques for studying the testes
Benita Katzenellenbogen; Molecular and Integrative Physiology- Reproductive toxicology
John Katzenellenbogen; Chemistry-Anti-estrogenic compounds
David Miller; Animal Sciences- Male reproductive function
Bill Helferich; Food Sciences and Human Nutrition- Anti-estrogenic effects of phytoestrogens on male reproductive function
Bill Greenough; Psychology & Neurosciences- Consultant with Dr. Greenough on interpretation of electron microscopy results.

Gary Iwamoto:
Jeff Woods; Kinesiology- Oxygen consumption in smaller rodents
Ellen Evans; Kinesiology- Body composition analysis in rodents
Jerry Bell; Kinesiology- Effects of topical analgesics
Paul Lauterbur; MRI facility- MRI signal analysis of neuronal tissues
Ray Fish; Bioengineering- Electrical injury of neuronal tissues

Tomas Martin-Jimenez:
Kyekyoon Kim; Electrical and Computer Engineering- Application of microspheres to dose drugs
Trudy Kiven; Materials Science and Engineering- Delivery of anticancer drugs using ceramic nanoparticles

Anthony Olouch:
Lynn Belford; Chemistry and Paul Ceroke; Chemical Engineering- Electron paramagnetic resonance examination of free radical species in biological systems

David Schaeffer:

Edwin Herricks; Civil and Environmental Engineering- Risk analysis for bird strikes to passenger aircraft

Phil Mankin; Natural resources and environmental sciences-Risk analysis for bird strikes to passenger aircraft

Chris Barkan, Barbara Minsker and Charlie Werth; Civil and Environmental Engineering- Methods to rank costs of environmental cleanup resulting from railroad tank car spills

Sue Schantz:

Janice Juraska; Psychology- Dioxin studies in AhR KO mice

Bill Greenough; Psychology and Cell & Structural Biology- Motor function and cerebellum studies

Donna Korol; Psychology- Estrogen effects on cognitive function

Dave Gooler; Speech and Hearing Science- Assessments of cochlear function (otoacoustic emissions) in PCB & MeHg exposed rats

Bill Helferich; Food Science and Human Nutrition- Development of a program project grant application, genestein effects on cognitive function

Karin Rosenblatt; Community Health-Prostate and colon cancer in people exposed to PBBs in MI

Shelley Tischkau:

Martha Gillette; Cell and Structural Biology- Role of the clock gene timeless in the mammalian circadian clock

Janice Bahr; Animal Sciences- Circadian clock gene expression in the chicken ovary

Current collaborations between VP faculty and faculty on campus:

Summary:Twenty-one members of the VP faculty have current research collaborations with no fewer than 47 different faculty members on the UIUC campus. The following campus departments and units are represented, with some of the collaborators holding appointments in more than one department. The number in parentheses represents the number of unique VP faculty collaborations with each campus unit: Agricultural Economics (1), Agricultural Engineering (2), Animal Sciences (8), Biochemistry (1), Biologic Resources Laboratory (1), Chemistry (2), Division of Animal Resources (2), Food Science and Human Nutrition (3), Illinois Natural History Survey (4), Illinois State Water Survey (1), Kinesiology (1), Material Sciences and Engineering (1), Medicine (3), Microbiology (1), Molecular and Cellular Biology (1), Integrative Physiology (2), Natural Resources and Environmental Sciences (1), and the Program in Ecology and Evolutionary Biology (2). This listing does not include interdepartmental collaborations within the CVM, joint teaching appointments in other departments, campuswide committee work, or the significant numbers of off campus and international research collaborations that are ongoing.

The following list provides details on the UIUC on-campus collaborations:

Roberto Docampo
- Eric Oldfield; Departments of Chemistry and Biophysics - Prenyl diphosphate inhibitors
- Robert Coates; Department of Chemistry - Non-mevalonate pathway inhibitors as antimalarials
- Byron W Kemper; School of Molecular and Cellular Biology (MCB) - Cellular and Molecular Biology Training Grant

Larry Firkins:
- C-FAR - Siting of Swine Facilities in Illinois: Development of Economically Feasible, Low Emission Housing Systems

Tony Goldberg:
- Illinois Natural History Survey Center for Aquatic Ecology

Wanda Haschek:
- Nicki Engeseth; FSHN - Fumonisin toxicity

Lois Hoyer:
- Peter Orlean; Biochemistry
- Sandra Rodriguez-Zas; Animal Sciences
- Kurt Kwast; Molecular and Integrative Physiology
- Suzanne Trupin; College of Medicine

Uriel Kitron:
- Jeffrey Brawn; PEEB - West Nile Virus vector ecology

Mark Kuhlenschmidt
- Prasanta Kalita; Agricultural Engineering - Movement and survival of Cryptosporidium parvum in farm runoff

Carol Lichtensteiger:
- Illinois Natural History Survey - West Nile Virus and environmental contamination
- Division of Animal Resources - Support of researchers using animals across campus via necropsies (diagnsotic pathology) of research animals (unexpected illness or deaths).

Carol Maddox
Van Bowersox, Dr. Karin Harlin; Dept Natural Resources - Monitoring atmospheric particulates in rainwater for Bacillus anthracis

Milton McAllister:
Nohra Mateus-Pinilla; Illinois Natural History Survey

Joanne Messick:
Janice Larsen; molecular and integrative physiology, LAS - Alteration of calcium channel expression and development of thrombocytopenia

Gay Miller
Departments of Agricultural Economics, Animal Science, Agricultural Engineering - Swine odor; food safety

Silvia Moreno
Eric Oldfield; Departments of Chemistry and Biophysics - Effects of prenyl diphosphate inhibitors on Toxoplasma gondii

Evelyne Pollack:
Division of Animal Resources - Pathology support to research through DAR
Biologic Resources Laboratory-UIC - Pathology support to research through BRL
G. Adami; Dept. of Oral Medicine and Diagnostic Sci. College of Dentistry, UI- Pathology support to a study on the effect of overexpression of FOX 1B in hepatic carcinogenesis in transgenic mice

Marilyn Ruiz:
Illinois State Water Survey - Climate Variability and the Control of West Nile Virus
Illinois Natural History Survey - Conservation of Anuran Populations in the Midwest Agricultural Region
PEEB - Eco-epidemiology of West Nile virus in urban areas, Animal Sciences and Illinois Natural History Survey - Prion Disease Control and Prevention

Gail Scherba:
Janice Bahr; Animal Sciences - USDA research proposal

Randy Singer:
Brian White, Rod Mackie; Animal Sciences - Antimicrobial resistance of foodborne pathogens
Abigail Salyers; Microbiology – Antimicrobial resistance of foodborne pathogens

Ted Valli:
Bill Law; UI-C Dept Physiology and Biophysics - Joint research on inflammation.
Terry Unterman; UIC Dept Pharmacology - Joint research on transgenic mouse with insulin implications
Harris Lewin; Animal Sciences - Genomics of bovine lymphoma with Dr Dawn Morin.

Mathew Wallig:
Barbara Klein (FSHN), Elizabeth Jeffery (FSHN), John Juvik (NRES), Kelly Tappenden (FSHN, NS), Keith Singletary (FSHN, NS), Wautraud (Trudy) Kriven (MSE), Jeff Woods (Kinesiology), Tin Garrow (FSHN), Jean-Louis Froissard et al (Dept. of Clinical Investigation, Geneva, Switzerland) - Functional foods

Ron Weigel:
Brian White; Animal Sciences
Donald Layman; Food Science & Human Nutrition

Current collaborations between VCM faculty and faculty on campus:

Warwick Arden:
Executive Committee, Interdisciplinary, Cross-Campus Initiative on Aging, ACES, Kinesiology (ALS), Medicine, Psychology (LAS)

Robert Clarkson:
MRI and NMR research with Linn Belford, Chemistry (LAS)

Peter Constable:
Cancellous bone absorption in plasma with Trudy Kriven, Engineering

David Freeman:
Orthopedic recovery system for horses with Mike Philpott, Engineering

Paul Gerding:
Analytical models of corneal topography with Ghaboussi, Pecknold and Hashash, Engineering

Dominque Griffon:
Orthopedic biomaterials with Russ Jamison, Engineering

Barb Kitchell:
Bioresorbable nanohybrids for drug delivery with Trudy Kiven, Engineering
Non-linear optical coherence tomography system for biomolecular detection and intervention with Steve Boppart, Medicine and Engineering

Dawn Morin:
Mastitis biology with Walt Hurley, Animal Sciences
Photoperiod effects on dairy cow health with Geoff Dahl, Animal Sciences
Effects of diet on ketosis in dairy cows with Jim Drackley, Animal Sciences

Cliff Shipley:
Vitamin E absorption and metabolism in swine with Vicky Jarrell, Animal Sciences

Fred Troutt:
Dietary-induced changes in nucleic acids in dogs with George Fahey, Animal Sciences
Steering Committee for Cross Campus Initiative on Food Safety, multiple investigators