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SHAPING THE FUTURE: A COLLECTIVE VISION FOR THE COLLEGE OF VETERINARY MEDICINE

INTRODUCTION

Veterinary medicine=s role in society today encompasses not only the health of domestic animals, wildlife and ecosystems, but also comparative biomedical research, food safety and security, and the sociological implications of the human-animal bond. These areas all work together to improve human and animal health. Our teaching, research, and service embrace a one medicine philosophy that recognizes the connections among these areas,

The University of Illinois College of Veterinary Medicine is one of only 32 colleges of veterinary medicine in the United States and Canada and the only one in Illinois. We are active in all parts of the university=s mission and our faculty are key contributors to interdisciplinary programs across the university, in the state, nation, and around the world.

We are uniquely qualified to address many of the most critical challenges of the 21st century. Our professional and graduate degree programs supply veterinary scientists who work to ensure human, animal, and environmental health. Our outreach programs touch the lives of thousands of animal owners and help safeguard public health. Our research expertise and facilities provide essential components for translating this campus's strengths in theoretical science into biomedical applications that will result in breakthroughs for human health.

Responding to critical needs from the local to the global scale, we are striving to be in the top tier of colleges of veterinary medicine.

This plan will be continually modified and updated at least annually.

MISSION

The mission of the College of Veterinary Medicine is to provide teaching, research and public engagement programs that benefit the animals, people and environment of the State of Illinois, nation and world, through the promotion of animal health, alleviation of animal suffering, efficient and responsible animal production, conservation of animal and broader ecological resources, and protection of public health. The college is dedicated to educating veterinary and graduate students, post-graduate veterinarians, and the public; discovering, applying, and disseminating comparative biomedical knowledge and technology; and providing outreach to the veterinary medical profession and public.

VISION

The College of Veterinary Medicine aspires to be a leader in veterinary and comparative biomedical education, scholarship, and public engagement in the University of Illinois system, in the state, in the nation, and around the world.

To attain this vision the College will:

1. Cultivate innovative, broad-based, lifelong learning experiences in the art and science of veterinary medicine and comparative biomedical sciences.

2. Maintain high-quality, focused research programs and expand collaborative programmatic interactions.

3. Address the needs of a changing profession and a diverse society.

4. Include a global dimension in all activities by developing international programs and collaborations.

5. Improve and strengthen operational efficiency, facilities, and financial health.

6. Promote and foster an environment of collegiality and professionalism.

GOALS AND PLANNING STRATEGIES FOR ACTION

1. CULTIVATE INNOVATIVE, BROAD-BASED, LIFELONG LEARNING EXPERIENCES IN THE ART AND SCIENCE OF VETERINARY MEDICINE AND COMPARATIVE BIOMEDICAL SCIENCES.

1.1. UNDERGRADUATE EDUCATION. Expand interactions with undergraduate students and contributions to undergraduate education.

ACTION:

- Identify students with exceptional potential for our DVM and graduate programs and increase applications.
- Increase undergraduate course offerings, including:
  - Develop a minor in comparative biomedical sciences
  - Develop Discovery courses in biomedical sciences with international dimensions, e.g. zoonotic diseases such as avian influenza, BSE, etc.
- Increase student participation on college research teams.
- Champion mentoring programs and other opportunities for students to gain an early understanding of the profession.
- Provide leadership in translational/comparative biomedical sciences/systems biology and other cross-campus initiatives.
- Augment recruitment to increase diversity of cultures and career orientations in students of our DVM program.

1.2. PROFESSIONAL EDUCATION. Increase flexibility in the curriculum. Foster opportunities for students to gain knowledge and skills needed to respond to the future needs of society and changes in veterinary medicine and biomedical science. Encourage students to pursue their broad interests and assist them in finding unique paths toward contributions to animals and society. Structure the curriculum to address weaknesses. Ensure a critical mass of faculty to deliver the core professional curriculum effectively.

ACTION:

- Educate potential applicants and current students about the breadth of career opportunities in the profession.
- Expand opportunities for students to gain knowledge and experience in focused areas, such as the development of:
    - coordinated series of elective courses within the four-year curriculum.
    - fourth-year rotations and externships for each area of interest.
    - on-line courses to be taken during semesters or breaks.
    - summer research programs.
- Partner with other CIC institutions to share course availability and faculty mentors within professional veterinary curricula.
- Submit NIH training grant proposals focused on introducing veterinary students to research.
- Review the curriculum continuously to respond to the needs of society and changes/needs in veterinary medicine and biomedical sciences.
- Enhance experiential learning through monitored externships.
- Provide student research fellowships.
- Enhance international opportunities for students.
- Increase the number of professional veterinary medical students participating in education training programs, such as Envirovet, NIH educational programs, etc.
- Increase educational offerings by bridging geographic boundaries with use of videoconferencing bringing unique opportunities to our students.
- Integrate into the curriculum new technologies to take advantage of changing learning styles and characteristics of students.
- Expand participation in DVM/MPH.

1.3. GRADUATE EDUCATION. Cultivate stronger graduate programs in areas of research emphasis within the college.

ACTION:

- Increase current graduate student funding through training grants, investigator-initiated grants, and corporate, foundation, and private partners, such as the recent partnership with Eli Lilly in the areas of toxicologic pathology and pharmacology/toxicology.
    - Develop innovative research fellowships that complement industrial/federal initiatives
    - Expand/enhance graduate student stipends through the formation of partnerships with industry/government
    - Increase number of individual postdoctoral fellowships from NIH
    - Explore research opportunities with university, industrial, and biotechnology partners to support the pathology, toxicology, toxicologic-pathology, pharmacology and clinical medicine and surgery residency training programs.

- Enhance graduate recruitment efforts by increasing the number, quality and diversity of graduate student applications.
- Pursue NIH training grants independently and in collaboration with external units.
- Maintain and expand campus courses needed in graduate curricula.
- Increase opportunities for DVM and non-DVM graduate students to train in the College of Veterinary Medicine.
- Encourage qualified graduate students to apply for individual NIH fellowships and K01 support.
- Develop a translational biomedical sciences graduate program.
- Strengthen the campus environmental toxicology program.

1.4. POST-DVM EDUCATION.

Intramural: Educate the next generation of faculty to meet the critical shortage of veterinarians in academia. Provide specialty training opportunities in the form of internships and residencies to post-DVMs in selected areas in which there are qualified faculty and mentors. Continue basic science residencies in the areas of clinical, anatomic, and zoological pathology; toxicology; and pharmacology; clinical internships in small animal medicine and surgery and clinical social work; and clinical residency programs in anesthesia, equine medicine, equine surgery, imaging, ophthalmology, production medicine/theriogenology, large and small animal internal medicine, small animal surgery, oncology, cardiology, dermatology, and zoo medicine. Address other areas of interest, including nutrition, emergency and critical medicine, wildlife and exotic animal medicine, and clinical pharmacology.

ACTION:

- Continually evaluate, enhance, and expand clinical and basic science residency programs.
- Secure funding to expand internships, residencies and graduate fellowships to address the needs and opportunities in academia, private practice, public practice and industry.
- Form partnerships with industry/federal agencies to fund post-DVM training positions.

Extramural: Create selected non-degree programs and opportunities for post-graduate education to respond to developing needs in veterinary and biomedical and environmental sciences and policy.

ACTION:

- Expand Envirovet regional programs.
- Enhance and develop educational opportunities for the biomedical research community.
- Continue development and marketing of the Executive Veterinary Program (EVP).
- Incorporate online learning into EVP where appropriate.
- Emphasize online learning programs utilizing our experience gained the last two years with Veterinary Education Online.

1.5. UNDERREPRESENTED POPULATIONS. Attract underrepresented populations in the veterinary medical profession to meet the evolving needs of society.

ACTION:

- Provide programs for high school undergraduate guidance counselors.
- Participate in UIUC new student summer orientation.
- Develop a Career in Veterinary Medicine course for undergraduates.
- Partner with the Illinois Farm Bureau, Future Farmers of America, 4-H, and other organizations to identify and mentor students interested in production medicine.
- Collaborate with the Illinois State Veterinary Medical Association to provide veterinary

mentors to high school students from underrepresented populations who are exploring opportunities in the profession.

2. MAINTAIN HIGH-QUALITY, FOCUSED RESEARCH PROGRAMS AND EXPAND COLLABORATIVE PROGRAMMATIC INTERACTIONS.

Strengthen current areas of scholarly focus within the College of Veterinary Medicine: infectious diseases, ecosystem health, orthopedic biology, reproductive biology, toxicology, and oncology. Build strength within the college in the areas of stem cell and regenerative biology, host-microbe interaction, and environmental sustainability. Periodically reassess areas of programmatic emphasis to respond to evolving faculty strengths and societal needs. Encourage research focused on addressing and solving "real world" issues in veterinary medicine, public health and biomedical science.

ACTION:

- Participate in various campus and regional homeland security initiatives.
- Recruit faculty who can contribute to the defined areas of focus.
- Identify and develop opportunities to incorporate bioengineering into our areas of scholarly focus.
- Actively recruit faculty under campus programs such as the Faculty Excellence Program and the Targets of Opportunities Program.
- Pursue funding for named faculty chairs in areas of scholarly focus.
- Expand interdisciplinary programs with the Institute of Genomic Biology; the College of Medicine; the College of Agricultural, Consumer and Environmental Sciences; and the College of Engineering (Departments of Bioengineering, Material Sciences, Mechanical and Industrial, Electrical and Computer, and Civil and Environmental Engineering) through the pursuit of collaborative hires and/or joint appointments.
- Increase the diversity of funding sources.
    - Engage all areas of the college in establishing partnerships to diversify our funding sources.
    - Maintain and expand partnerships with private, corporate, and foundation entities.
    - Expand our portfolio of federal grants, including multi-investigator and multi-institutional grants and program project grants.
- Expand opportunities for professional and graduate students to participate on interdisciplinary research teams that enrich their learning experience and contribute to the scholarship of the college.
- Strengthen involvement in programmatic collaborative programs—campus and region
    - Ecosystem health
    - Anthrozoologic initiative
    - Reproductive biology
    - Nanotechnology
- Enhance and promote translational biomedical research through the development of service centers in support of various research needs at UIUC and UIC, and the Chicago biomedical community, e.g., comparative pathology, transgenic animal pathology, toxicology, microscopy, drug/toxicant kinetics and experimental clinical medicine.
- Reconstitute and build research infrastructure.
    - Develop a critical mass of veterinarian/physician/clinician scientists and research faculty in comparative biomedical sciences.
    - Identify/construct dedicated biomedical research facilities which include campus BSL-3 laboratory, animal facilities and biowaste disposal.

- Institutionalize regular upgrades of IT infrastructure.
- Partner with CITES to provide 24x7 support of network communications.

- Encourage faculty to "move their ideas" to applied solutions:
  - Develop fee-for-service laboratories
  - Develop start-up companies

3. ADDRESS THE NEEDS OF A CHANGING PROFESSION AND A DIVERSE SOCIETY IN INNOVATIVE WAYS.

3.1. CLINICAL SERVICE. Provide a high level of public engagement through the Veterinary Teaching Hospital, which offers state-of-the-art patient care and addresses the needs of referring veterinarians and the animal-owning public. Continue these core areas of engagement and instruction: companion animal medicine and surgery; food animal health and production; equine medicine and surgery; and zoological, exotic and wildlife medicine.

ACTION:

- Form advisory committees to assist in evaluation and enhancement of clinical programs.
- Facilitate collaboration between clinical and basic science faculty within the college and across campus.
- Expand existing programs with high levels of public engagement and visibility, including food security and public health, population and conservation medicine, and the urban animal health initiative.
- Partner with high quality practices to expand clinical experiences for professional students.
- Develop methods to utilize feedback from stakeholders.
- Expand technological capabilities for distance learning (CE), distance consultations, and client services
- Continue to update medical information systems and associated data management systems
- Expand service, e.g., clinical and comparative pathology, in support of laboratory animal and biomedical research at UIUC, UIC, and the Chicago biomedical community
- Strengthen consulting services, including telemedicine-type activities.
- Investigate the establishment of a satellite referral center and wellness clinic in the Chicago area.
- Utilize advances in technology such as wireless communication, web services, tablet PC's, digital imaging and electronic medical records to improve efficiency and care.

3.2. DIAGNOSTIC SERVICE. Provide high quality diagnostic assistance through the Veterinary Diagnostic Laboratory (VDL) and its Chicago branch program, the Zoologic Pathology Program (ZPP), which conduct laboratory examinations and diagnostic investigations. Assist in the identification, control, and treatment of infectious, nutritional, toxicologic, and other diseases that adversely affect the animals and animal industries of Illinois and the public health of the citizens of Illinois. Continue to strengthen areas of needed diagnostic expertise and service and complement the college's areas of programmatic research.

ACTION:

- Maintain and strengthen areas of diagnostic expertise and service to provide for the needs of the state:
  - Expand the infectious and toxicologic disease investigation service, production animal diagnostics, food safety service, and biosecurity support (emerging diseases, agro-bioterrorism, and foreign animal disease preparedness and surveillance).

    - Expand expertise and services in molecular diagnostics, including molecular diagnostic capability of the Zoologic Pathology Program (ZPP).
    - Cultivate opportunities and support for faculty research in production medicine, equine, wildlife, zoo animal, aquatic animal, and environmental surveillance and diagnostic support.
- Promote partnerships with the Illinois Department of Agriculture veterinary diagnostic laboratories that will offer economies of scale on animal diagnostic testing procedures and enable the Illinois Veterinary Diagnostic Laboratory System to compete for federal funding related to animal disease surveillance and detection.
- Build partnerships with the College of Medicine for diagnostic and collaborative comparative pathology support.
- Expand funding and openings for toxicology, pathology, and toxicologic-pathology residency training.
- Develop methods to utilize feedback from stakeholders.
- Expand technological capabilities for distance learning (CE), distance consultations, and client services
- Continue to update medical information systems and associated data management systems
- Expand service, e.g., clinical and comparative pathology, in support of laboratory animal and biomedical research at UIUC, UIC, and the Chicago biomedical community
- Develop and expand the existing technologies to provide rapid and mobile diagnostic medical services to assist in the state emergency response plan
- Expand the molecular diagnostic capability of the Zoologic Pathology Program (ZPP)
- Integrate the ZPP more closely with on-campus CVM activities to enhance educational and research programs, e.g., ecosystem health
- Merge Veterinary Diagnostic Laboratory and Veterinary Biosciences chemistry-toxicology laboratories (service center) to strengthen both research and diagnostic support (personnel and equipment).

3.3. PUBLIC ENGAGEMENT. Bring a greater understanding of the college, the profession of veterinary medicine, and the field of biomedical science to the public and university communities. Respond to emerging opportunities and societal needs.

ACTION:

- Encourage all faculty and staff to engage our public by representing the college and profession at public venues, such as exhibits sponsored jointly with organized veterinary medicine at state fairs and horse, dog, or pet shows.
- Collaborate with organized veterinary medicine to deliver educational programs to the general public.
- Increase our engagement and visibility to an important segment of the Illinois population through targeted activities in the Greater Chicago area.
    - Expand our urban animal/shelter medicine program through expansion of activities with partner organizations, including The Anti-Cruelty Society of Chicago and Chicago Animal Care and Control focusing primarily on prevention of excess breeding of animals and abandonment.
    - Develop collaborative programs that increase engagement with the Greater Chicago equine performance industry, including the thoroughbred and standardbred racing and the sport horse industries.
    - Expand and refine Chicago-based programs including the Zoologic Pathology Program (with the Lincoln Park Zoo, Brookfield Zoo, Shedd Aquarium and Cook

County Forest Preserve); the Zoological Medicine Program (with Brookfield Zoo); the Aquatic Animal Medicine Program (with Shedd Aquarium); and the Conservation Medicine Center of Chicago (with Loyola University and Brookfield Zoo) to play a greater role in conservation in the Midwest and Great Lakes region in diagnostic and preventive medicine.

- Expand collaborations with state agencies on issues of public health significance, such as existing zoonoses, new and emerging diseases, food animal diseases, and toxic contaminant-induced diseases.
- Address current and future issues of significance to society, such as public health, the human-animal bond/grief counseling, violence in society and animal abuse, biosecurity, and environmental issues.
- Develop novel Executive Veterinary Programs, including a program based in Chicago.
- Develop Master Pet Program with the College of ACES.
- Provide rapid information response to animal and public health issues.

4. INCLUDE A GLOBAL DIMENSION IN ALL ACTIVITIES BY DEVELOPING INTERNATIONAL PROGRAMS AND COLLABORATIONS.

Acting as a world citizen, address and resolve local and regional issues in international settings.

ACTION:

- Develop a coordinated plan to address international priorities that enhance faculty productivity and the education of professional and graduate students.
- Incorporate issues related to global problems into course work.
- Amplify international dimensions of current programs, such as the Center for Zoonoses Research, the Zoologic Pathology Program, and the Envirovet Program in Wildlife and Ecosystem Health.
- Expand international partnerships to facilitate faculty and student exchange programs.
- Pursue funding to provide international experiences to faculty and student, e.g., Fulbright Scholar support, Fogarty Fellowships and the Rockefeller Foundation.

5. IMPROVE AND STRENGTHEN OPERATIONAL EFFICIENCY, FACILITIES, AND FINANCIAL HEALTH.

5.1. ORGANIZATIONAL STRUCTURE. INCREASE ORGANIZATIONAL EFFICIENCY.

ACTION:

- Evaluate the organizational structure and prioritize ways to enhance the mission and goals of the college.
- Continue to use external advisory committees to assist in developing short- and long-range goals for the college.
- Develop opportunities between the college and other campus units, including the Colleges of Medicine; Engineering; Agricultural, Consumer and Environmental Sciences; the state surveys; and other allied state agencies on campus.

5.2. FACILITIES. Understand current and future needs for maintaining and improving facilities.

ACTION:

- Provide leadership to obtain a biosecurity research and development and biowaste facility.
- Move the college's facilities plan, "Building Community" forward.
    - Investigate state and federal funding opportunities for capital programs

    - Develop a fundraising plan to identify and approach prospective donors
- Upgrade facility networking infrastructure to support high bandwidth applications of medical applications and systems.
- Develop a plan that ensures better utilization of the facilities in the Surgery and Obstetrics Lab, the Veterinary Medical Research Farm, and the Dixon Springs Agricultural Center.
- Determine and address the impacts of federal regulations on animal care facility needs.

5.3. FINANCES. Seek support from a wider range of sources. Continue to be open and responsible regarding use of funds.

ACTION:

- Produce an annual financial report to provide a basis for sound financial planning and realigning of priorities.
- Develop a plan to increase college funding that incorporates more revenue streams.
- Compile a prioritized list of programmatic and physical plant needs and goals with cost estimates for a larger professional class.
- Develop funding and implementation plans for all new initiatives that are a result of the planning process.
- Coordinate budget planning processes for all units to occur during the annual budget reviews.
- Implement a comprehensive plan for identifying donors for specific college programs and endowed chairs.
- Generate a marketing/public relations plan that integrates with and supports the college's goals.

6. PROMOTE AND FOSTER AN ENVIRONMENT OF COLLEGIALITY AND PROFESSIONALISM.

ACTION:

- Create opportunities for faculty and students to interact in a collegial environment.
- Continue grand rounds and develop similar forums for faculty, staff, and students.
- Expand mentoring and advising programs to support faculty and students.
- Facilitate opportunities for student leadership with greater faculty support.
- Foster opportunities for students to interact with alumni and intellectual leaders, such as a scholar-in-residence program, college-wide seminars featuring prominent alumni and other experts, and through support of student involvement in collaborative research and service programs.