PURDUE UNIVERSITY
COLLEGE OF VETERINARY MEDICINE
DEPARTMENT OF VETERINARY CLINICAL SCIENCES
STRATEGIC PLAN 2009-2014

Approved April 8, 2009

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MISSION
To educate members of the veterinary health care team\(^1\) and biomedical community, to create and communicate knowledge, and to provide outstanding clinical service for the citizens of Indiana and surrounding region.

VISION
The members of the Department of Veterinary Clinical Sciences will provide superior educational programs emphasizing experiential learning and lifelong learning; conduct innovative clinical, fundamental, and comparative research; and provide outstanding, comprehensive patient care and animal wellness programs.

BACKGROUND
The Department of Veterinary Clinical Sciences (VCS) is one of three departments in the Purdue University College of Veterinary Medicine (PVM). Purdue University was founded as a land grant institution in 1869. The Indiana General Assembly authorized the establishment of the School of Veterinary Science and Medicine in 1957 and the first students were enrolled in 1959. The name of the school was changed to the School of Veterinary Medicine in 1974 and changed to the College of Veterinary Medicine in 2011; currently PVM is one of 28 Veterinary Colleges in the US and one of 11 Colleges/Schools at Purdue University. The Department of Veterinary Clinical Sciences was founded in 1960 and separated into a Department of Small Animal Clinics and a Department of Large Animal Clinics in 1972. The two clinical departments merged to form the Department of Veterinary Clinical Sciences in July 1987, with the merger being accompanied by the appointment of a Director of the Veterinary Teaching Hospital in 1988.

The Department of Veterinary Clinical Sciences developed strategic plans in 1988 and 2002 and the Veterinary Teaching Hospital developed a strategic plan in 2006. The PVM strategic plan for 2002-2007 was successfully implemented and was marked by significant investments in infrastructure, expansion in faculty and staff, and development of new academic and interdisciplinary programs. New buildings constructed during 2002-2007 included Large Animal Isolation ($1.9 M), the Linda and William Fleischhauer Radiation Therapy Facility ($1.4 M), and the Equine Health Sciences Annex ($390 K). Existing buildings that were extensively renovated during 2002-2007 included the Junior Surgery Laboratory ($1.0 M) and the Clinical Discovery Laboratory and Cardiology Suite ($1.3 M).

Major equipment additions during this time included helical computed tomography, digital radiography, and nuclear scintigraphy. Areas of research within PVM were defined and four areas of discovery strength were identified; cancer, infectious disease, neuroscience, and biomedical engineering. Faculty were successfully recruited and retained and the department added approximately eight faculty FTEs during 2002-2007. New faculty positions in Anesthesiology (2), Cardiology (1), Emergency/Critical Care (1), Neurology (0.75), Radiology (1), Small Animal Medicine (1), and Small Animal Surgery (1) were added to the department during this period. Programs initiated during 2002-2007 included the Clinical Discovery Laboratory, the Clinical Trials Group, and the establishment of a Graduate Certificate Program in Veterinary Homeland Security and the National Biosecurity Resource Center for Animal Health Emergencies.

\(^1\) The veterinary health care team consists of veterinarians, veterinary technicians, animal caretakers, receptionists, and administrative and support staff. Every member of the team plays an important role in ensuring the delivery of high-quality, compassionate veterinary care.
CORE VALUES, CULTURE, AND GOALS

The Department of Veterinary Clinical Sciences affirms the values, culture, and integrity of a landgrant university set forth in the Purdue University Strategic Plan, New Synergies: 2008-2014. We also affirm the values and culture of the Veterinary Teaching Hospital (VTH) as stated in the Strategic Plan for 2006-2016. Our core values and culture, which are incorporated in the mission statement, vision statement, goals, and strategic directives, are to:

- Provide excellent and compassionate care for animals
- Be fair, transparent, direct, and honest in our interactions
- Maintain and foster a diverse2, inclusive, and collegial environment by valuing everyone as an individual
- Value and respect our resources: personnel, animals, and the environment
- Facilitate personal development, ensure personal well being, and foster respect of others
- Communicate effectively and promptly with everyone within VCS, VTH, and Purdue, and with all clients, referring veterinarians, and stakeholders
- Embrace the tripartite missions (learning, discovery, engagement) of Purdue University as a land grant institution

Our goals are grounded in those of Purdue University and the College of Veterinary Medicine. The three major goals of Purdue University are: Launching Tomorrow’s Leaders (Learning), Discovery with Delivery (Research), and Meeting Global Challenges (Engagement). The three major goals of the PVM are: Launching Veterinary and Biomedical Careers (Learning), Delivering Discovery that Benefits Animal and Human Health (Research), and Providing Service and Knowledge that Impact Our Global Society (Engagement).

Three major goals form the foundation for this strategic plan. The three major goals are:

- Educating members of the veterinary health care team and biomedical community
- Generating and communicating knowledge in veterinary medicine, animal agriculture, and comparative biomedical sciences
- Enhancing animal and human health by providing outstanding patient care and delivering continuing education programs to veterinarians, animal owners, and the public

Common strategies are shared by two or more goals. Common strategies are to:
- Recruit and retain outstanding faculty, staff, and house officers
- Create a diverse, inclusive, and collegial environment where all members of the health care team are valued
- Facilitate and support career development and personal growth for faculty and staff
- Provide discovery and educational opportunities for residents, graduate students, and interns that will prepare them for successful careers in academia, specialty practice, industry, and government
- Protect and support our environment

Strategies specific to the first goal, Educating members of the veterinary health care team and biomedical community, are:

1. Graduate excellent veterinarians, veterinary technicians, and research scientists that are ready to enter clinical veterinary practice and other careers
2. Deliver innovative veterinary and veterinary technician training programs that foster self-motivated learning
3. Integrate clinical experiences for veterinary and veterinary technician students so that they learn to function as members of outstanding veterinary health care teams
4. Improve the teaching effectiveness of faculty, staff, house officers, and veterinary technicians
5. Promote a culture of educational excellence by rewarding achievements in teaching

Strategies specific to the second goal, Generating and communicating knowledge in veterinary medicine, animal agriculture, and comparative biomedical sciences, are:

1. Undertake research that benefits animals and humans, and communicate the results of research activity in top-tier journals and at scientific conferences
2. Increase the ability to perform preclinical trials, clinical trials, and other applied research
3. Become an integral and valued member of translation3 research programs at Purdue University and in Indiana by providing expertise in animal model research

Strategies specific to the third goal, Enhancing animal and human health by providing outstanding patient care and delivering continuing education programs to veterinarians, animal owners, and the public, are:

1. Provide outstanding clinical service
2. Enhance interactions with other veterinarians
3. Become a leader in veterinary continuing education
4. Increase local, regional, and global engagement

COMMON STRATEGIES

Directive 1: Recruit and retain outstanding faculty, staff, and house officers.

- Recruit and retain faculty and staff with excellent academic qualifications, diverse backgrounds, and a strong commitment to one or more of our missions

2 Diversity of race, religion, color, sex, age, national origin or ancestry, marital status, parental status, sexual orientation, and educational background.

3 House officers are veterinarians that are participating in a clinical training program as a resident (3-year program leading to board certification in a clinical specialty) or intern (2-year program).

4 Continuum of basic science through discovery in animal and human health.
Goal 1: Educating members of the veterinary health care team and biomedical community

Directive 1: Graduate excellent veterinarians, veterinary technicians, and research scientists who are ready to enter clinical veterinary practice and other careers.

• Admit students of the highest caliber from diverse backgrounds
• Maintain rigorous academic standards in the clinical program
• Consider remediation for students that fail a clinical rotation rather than immediate dismissal from the professional program
• Support off-campus experiential learning including externships, off-campus blocks, and international experiences
• Promote a culture of lifelong learning
• Provide leadership opportunities for students
• Enhance mentoring of students
• Optimize learning by the thoughtful use of animals in the first 3 years of the professional program and continue to explore and utilize viable alternatives to animal use in instruction

Directive 2: Create a diverse, inclusive, and collegial environment where all members of the health care team are valued.

• Implement measures that increase our attractiveness to faculty, staff, and students from diverse backgrounds
• Increase and embrace diversity by implementing targeted initiatives
• Create a culture that values and celebrates success
• Reward faculty and staff who are excellent role models for students from diverse backgrounds

Metrics (Input, Output)

- Full time equivalent (FTE) distribution of individual faculty for learning, discovery, and engagement
- Funds expended for diversity initiatives
- Employee diversity

Directive 3: Facilitate and support career development and personal growth for faculty and staff.

• Institute career development mentoring programs for faculty and staff.
• Match the skills and interests of tenure-track and clinical track faculty and staff with position responsibilities based on the needs of the department and college.
• Position responsibilities should be updated annually as part of the annual career development meeting.
• Ensure that faculty have equal opportunities to be promoted if they can document excellence and impact in learning, discovery, or engagement
• Develop a system to evaluate teaching that is sufficiently robust to support promotion based on teaching excellence
• Encourage and support sabbatical leave opportunities
• Recognize position classifications of veterinary technicians in VTH/VCS
• Develop a system of merit based promotion for veterinary technicians

Metrics (Input, Output)

- Number of faculty and staff attending workshops/conferences/seminars on career development and personal growth
- Number of faculty and staff receiving national/international awards
- Number of eligible faculty completing sabbatical leave

Directive 4: Provide discovery and educational opportunities for residents, graduate students, and interns that will prepare them for successful careers in academia, specialty practice, industry, and government service.

• Recruit residents who want to pursue careers in academia
• Increase awareness and enthusiasm for academic careers and the importance of discovery amongst residents
• Increase the number of students undertaking thesis MS and PhD degrees
• Provide opportunities for all residents/graduate students to teach in the classroom and student laboratories and be exposed to different instructional methods
• Convene a VCS Residency Training Program Committee that will evaluate our current program, define the goals of the program, and advise the department head on all matters related to the Residency training program

Metrics (Input, Output)

- Number of former residents working in academia, specialty practice, industry, and government service
- Number of residents becoming board certified and median time to degree
- Number of thesis MS and PhD degrees awarded and median time to degree
- Number of interns undertaking residency training or graduate programs
- Number of former residents working in academia, specialty practice, industry, and government service

Metrics

- Number of recycling programs
- Number of printing programs

Goal 2: Research and discovery

Convene a VCS residency Training Program Committee that will evaluate our current program, define the goals of the program, and advise the department head on all matters related to the Residency training program.
Directive 1: Undertake research that benefits animals and humans, and communicate the results of research activity at scientific conferences and in top-tier journals.

- Identify faculty that are passionate about research and enhance their ability to undertake and complete research either individually or as a member of a research team.
- Identify or recruit faculty research "engines" that will develop and lead research programs or teams, acquire major external funding, mentor graduate students, and facilitate collaboration between VCS and PVM faculty, Discovery Park, the IU School of Medicine and others, supervise graduate students, and advise the Department Head on research-related issues.
- Ensure that faculty who act as research engines are able to devote a substantial amount of time to research.
- Ensure that facilities are adequate to support the research activity of externally funded investigators.
- Provide a mechanism to support pilot and preliminary studies that have the potential to lead to external funding.
- Create and promote collaborative research opportunities between tenure track and clinical track faculty and facilitate new areas of investigation for all faculty with an interest in research.
- Appropriately acknowledge the valuable intellectual contributions of collaborators in clinical research.
- Develop departmental guidelines for acknowledging valuable intellectual contributions.
- Provide more structure to the graduate program, increase graduate student numbers, and establish a departmental PhD program.

Goal 2: Generating and communicating knowledge in veterinary medicine, animal agriculture, and comparative biomedical sciences.

Directive 3: Integrate clinical experiences for veterinary and veterinary technician students so that they learn to function as members of outstanding veterinary health care teams.

- Provide access to the latest educational technology for course development and course delivery.
- Increase availability of technical support and technical training opportunities.
- Incorporate contemporary ideas on class room and seminar room design in order to optimize student learning.
- Institute new educational experiences for students as opportunities become available and societal needs change.
- Provide and maintain adequate facilities and course budgets in order to teach core courses.

Directive 4: Improve the teaching effectiveness of faculty, house officers, and veterinary technicians.

- Provide more structure to the graduate program, increase graduate student numbers, and establish a departmental PhD program.
- Ensure that faculty who act as research engines are able to devote a substantial amount of time to research.
- Ensure that facilities are adequate to support the research activity of externally funded investigators.
- Provide a mechanism to support pilot and preliminary studies that have the potential to lead to external funding.
- Create and promote collaborative research opportunities between tenure track and clinical track faculty and facilitate new areas of investigation for all faculty with an interest in research.
- Appropriately acknowledge the valuable intellectual contributions of collaborators in clinical research.
- Develop departmental guidelines for acknowledging valuable intellectual contributions.
- Provide more structure to the graduate program, increase graduate student numbers, and establish a departmental PhD program.

Metrics (I=input, O=output)

- I-Number of faculty participating in hypothesis testing research
- I-Number of faculty with at least 0.5 FTE available for research
- I-Total dollars available for internally funded grants
- I-Number of graduate students enrolled in PhD and thesis MS degree programs
- O-Number of peer-reviewed publications and citations
- O-Number of research presentations at scientific conferences
- O-Number of externally funded grants and total dollars awarded
- O-Number of internally funded grants and total dollars awarded
- O-Number of patents and licenses awarded
Directive 2: Increase the ability to perform preclinical trials, clinical trials, and other applied research.

- Support changes in the VTH research infrastructure and processes so that the VTH is more efficient and better able to facilitate clinical research efforts
- Ensure that the Medical Discovery Research Unit (MDRU), in particular the Clinical Trials Group (CTG) and the Clinical Discovery Laboratory (CDL), have sufficient resources to provide the appropriate level of research support
- Work with the Director of the Veterinary Teaching Hospital to facilitate coordination between VCS and VTH activities
- Work with PVM administration to better organize and coordinate services delivered within the MDRU
- Provide adequate support in proposal submissions including grant format and budget
- Provide adequate support in study design and biostatistical analysis
- Define resources that are required for the department to provide an appropriate level of support for PVM signature programs in discovery (cancer, infectious disease, neuroscience, and biomedical engineering)

Metrics (I=input, O=output)
- I-Faculty and staff FTE providing biostatistical analysis and assistance in study design
- O-number of externally funded clinical trial grants and total dollars awarded
- O-number of clinical trials and number of animals enrolled in clinical trials
- O-number of peer-reviewed publications resulting from clinical trials
- O-number of faculty that actively participate in Discovery Park, the Indiana CTSI, and other interdisciplinary and translational research programs

Directive 3: Become an integral and valued member of translational research programs at Purdue University and in Indiana by providing expertise in animal model research.

- Develop a strong presence in Discovery Park and other interdisciplinary and translational research programs at Purdue University, and in the Indiana Clinical and Translational Science Initiative (CTSI), the Indiana Innovation Alliance, BioCrossroads, and the Orthopaedics group in the Indiana Innovation Network (IN-OrthoNet)
- Define the role and responsibilities of VCS, the Clinical Discovery Laboratory, and the Clinical Trials Group in the Indiana Clinical and Translational Science Initiative
- Investigate the establishment of a Center of Applied Veterinary and Comparative Medicine as a flagship program in clinical research, graduate student training, and resident training. The center should be integrated with the Clinical Investigator M5 program being developed on campus, the Clinical and Translational Science Initiative, and other campus initiatives.

Metrics (I=input, O=output)
- O-number of faculty that actively participate in Discovery Park, the Indiana CTSI, and other interdisciplinary and translational research programs

Goal 3: Enhancing animal and human health by providing outstanding patient care and delivering continuing education programs to veterinarians, animal owners, and the public

Directive 1: Provide outstanding clinical service

- Provide excellent and compassionate patient care
- Provide state of the art equipment, facilities, and a highly skilled staff
- Ensure sufficient clinical services and areas of specialization to provide outstanding patient care
- Provide and facilitate the growth of clinical services that are valued by clients

Metrics (I=input, O=output)
- I-number of faculty that are members of the indiana Veterinary Medical Association
- O-number of externships at referring hospitals for veterinary and veterinary technician students
- O-number of presentations at local and state continuing education conferences
- O-number of presentations at local and state continuing education conferences
- O-number of hours of on-line programs delivered

Directive 2: Enhance interactions with other veterinarians

- Increase faculty communication with referring veterinarians
- Increase opportunities for faculty to interact with referring veterinarians, such as attending Fall Conference, Indiana Veterinary Medical Association Annual Conference, regional conferences throughout Indiana, etc
- Implement an advisory group to improve hospital and ambulatory services
- Increase faculty involvement in local and state organized veterinary medicine
- Increase the number of presentations at local and state continuing education conferences and acknowledge the importance of this activity

Metrics (I=input, O=output)
- O-number of books, book chapters, and conference proceedings published
- O-number of hours of on-line programs delivered

Directive 3: Become a leader in veterinary continuing education

- Promote sharing of knowledge between the clinical specialties and veterinarians, animal owners, and the public
- Increase the number of high impact presentations by faculty and staff at continuing education conferences
- Increase the leadership role of faculty and staff in continuing education conferences regionally, nationally, and internationally
- Explore development or expansion of on-line continuing education programs produced by faculty and staff
- Increase the number of conferences organized by VCS faculty that are held at Purdue University and be supportive of this activity

Metrics (I=input, O=output)
- O-number of students involved in international activities
- Expand and improve existing international exchange programs for faculty and students (Jordan University of Science and Technology, Kitasato University, and University of Veterinary and Pharmaceutical Sciences Brno)
BENCHMARKING

- Explore establishing or participating in an international satellite clinic operated and staffed by Purdue University faculty and veterinary technicians
- Explore establishing new referral satellite clinics within Indiana operated and staffed by Purdue University faculty and veterinary technicians
- Enhance the use of technology for long distance communication and diagnostic clinical service
- Increase faculty involvement in international veterinary organizations
- Explore increasing DVM student clinical year programs with international universities such as Ross University, St. George’s University, and St. Matthew’s University
- Explore increasing our engagement with Veterinary Colleges in India, the Middle East, and elsewhere
- Increase funding for Purdue University faculty and veterinary and graduate students to study abroad

Metrics (Input, Output)

- Number of faculty/students/staff involved in international activities
- Number of faculty involved in international veterinary organizations
- Number of clinical year students and veterinary students involved in international student exchange programs
- Number of international veterinarians completing graduate studies or sabbatical leave
- Number of residents and interns in Clinical Science departments
- Number of equine admissions and hospitalized days
- Number of food animal admissions and hospitalized days
- Number of small animal admissions and hospitalized days
- Number of equine farms visited
- Number of ruminant farms visited
- Number of swine farms visited
- Veterinary Teaching Hospital income
- Number of peer reviewed publications
- Number of citations in peer reviewed journals
- Total extramural research expenditures (College/School basis)
- Number of faculty presenting at national continuing education conferences

The department will compare itself to three sets of veterinary medical institutions (peer land-grant institutions, Big Ten institutions, aspirational institutions) for key metrics in learning, discovery, and engagement. Metrics will be compared using a “dashboard” approach to categorize performance as green (exceeding peers), amber (similar to peers), and red (below peers). An indicator (↑, ↔, ↓) will be provided in order to indicate the 5 year trend in comparative performance.

The first set of 14 institutions consists of peer land-grant institutions that have a College/College of Veterinary Medicine based on a campus that is not located in a major metropolitan area and does not have a major medical hospital. This list may be further categorized based on DVM student numbers:

- Auburn University, College of Veterinary Medicine
- Colorado State University, College of Veterinary Medicine and Biomedical Sciences
- Iowa State University, College of Veterinary Medicine
- Kansas State University, College of Veterinary Medicine
- Louisiana State University, School of Veterinary Medicine
- Oklahoma State University, Center for Veterinary Health Sciences
- Oregon State University, College of Veterinary Medicine
- Mississippi State University, College of Veterinary Medicine
- Texas A&M University, College of Veterinary Medicine and Biomedical Sciences
- University of Georgia, College of Veterinary Medicine
- University of Michigan, College of Veterinary Medicine
- University of Pennsylvania, College of Veterinary Medicine
- University of Tennessee, College of Veterinary Medicine
- Virginia-Maryland Regional College of Veterinary Medicine
- Washington State University, College of Veterinary Medicine
- Stipends for residents, interns, and graduate students in Clinical Science departments

The second set of 5 institutions consists of the Big Ten institutions listed in the Purdue University Strategic Plan that have Colleges/Schools of Veterinary Medicine:

- Michigan State University College of Veterinary Medicine
- Ohio State University College of Veterinary Medicine
- University of Illinois College of Veterinary Medicine
- University of Minnesota College of Veterinary Medicine
- University of Wisconsin School of Veterinary Medicine

The third set of 5 aspirational institutions was created based on specific metrics reported in the 2008-2014 PVM Strategic Plan:

- Cornell University, College of Veterinary Medicine
- Texas A&M University, College of Veterinary Medicine and Biomedical Sciences
- University of California-Davis, School of Veterinary Medicine
- University of Florida, College of Veterinary Medicine
- University of Georgia, College of Veterinary Medicine

Rankings will be compared among both sets of peers to maintain consistency with the Purdue University strategic plan and to assess objective progress in achieving our mission. Key dashboard metrics that will be used for comparative purposes are:

- Number of students in clinical year (Purdue University students & total)
- NAVLE pass rate (%)
- Number of faculty in Clinical Science departments
- Number of residents and interns in Clinical Science departments

Summary information will be obtained from the AAVMC Comparative Data Report, Departmental web sites, published articles in J Am Vet Med Assoc and J Vet Med Educ, Residency/internship matching program, and the ISI Web of Knowledge.