

Department of Veterinary Science Implementation Plan FY 2015 Annual Report

(Implementation Plan developed from August 2011 Department of Veterinary Science Program Review which focused on the Gluck Equine Research Center)

Action item #1: Advance the mission and goals of the Gluck Equine Research Center (GERC).

Assessment Method: Monitor all measures of faculty productivity.

Results: For the reporting period, faculty produced 9 books or chapters, 92 refereed publications, 16 non-refereed publications, and 71 abstracts. The faculty gave 95 presentations and hosted 1 national, and 2 international meetings during this period. Additionally, a total of 11 accessions were made by GERC Veterinary Science faculty to GenBank. In the past year, faculty members submitted 29 extramural grants (8 Federal and 21 non-Federal) with a combined requested budget of \$7.4 million. A total of 9 grants were funded representing \$790,040 in total awards for FY 2015.

Analysis of results and reflection: The number of refereed publications, non-refereed publications and abstracts increased over the preceding period (13.6%, 100.0% and 22.4%, respectively). This increase is a continuing trend in the program. Presentations at meetings increased (102.1%) over the reporting period. This increase in non-refereed publications represents a greater emphasis by faculty on these types of publications. The increase in abstracts can be accounted for by the occurrence of major international conferences during the reporting period. The total number of grants submitted by faculty declined in FY 2015 to 29 (as compared to 38 in FY 2014). Total federal funds received in FY 2015 amounted to \$738,046 (2 projects funded) and \$356,071 (7 projects) was received from non-federal funds. This represents a decline in both Federal and non-federal extramural funding compared to FY 2014. This is due in part to both fewer submissions and a lower success rate (55.3% in 2014 vs 24.1% in 2015).

Improvement actions: Faculty and graduate students will be encouraged to publish their work in refereed journals. Faculty and graduate students will also be encouraged to continue to submit abstracts and present their findings at scientific meetings. Faculty will continue to be encouraged to seek extramural funding for their research and to apply for federal funds when possible.

Action item #2: Increase collaboration between University of Kentucky Veterinary Diagnostic Laboratory (UKVDL) and GERC Veterinary Science faculty.

Assessment Method: An increase in the number of collaborative projects, co-authorship on papers, and meetings sponsored by both units.

Results: Veterinary Science faculty from the GERC and UKVDL faculty continue to collaborate on a number of research projects involving infectious disease and equine reproduction. This has resulted in five co-authored refereed publications. UKVDL faculty members continue to serve on graduate student committees and participate in regional meetings hosted by GERC Veterinary Science faculty. A seminar program established in 2006, is held at the UKVDL and is jointly sponsored and hosted by the Veterinary Science Department and UKVDL.

Analysis of results and reflection: Significant collaborations between UKVDL faculty and GERC Veterinary Science faculty are in progress. UKVDL faculty provides important expertise to graduate student programs, as evidenced by their participation as committee members on graduate students who recently completed their programs.

Improvement actions: Faculty at both centers will be encouraged to enter into collaborative efforts, whenever possible. Any impediments to this effort will be identified and reduced.

Action item #3: Improve communications between the GERC Veterinary Science Department and the equine industry and stakeholders.

Assessment Method: Increase in outreach activities including press releases, lay publications, and web presence.

Results: The Department now produces a number of lay publications that are distributed to horse owners and veterinarians. These include the Bluegrass Equine Digest with more than 29,500 subscribers, the Equine Disease Quarterly (EDQ) with 16,500 subscribers, and the University of Kentucky Gluck Equine Research and Service report with more than 3,000 subscribers. The GERC has also established a Facebook page (GluckEquineResearchCenter) and a presence on Twitter (@UKGluckCenter). Veterinary Science faculty also participated in the organization and presentations at the UK Equine Showcase and Kentucky Breeders' Short Course, as well as the Department of Veterinary Science's Equine Diagnostic and Research Seminar Series presented at the UKVDL.

Analysis of results and reflection: Our program continues to make significant strides towards increasing our presence on the web and through various outreach efforts. As noted above, these efforts involve tens of thousands of direct subscribers and likely many more that receive the information via others. Our Research and Diagnostic seminar series is recorded by TheHorse.com and made available for web viewing by thousands of persons worldwide. Many of these seminars have attracted over 1,000 views according to metrics collected by TheHorse.com.

Improvement actions: The Veterinary Science Department will continue to grow our presence online and through our various publications. The content and appearance of our departmental webpage is currently being updated.

Action item #4: Strengthen the graduate program by enhancing industry and academic partnerships and by increasing the competitiveness of graduate assistantships/fellowships.

Assessment Method: Increase in graduate funding support from industry partners to support students with veterinary training. Increase in assistantship stipends. A benchmark of at least 1/4 of PhD students in the program should have a veterinary degree and board certification.

Results: Since 2011, an agreement with Pfizer/Zoetis Animal Health has provided graduate fellowships to support two students with veterinary degrees and board certification in a discipline of veterinary medicine. A dual-degree program leading to the PhD was established with the University of Copenhagen. The program is targeted for students with a veterinary degree who are board eligible or board certified in a veterinary discipline. Effective August 2014, stipends were increased for all department-supported research assistantships. Base stipends of \$18,000 (non-veterinary degree) and \$23,000 (veterinary degree) were increased to \$20,000 and \$26,000, respectively. A 2-year milestone was added that provides a further increase to \$23,000 and \$29,000, respectively. Since 2013, seven of 28 students in the PhD program had a veterinary degree and board certification in a veterinary discipline.

Analysis of results and reflection: New partnerships with industry (Pfizer/ Zoetis) and academia (University of Copenhagen) along with increased research assistantship stipends have enhanced our ability to recruit top-quality students to the program, including students with veterinary training and board certification.

Improvement actions: The Veterinary Science Department Chair and Director of Graduate Studies will continue to seek additional graduate fellowships from industry

partners. Graduate faculty will be encouraged to identify and recruit students with veterinary training and board certification (or board eligibility).

Action item #5: Increase faculty involvement in graduate and undergraduate teaching efforts within the College.

Assessment Method: Faculty participation in undergraduate and graduate courses.

Results: At the time of the program review (2010), most of the faculty members in the GERC Veterinary Science Department had 100% research appointments and relatively few faculty (3) were regularly involved in undergraduate instruction. Since then, additional faculty members have become actively engaged in teaching both Veterinary Science and other courses. In addition to VS 350 (Introductory Anatomy, Physiology, and Animal Hygiene) and VS 351 (Principles of Animal Hygiene and Disease Control) that have been offered for several decades, GERC faculty have developed several new courses. These include VS 597 (Special Course: Equine Infectious Diseases in the Genomic Era), VS 777 (Current Literature in Equine Reproduction), VS 500 (Advanced Equine Reproduction), and VS 307 (Genetics of Horses). As well, Veterinary Science faculty members have provided guest lectures in a number of courses including EQM 351 (Equine Health and Disease) and EQM 399 (Equine Science and Management Internship).

Analysis of results and reflection: GERC Veterinary Science faculty participation in undergraduate and graduate teaching efforts is increasing. Over the past several years, this has been well demonstrated by the creation of four new courses within the VS series.

Improvement actions: A teaching task force was formed in 2014 by Dean Cox to further examine Veterinary Science faculty participation in undergraduate and graduate courses. This group identified several new prospective VS courses that could contribute to degree program curricula.

Action Item #6: Hold faculty accountable to productivity standards established for the program.

Assessment Method: Compare individual faculty productivity measures (see Action Item #1) to Department expectations.

Results: The Departmental expectation for refereed publications is 3 per Research FTE. This goal was met or exceeded by 85% of the faculty. Similarly, the expectation for Abstracts was an average of 1 per faculty with Research FTE and 80% of the faculty meeting or exceeding that goal. Seventy-five percent of the faculty met or exceeded the goal of 1 presentation per year.

Analysis of results and reflection: Overall, the majority of the faculty (as identified by research FTE) met the minimum goals for publications, abstracts and presentations. The average number of publications over a longer interval than a single year is probably warranted.

Improvement actions: Faculty will continue to be encouraged to submit at least 3 papers and 1 abstract per year. Faculty will also be encouraged to attend and present at one meeting per year. Averaging of publications over a three year period will be monitored to provide a better measure of faculty productivity.

Action item #7: Increase faculty participation in the Equine Initiative (now Ag Equine Programs).

Assessment Method: Determine faculty participation in Ag Equine Programs

Results: Since the time of the review a number of faculty are currently involved in various aspects of the Ag Equine Programs, including two GERC Veterinary Science faculty serving as Directors of the program. This also includes participation in various committees, as well as participation in the regular Equine Forum meetings.

Analysis of results and reflection: While some faculty are actively participating in these programs, the majority of faculty are not (based on recent attendance numbers at Equine Forum meetings, for example).

Improvement actions: The Veterinary Science Department will encourage more faculty participation in these efforts, stressing faculty participation at departmental meetings.

Action item #8: Upgrade GERC Veterinary Science lab animal and large animal (equine) facilities.

Assessment Method: Evaluate the research capabilities and quality of animal care of the lab animal and equine facilities.

Results: Significant improvements to the large animal facilities at the North Farm have been completed. This includes the operation of a fully functional BSL2 facility and enhancements to equine reproduction facilities including improvements to both mare and stallion research areas using funds provided by the equine industry. An effort is currently underway to develop an equine performance laboratory on the North Farm

which will include installation of a high speed equine treadmill in a new purpose-built building. Renovations to adjoining pastures and an adjacent barn are also underway. It is expected that this new unit will be functional in Spring 2016.

Analysis of results and reflection: While some aspects of the large animal facility have been improved, others still require attention.

Improvement actions: A strategic plan for the North Farm and other large animal facilities is being developed. A new budget model for the equine facilities has been developed and submitted to the college for approval.

Action item #9: Develop a strategic plan for recruitment of new faculty and development of research programs.

Assessment Method: Use a strategic plan for faculty recruitment

Results: The Departmental committee structure has recently been reorganized and included the establishment of an Advisory and Planning Committee (APC) that replaces the current Advisory and Strategic Planning committee. This standing committee will take on the responsibility of planning for the next faculty hires and work with the chair on developing strategies and plans for equipment, facilities, and other departmental resources needed for faculty recruitment..

Analysis of results and reflection: While recent and ongoing financial constraints have limited the opportunities for faculty recruitment over the past several years, the recruitment of three new faculty within the next two years is planned.

Improvement actions: The APC committee will be charged with developing a strategic plan for faculty recruitment.