

## **Department of Veterinary Science Implementation Plan FY 2016 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 11 books or chapters, 70 refereed publications, 8 non-refereed publications, and 71 abstracts. The faculty gave 54 presentations and hosted 1 national, and 3 international meetings during this period. Additionally, a total of 10 accessions and 1 patent were made by GERC Veterinary Science faculty to GenBank. In the past year, faculty members submitted 24 extramural grants (6 Federal and 18 non-Federal) with a combined requested budget of \$3.1 million. The department had \$1,667,161.83 in total awards for FY 2016.

**Analysis of results and reflection:** The number of refereed publications decreased compared to the preceding period, but still exceeds our overall 5-year average of ~60 publications per year. While the number of abstracts submitted remained the same, there was a decrease in faculty presentations. There was also a decrease in non-refereed publications. Some of this decrease is likely due to several of our programs winding down as faculty either retire (J. Timoney) or prepare for retirement (Cook, Issel). However, total funds received in FY 2016 exceed those received in 2015 (\$790,040) and \$356,071 (7 projects) was received from non-federal funds. This represented an increase in both Federal and non-federal extramural funding compared to FY 2015. It should be noted that this represents the efforts of six faculty members.

**Improvement actions:** Faculty and graduate students continue to be encouraged to publish their work in refereed journals. Faculty and graduate students continue to be encouraged to submit abstracts and present their findings at scientific meetings. All 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 has maintained and expanded its communication strategy over the evaluation period. The department publishes between 5 and 15 press releases each year and the Equine Disease Quarterly, funded by the Kentucky agents and brokers of Lloyd's, London, is distributed to over 15,000 subscribers. Additionally, information generated within the department provides major contributions to the "Bluegrass Equine Digest", which is a monthly newsletter published by TheHorse.com. Furthermore, the department maintains active Facebook and Twitter accounts.

**Analysis of results and reflection:** Our program continues to make significant strides toward 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:** We continue to look for new approaches to both recruit and fund DVM graduates in our program. Dr. Martin Nielsen has recently engaged in a new parasitology fellowship training program which has recruited an exceptional DVM student into his program. Dr. Jamie MacLeod has also recruited a veterinarian from the University of Copenhagen into his program. This is part of a cooperative agreement between UK and University of Copenhagen. We have also received approval for, and established, a DVM-PhD program in conjunction with Lincoln Memorial University's College of Veterinary Medicine.

**Analysis of results and reflection:** Ongoing and new partnerships with industry (Zoetis) and academia (University of Copenhagen, LMU-CVM) along with increased research assistantship stipends have enhanced our ability to recruit top-quality students with veterinary training and board certification to our graduate program.

**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:** GERC faculty continue to offer courses to both undergraduate and graduate students. 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). Veterinary Science faculty members have also provided guest lectures in a number of courses including EQM 351 (Equine Health and Disease) and EQM 399 (Equine Science and Management

Internship), ABT 301 (Writing and Presentation in the Sciences) and research opportunities for undergraduates (VS/ABT 395).

**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:** While we have increased our faculty's participation in the teaching programs at the college, additional opportunities will need to be explored going forward. New faculty recruited into our program will be expected to develop courses consistent with their area of expertise.

**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 annual Departmental expectation per faculty Research FTE is 3 refereed publications, 1 abstract and 1 presentation per year. The vast majority (>75%) of the faculty met or exceeded this requirement.

**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. It should be noted that as discussed above (AI #1), some faculty are in the process of ending their careers and their productivity has declined. Further, publications are often associated with graduate students completing their programs. As such, averaging 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 at the lab animal and equine facilities.

**Results:** The geriatric herd associated with Dr. Amanda Adams' program has been relocated to Orin C. Little research farm in Woodford County. This will allow us to provide the necessary oversight and care for this unique population. As part of this effort, Dr. Adams has secured additional funding for facilities renovation and care of these animals. 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 2017.

**Analysis of results and reflection:** While some aspects of the large animal facility have been improved, others still require attention. Additional repairs to fencing is needed to utilize recently improved pastures and structures off of Nancy Lane. With the end of Dr. John Timoney's strangles program, that portion of the farm used for this effort will now need to be considered for other activities. A new budget model for the equine facilities was developed, and received college approval.

**Improvement actions:** A strategic plan for the North Farm and other large animal facilities is being developed.

**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 department has created two new faculty positions to address emerging and reemerging diseases and bioinformatics; both of which are research fields and disciplines not covered by existing programs. A potential candidate for the emerging and reemerging position has been identified and invited back for a second interview. A third faculty position was created for an immunologist to address a need for veterinary immunology research within the department. This position is currently being advertised. The bioinformatics position will be advertised once the other two positions are filled and the new faculty members are available to participate in this search. Additionally, two clinical pathologist positions were created using funding from LMU-CVM to assist with the teaching agreement between LMU and UKVDL. One of these positions has been successfully advertised and the new faculty member will be joining our program before the end of this year. The second position will be advertised in 2017.

**Analysis of results and reflection:** We are excited about the potential of recruiting 5 new faculty into our program. This will increase both the research and instructional activity of this program. While some funds have been identified for this purpose, we will still need help from both the college and university in providing adequate facilities and start-up funds for these new hires.

**Improvement actions:** The recruitment of new faculty positions will continue until all five positions are filled.