

Veterinary and Animal Sciences

A department in the College of Natural Resources and the Environment offering the A.S. in Equine Studies, the B.S. in Animal Science, the B.S. in Pre-Veterinary Studies, and the M.S. and Ph.D. in Animal Biotechnology and Biomedical Sciences.

■ The Review Process

This was a standard AQAD review. Reviewers were:

Karen Plaut, chair (University of Vermont)
Robert BonDurant (University of California, Davis)
Lorraine Sordillo (The Pennsylvania State University)

■ Main Issues

The review team found that the Department of Veterinary and Animal Sciences (VAS) is “an outstanding academic program” and that “faculty research productivity and dedication to undergraduate teaching and graduate mentoring is exceptional.” Citing national competitiveness in research funding and production of “high-impact publications at a rate that few other institutions can claim,” the team expressed the view that VAS has the potential to “become the leading department in the country focusing on animal biotechnology.”

The department identified three areas of focus for its graduate and research programs, and the team found strength and opportunities for expansion in each:

- The Infection and Immunity group was found to have “an excellent national and international reputation,” and the team also observed that “VAS is unique among animal science departments across the country in that they house faculty who represent the main thrust of the campus research in immunology.”
- The Reproduction and Development group was cited for its “mix of established and rising leaders,” and could represent a campus-wide focal point for faculty from a number of disciplines. New positions in germ cell development and stem cell research were recommended, although it was noted that both existing and potential future faculty are limited by existing facilities.
- The Toxicology group was found to have formed effective collaborations (e.g., UMass/Bay State Cancer Research Institute and Massachusetts Pesticides Analysis Lab), and the team found significant opportunities for broader collaborations.

Facilities were a major concern of the team. The faculty were found to have outgrown their current space, and future development must involve expansion beyond Paige Laboratory. The team was especially concerned with the lack of adequate teaching lab space, and was critical of the practice of holding undergraduate teaching labs in research facilities.

With respect to the graduate program, the team made several specific curricular recommendations: 1) expand upper-level graduate courses stemming from faculty research interests; 2) revisit the non-thesis option for the M.S.; and 3) consider expanding preparation of graduate students in the areas of teaching methods and ethics in research. In terms of the undergraduate program, the team cautioned that “students’ passion for animals” should be nurtured, but also “balanced with a rigorous basic science curriculum.” Along these lines the

team recommended that the research faculty “consider strengthening the laboratory based upper level courses.” In particular, the team stated that “it is imperative that the Equine Management and Training Program have a scientific component.”

The team found the use of the Hadley Farm for the livestock and equine programs to be effective and supportive of an integrated animal science program. Team members suggested that consideration be given to systematically improving the genetics of the herd, and also possibly reducing its size.

Finally, with respect to service and outreach, the team commended VAS’s interactions with Extension, and urged greater collaboration if Extension resources permit. The team cautioned against the department’s development of a demonstration dairy operation, but urged VAS participation in state and local fairs.

■ Results of the Review

The department concurred with the team’s findings. In response to the recommendations concerning VAS growth and development, the department listed several positions it hoped to fill: a lecturer in animal sciences, an assistant professor in veterinary immunology, an assistant professor in stem cell biology, and an associate or full professor in germ cell biology. The department suggested that the latter two positions might be shared between VAS and the Chemistry or Chemical Engineering departments. The department also requested new teaching lab space.

The department cited plans to expand undergraduate lab courses (subject to sufficient staffing and space). With respect to recommendations on graduate teaching, the department indicated that recent course additions are sufficient, and that it prefers to rely on the University’s general graduate student training opportunities rather than mount its own teaching methodology efforts. In addition, plans were announced for an upcoming departmental vote on eliminating the non-thesis M.S. option. The department proposed that needed research and teaching lab space be sought in Goessmann after the ISB is completed. VAS is mounting a program to showcase its activities at state and local fairs, and plans to continue its collaboration with Extension. The department will continue to discuss a demonstration dairy with Extension, but will not expose itself financially.

The Dean also concurred with the team’s findings, and expressed support for hiring at the lecturer level from College funds. The Dean also endorsed the department’s request for additional space from backfill in Goessmann. In terms of faculty hiring, the Dean indicated that he has included a request for funding for the immunology position in his faculty hiring proposal to the Provost. He urged the department to continue discussions with the campus life science community regarding the stem cell and germ cell positions.