

<b>Executive Summary of Most Significant Contributions to Teaching and Education</b>	
<b>Name:</b> Patrick Chappell	<b>Affiliation:</b> Oregon State University College of Veterinary Medicine, Dept. of Biomedical Sciences
<b>Overall faculty roles:</b> In one sentence, list your faculty roles (teaching, research, patient care, administration) and approximate time allocation to each (%).	
Teaching: Veterinary Physiology VMB717, Research Reading and Skills 60% Research (basic biomedical): Reproductive neuroendocrinology; hormone-dependent cancers, 30% Committees (departmental, college, and university), Merial Scholars co-director: 10%	
<b>Changes in role(s) over time:</b> In one sentence, describe any major changes in teaching roles over the past 2 or 3 years.	
I am currently adding a seminar class. Instruction in VMB717 was temporally re-ordered	
<b>Important contributions to education:</b> Identify educator role (domain) in parentheses and list contribution in a phrase. Describe what was done, how well it was done, and its impact in 3-7 sentences. Use only as many as are appropriate to your teaching (n = 2-5). <ul style="list-style-type: none"> <li>• To the degree possible, highlight activities that occurred during the time period under review.</li> <li>• You will expand on each of these using the domain specific templates (Detailed Role Description).</li> <li>• Especially early in their careers, few faculty will be active in more than 2 domains. However, you may have multiple examples in a domain.</li> <li>• Note that (1a) Teaching and at least one additional Detailed Role Description (e.g. 2 Mentoring/Advising) are required.</li> <li>• Your Executive Summary should NOT exceed 2 pages total.</li> </ul>	
<b>First important contribution to education: Teaching</b>	
<p>Each year, teaching portions of the core Physiology curriculum to first-year veterinary students brings new challenges and new opportunities to improve my teaching through curricular and instructional experimentation. Since arriving here, I have increasingly incorporated veterinary case studies into each lecture to promote problem-solving, knowledge application, and constructive discussion. I have also expanded the scope of take-home exercises, moving away from a didactic style towards a model of increased student engagement, allowing student-initiated points of inquiry to fully develop. Student participation in the learning process is invaluable, and I find that examinations involving critical thinking and problem-solving exercises are far more informative as an evaluative tool and more rewarding for the students than multiple choice tests. Upon completing my section, students have worked in teams to examine fundamental mysteries in endocrinology, metabolism, and reproduction, using both real veterinary case studies and the broader biomedical literature. These assignments, in conjunction with in-class presentations, give students a greater appreciation of the contribution of experimental biology to advances in medicine, allowing for greater investment and engagement. Further, the ability to critically examine clinical cases with an awareness of underlying physiological mechanisms will serve students well after graduation. To further this commitment, I recently became a fellow and steering committee member of the Regional Teaching Academy of Western Veterinary Colleges, interacting regularly with other vet school professors to enhance education practices at our institutions. This rewarding experience has helped inspire my teaching as I explore alternatives to traditional models by collaboration with post-professional educational experts. I hope now to promote these ideas among my peers at our College, to improve our overall teaching quality.</p>	
<b>Second important contribution to education</b>	
<p>Mentoring:</p> <p>In addition to my contributions to the core curriculum, I continue to be committed to mentoring the next generation of students and trainees, from high school students through to scholars with postdoctoral-level experience, including over thirty-five undergraduates who have worked on research projects in my lab. While I recognize the often low productivity and high commitment inherent in undergraduate training, I firmly believe that mentoring these students in molecular biology is an opportunity that will better serve future generations of scientists. Indeed, several of my undergraduates have advanced to productive academic research careers and graduate training programs in neuroscience and physiology, and many to medical school. This should be one of the highest priorities of our profession, running parallel to scholarship- providing the framework via mentoring for trainees continued success.</p>	

<b>Third important contribution to education</b>
Educational Outreach: Science education has also been central to my academic service to the community at large. I have worked to foster scientific advancement at the high school level, critical for shaping the next generation of experimental biologists. In addition to being a mentor in the CVM annual Summer Veterinary Experience for high school students since 2011, I created an ongoing outreach project, initially supported by the M.J. Murdock Charitable Trust, to bring molecular biological techniques to McKay High School in Salem, Oregon, serving a population comprised predominantly of minority and first-generation students. My trainees and I assist in performing bacterial cloning and plasmid DNA preparation over a 2-week period under the supervision of their biology teacher. At the conclusion of the project, student groups are able to visualize the success of their labors in the form of glowing neurons, transfected with the plasmids they created. Whether viewing electronic images at their school or on our campus looking at cells under a microscope, I found this project really brings home the “wow” factor to the students, who can apply these skills to something tangible and removed from the abstraction of textbooks.
<b>Fourth important contribution to education</b>
(Educator Role), contribution, description.
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(Educator Role), contribution, description.