

FACULTY OF VETERINARY MEDICINE UNIT REVIEW

Summary Report

The Site Visit of the Unit Review Team for the Faculty of Veterinary Medicine took place from February 23-26, 2016. The Unit Review Team consisted of:

Dr. Lonnie King, Ohio State University
Dr. Donald Smith, Cornell University
Dr. Elizabeth Stone, University of Guelph
Dr. Benedikt Hallgrímsson, University of Calgary

Following the Site Visit the Unit Review Team prepared a written report containing comments and recommendations. The Faculty of Veterinary Medicine subsequently provided responses to the recommendations. General comments and the recommendations and responses follow.

General Comments of the Unit Review Team

The University of Calgary Faculty of Veterinary Medicine (UCVM) delivers high value to the University of Calgary and to the Province of Alberta. This reflects the commitment of its faculty and staff, the quality of its educational programs and the quality and impact of its research. There is the potential to expand the faculty without sacrificing this record of quality by adding at least 20 students to the DVM program as was originally planned. There will, however, be incremental costs and increased staffing needs related to providing learning opportunities and services for these additional students. If the DVM enrolment is increased, a targeted enrolment plan could be considered to ensure that the needs of the province and society are met. The reviewers recommend the UCVM consider an Area of Emphasis (AOE) in rural community health and to more fully integrate 'One Health' into student experiences within all the AOE's. The proficiency of DVM students in technical and client communication skills is notable and they seem well prepared to participate in the distributed veterinary learning community (DVLC). Continuing to provide consistency throughout the DVLC learning environment will require ongoing vigilance.

The reviewers consider the strong graduate program at UCVM, which has approximately equal numbers of graduate students and DVM students, to be an outstanding manifestation of the UCVM's original research mandate. Mentoring graduate students to help prepare them for successful careers, whether in academia, industry or government, is critical. Any proposed expansion of post-DVM residency programs needs careful analysis to determine which residency programs, such as preventive medicine, provide a competitive advantage for UCVM.

Continued support by the Provost will be critical for the new Dean, particularly in the areas of space, personnel and funding all of which support the unique requirements and potential of the UCVM. A robust plan for Communications and Marketing is critical to foster a unified UCVM culture and to

engage external constituencies. It should be developed in concert and in support of a strong fund-raising plan that will provide the resources for the continued success and growth of the UCVM.

The UCVM is approaching a critical crossroads and will need to decide on the scope and direction of its activities, programs and responsibilities for the future. The relevance of the College will continue to be based on how well it meets the needs of the citizens of Alberta and responds to their contemporary challenges to improve the health of its citizens, animals and environment. The College's One Health philosophy and commitment could serve to further broaden the UCVM mission, integrate new university partners, recruit new external partners and ensure a healthier province and country.

Detailed Reviewer Recommendations and Faculty Response

FACULTY ROSTER AND ASSESSMENT

Faculty Size, Balance and Competencies

1. *Examine the reasons why more women are not being hired into the research areas and consider ways to ensure a more even gender balance in the Faculty.*

Response: The pipeline of DVM graduates is indeed 70-80% women. Subsequently, this gender distribution is better reflected in our clinical faculty, in which 18 of 35 clinical and diagnostic faculty members are women, than in our non-clinical disciplines. The instructor track is more common amongst clinical faculty members who bring extensive clinical training to their positions and this contributes to the higher percentage of women in the instructor track. In positions not required to have a DVM degree and that have a higher research component, we concur that there is a gender imbalance with more men hired than women. When the new dean arrives, we will review our recruitment practices to consider gender equity and unconscious bias in our processes. The Leadership Team has a 50:50 male:female ratio outside of the dean (at both the department head and associate dean level).

ACADEMIC PROGRAMS

DVM Program

2. *Consider Increasing DVM Program Enrolment*

Response: UCVM concurs that an increase in the enrolment of the DVM program of 15 – 30 students is desirable and warranted. An increase can only be accommodated with an increase in resources from the Ministry, as for any other program expansion. UCVM concurs that an increase in the student body needs to be accompanied by a revision to our admissions practices (already underway) and specifically the introduction of a targeted enrolment plan that does not include a single assessment protocol for all students. UCVM has recently launched an intercalated DVM/MPH program with the University of Alberta and is in discussions to develop an intercalated DVM/MAG program as well. There are a wealth

of other opportunities that should be explored and would create unique learning and recruitment opportunities, particularly for international students. UCVM concurs and will explore these opportunities with the objective of establishing new joint or intercalated programs over the next five programs.

3. Consider creating an Area of Emphasis (AoE) in Rural Community Health

Response: UCVM interprets an area of emphasis in Rural Community Health (RCH) to be different and distinct from an area of emphasis in Rural Community Veterinary Practice (RCVP). When UCVM was established, a decision was taken to build the DVM program around Rural Community Veterinary Practice and not to have RCVP as an Area of Emphasis elective in the fourth year of the program. Re-visiting this but in the context of an elective in RCH which would have a greater “One Health” perspective and could include such things as additional training in human health delivery or public health is an interesting concept that will be evaluated moving forward. Discussion with Alberta Health Services, the Government of Alberta (GoA), the Faculty of Nursing, the Faculty of Social Work and the Cumming School of Medicine would be required to fully explore this concept. This may also be addressed through joint degree programs, which could give students a unique blend of credentials to serve rural Alberta.

4. Create a Broader Integration of One Health

Response: A broadly accepted definition of One Health has remained a challenge. It has been defined as an approach that involves effective collaboration across all health professions to address broader health issues in society. It has also been defined as a multidisciplinary approach to ensuring the health of humans, animals and the environment. Regardless, we would suggest that One Health activities are broadly integrated across our programs although they may not be recognized as such by our faculty and students because they are not grouped under the One Health banner. Consequently, UCVM needs to review its use of the term to arrive at a common understanding of “One Health” activities and use this to highlight One Health integration across UCVM programs to ensure that it does not remain within the domain of one department.

5. Carefully evaluate the risks and benefits of a new Area of Emphasis (AoE) in Companion Animal Health (CAH).

Response: UCVM concurs with the assessment of the Unit Review Team under the current status of UCVM. Our program is such that considerable opportunity for learning in companion animal health exists and our graduates (approximately 30%) are hired directly into companion animal practices and perform extremely well. However, if and when the class size increases, provided that a targeted admissions system is developed, creation of a Companion Animal Health AoE would be an appropriate and expected outcome.

6. Develop further methods to assess the impact of teaching on student learning and include as part of the assessment of teaching component of the faculty’s distribution of effort.

Response: UCVM concurs with this assessment and we are continuing to explore the impact of educational methodology on student learning. We have recently restructured our support of veterinary education research and scholarship, moving it under the DVM Program Office. We have invested over \$1 million in educational research and have had a Veterinary Education Research Fund supporting educational research and scholarship for almost as long as the college was established and preceding the University's own recent efforts in support of teaching and learning. All this work is already included in the assessment of the educational component of a faculty member, as specified in our APT Guidelines.

7. Continue to support the 3rd year research project and consider better integrating research into the student experience in all years of the program

Response: UCVM continues to support and publicize the innovative third year research project. UCVM also recognizes that if the class size increases, the management and delivery of the project will need to be reviewed and likely adjusted. Although students may not have mentioned research as a highlight to the Unit Review Team in years one and two, they are well aware of the project which is a multi-year activity that is now termed the Integrated Research Project and is not called the 3rd year project to highlight this. Research methodology and the importance of research highlighted throughout the curriculum, but it are not unexpected that students would not highlight this as an important experience in the early years when they are focused on clinical medicine. The discussions with the Unit Review Team reflect the keen interest of students in clinical veterinary medicine. UCVM already has a structured summer research experience for DVM and other students that roughly follows the description of the Unit Review Team. In place for approximately 8 years, the Summer Undergraduate Research Experience (SURE) program participation is expected for all first time summer research students. UCVM specifically supports stipends for DVM in the summer (as well as non-DVM students) and the departments and faculty members provide additional opportunities. Generally, all DVM students seeking a summer research experience are accommodated. Education about research experiences and career pathways as outlined are also highlighted in the core curriculum.

8. Consider creating or introducing value-added certificate programs for DVM students .

Response: UCVM concurs.

9. UCVM should examine the possible existence of a dichotomy developing between the discipline-based and clinical and skills-based faculty and should ensure that the curriculum delivers and reinforces the importance and relevance of discipline-based knowledge to the students' future careers.

Response: UCVM is aware of this potential dichotomy, which always exists in clinical programs (e.g. Medicine, Veterinary Medicine, Nursing) and continues to seek ways to encourage interaction and collaboration. It is definitely one college with two missions and we have made a strong commitment to both education and research. We have based 85% of

our faculty and staff at the Foothills Campus to try and minimize a distinct research/education, clinical/basic sciences split, but this is being challenged as we grow and must increasingly accommodate faculty at the Spyhill Campus, for both space and practical reasons. We continue to encourage interaction and collaboration in our clinical skills, professional skills, clinical presentations, and outbreak investigation courses, and our seminar series (Frontiers in Veterinary Medicine). The recent establishment of formal Research Groups aims to enable interactions and collaborations between faculty members across departments and disciplines boundaries and so should assist in this goal. Included now is a Clinical and Translational Research Group that specifically aims to bring our clinicians and research-intensive faculty members together.

10. *Ensure that mandates and guiding principles for the DVM program are maintained.*

Response: UCVM concurs and is committed to this moving forward.

Distributed Veterinary Learning Community (DVLC)

11. *Ensure consistency throughout the DVLC learning environment, including student learning opportunities in the business aspects and management of the practices.*

Response: This is an important area. UCVM has a strong oversight program to support consistency and quality in the DVLC. We have made a large number of substantive changes in the last year to this oversight process and will continue to improve oversight moving forward. **Graduate Program**

12. *Consider development of a new graduate program in medical educational methodology and assessment, perhaps in partnership with other faculties (Education, Medicine).*

Response: UCVM does not consider development of a new graduate program in medical education methodology appropriate for UCVM and would instead continue to encourage our faculty members to become adjunct or joint members of Community Health Sciences and supervise students in the existing medical education graduate program. However, we would consider creation of a specialty in our Veterinary Medical Sciences graduate program. As our capacity and expertise increase, offering a distance component could be considered.

13. *Consider opportunities for clinically based faculty to partner with research faculty to further their research careers, train graduate students and improve clinical veterinary medicine.*

Response: We have established many opportunities in this area and continue to foster collaborations both within the Faculty and across Faculties. We have created interdisciplinary research groups, we have created a central support laboratory available to clinical faculty members, we have a clinical research fund, we provide clinical income back to departments to support research and scholarly activity, and our Investigative Medicine fourth year research projects heavily subscribe clinical faculty.

Advanced Clinical Training Program

14. Carefully consider and be selective about the future addition of specialty training programs (residencies), focusing on areas of distinct competitive advantage.

Response: UCVM concurs that careful expansion of residency programs is required and it must be done in close consultation with our partners in the Distributed Veterinary Learning Community. We have been following this approach and are awaiting the completion of three current programs to evaluate progress and program design. The majority of UCVM recognizes the importance of managing resources and delivering on expectations that align with our mandate and strategic priorities, as well as those of the University. There are a range of strategically relevant programs that are being considered and we continue to look for ways to use the relationship with CSM to create unique and attractive programs. A major challenge for residency programs is funding as the traditional funding model for veterinary colleges (funding from hospital revenues) is not directly available to UCVM and relies on collaborations with DVTH practices to fund residencies. Fund development is another important area for resources and has been used to fund some residencies. UCVM will conduct a full evaluation on completion of the three residencies underway currently.

STUDENTS AND EDUCATION

DVM students

15. UCVM should investigate ways to decrease the sole emphasis on academic performance as the initial admission selection tool and explore different pathways for students, including ones for underrepresented learners to be considered for acceptance into veterinary medicine school.

Response: UCVM concurs with this assessment and the process is currently underway to collect and analyze the data that would identify the need for and provide guidance for any changes. Some changes will be introduced this year and we are reviewing the process to determine if more substantive changes are needed in the future. It would be our goal to have this review completed and any new changes in place within two years. This will be particularly important if class size increases. An increase in the student body needs to be accompanied by a revision to our admissions practices and probably the introduction of a targeted enrolment plan that includes multiple assessment protocols to support targeted enrolment.

16. UCVM may want to explore student requests to schedule one half day a week with no classes to allow students to accommodate medical and other appointments.

Response: UCVM understands the desirability of having a consistent half-day off and has worked towards this. However, it is not possible in the current structure and with two educational sites. It will be again reviewed as part of our DVM program review and we will do our best to accommodate this if possible.

17. UCVM should carefully manage students' expectations and maintain their engagement.

Response: UCVM concurs.

18. UCVM should look for opportunities to combine efforts with the medical or nursing programs in community outreach in solving problems of common interest. Collaborative opportunities with engineering and other schools that have an important role to play in One Health.

Response: UCVM concurs and is actively working to increase interaction and create opportunities, particularly in the fourth year. The deans of the health science faculties have also agreed that an extra-curricular interprofessional experience is highly desirable. It has not yet been organized and the Provost has indicated that she will take a lead role in this area.

19. UCVM should consider broadening the use of the allocated student-directed learning opportunities to include student learning opportunities in research and/or One Health.

Response: This already exists under the umbrella of our Investigative Medicine program and funds are available outside of the current teaching funds referred to above. We continue to encourage faculty and students to take advantage of these opportunities. The new intercalated DVM/MPH program specifically has this as a requirement in the fourth year and we hope this will encourage opportunities.

Graduate Students

20. Provide more opportunities for graduate students to teach and learn how to teach.

Response: There are considerable opportunities for graduate students who choose to pursue teaching opportunities, but we have limited formal teaching assistantships because of the nature of our programs. However, participation in lectures and labs is available on a regular basis. The key is permission and encouragement from faculty members. UCVM commits to educating faculty members and graduate students on the opportunities and the obligations, but recognizes that there is already considerable activities in these areas.

21. Encourage graduate student involvement in enrichment activities and that a robust mentoring program is in place throughout the graduate programs.

Response: The opportunities outlined by the Unit Review Team are important and many exist within UCVM and UCalgary. Indeed, UCVM first pioneered a Professionals Skills course as a required course for its graduate students. The course content has been incorporated into the Faculty of Graduate Studies MyGradSkills program. We encourage our grad students to participate in the program (see UofC <https://www.ucalgary.ca/mygradskills/>). We also support other community outreach activities eg. Discovery Days, VetUCan, Stem

Cells and Regenerative Medicine for High School Students, etc . We are also active in NSERC-CREATE programs that enhance student opportunities (e.g. <http://www.ucalgary.ca/hpi/>).

RESEARCH

Assessment

22. Further emphasize research themes in support of cattle and equine health, welfare and reproductive and regenerative medicine.

Response: We commit to continuing to support the strategically important areas outlined above in a variety of ways, from support for research groups to chairs to fund development activities. We have recently formally recognized research groups and will continue to support them as a vehicle to enhance our research activities.

23. Improve UCVM's research alignment with its mission and resource allocation.

Response: While we have taken advantage of opportunities, as the Unit Review Team notes, we would argue that these have been strategic opportunities in research areas that align with our mission. We are also committed to supporting and encouraging excellence in the research and scholarly endeavours of our faculty members regardless of their specific interests.

24. Enhance the connection between clinical medicine and research.

Response: We believe that research is effectively integrated into our DVM curriculum in a way that does not exist at many other veterinary colleges (included having ~25% of our final year students pursue ten week research projects and the third year research project). We probably did not highlight this area enough for the Unit Review Team. Regardless, incorporation of research into the DVM program is being reviewed as part of our on-going DVM Program review.

25. Examine UCVM graduate students connection to DVM students and graduate students in other programs across campus to avoid isolation.

Response: We feel that our graduate students are actually very well connected to those in other programs across campus and in many instances to DVM students. It is not possible to capture everything in a brief visit and their commentary is not an accurate reflection of current activities. Many of our faculty members supervise graduate students who are registered in the VMS program directly alongside graduate students registered in graduate programs in other faculties. There are many interdisciplinary seminars and journal clubs available. Many of our advanced trainees actively participate in teaching and assessment opportunities with the DVM program. It would appear that the limited sampling of graduate students might not have covered the full engagement. We recognize that engagement of

graduate students requires the support and encouragement of their supervisor, and we commit to encouraging supervisors to facilitate this.

26. Examine how the UCVM community connects with opportunities and receives support in commercialization and technology.

Response: There is support in this area for faculty members through the UCVM Research Office and the UofC Research services and legal departments. The technology-transfer and business-incubation centre for the University of Calgary “Innovate Calgary” are available to advise faculty members on disclosure and IP issues. We agree though that as our research programs expand and mature this will become an increasingly important area. However, engagement and partnership with industry remains very difficult within the current Research Accounting structure and may be a limiting factor in some instances.

UCVM Research for the Next 5-10 Years

27. Develop a special research planning symposium – “UCVM Research for the Next 5-10 Years”.

Response: This will be a major responsibility of the new dean as he leads the generation of the next five year strategic plan for UCVM. The current plan runs to 2017.

STRATEGIC PARTNERSHIPS

Assessment

28. Continue building good will and positive relationships between the UCVM and veterinary practices and practitioners across Alberta including further development of continuing education programs.

Response: UCVM concurs with this assessment. We have adjusted the mandate of a newly established Associate Dean, Clinical Programs and will be developing new programs in this area over the next three years.

29. Continue developing new partners and collaborations across the university in areas such as medicine, nursing, public policy, bioengineering, social work, business and kinesiology.

Response: UCVM agrees and this work is underway, with good examples already bearing fruit.

30. Develop strategic partnerships with the City of Calgary including exploring the development of a Calgary Council.

Response: UCVM concurs that Calgary is a key partner, but this cannot be at the expense of our primary rural mandate. Creation of a new Council is not warranted; however, engagement of more City of Calgary representatives on our Stakeholder Advisory Council will be considered and could achieve a similar goal.

31. *Strengthen ties with Edmonton and their programs in agriculture and public health.*

Response: UCVM concurs and this is an on-going area of activity. UCVM commits to engaging in a broader consultation to ensure that we are considering all opportunities. For example, we are actively working on joint programs with the Faculty of Agriculture, Life and Environmental Sciences at University of Alberta

Integrating Strategies and Promoting the College

32. *Integrate communications, marketing, branding, development and outreach functions with a focus on expanding and strengthening key partnerships and metrics.*

Response: UCVM concurs with the general sentiments expressed. These are part of our on-going activities. Assessment of our contributions to Alberta will be an important part of supporting changes in class size and on-going support for UCVM. This is so important that UCVM needs to be the lead.

FACILITIES AND INFRASTRUCTURE

Teaching

33. *Consider expansions to classrooms, labs and clinical teaching facilities for any student expansion beyond 45-50 students a year.*

Response: UCVM concurs. The necessary expansions have been outlined in our Spatial Master Plan recently completed. UCVM has initiated an expansion at the Spyhill Campus that will start this process and lay the groundwork for future expansion as needed. An expansion at the Clinical Skills Building has been submitted for matching funding in the new federal government infrastructure project.

Research

34. *Ensure that the expansion needs of UCVM are considered in space planning for the Foothills site, including new laboratory space in the planned construction of the Cancer Hospital. Longer term expansion of the clinical research facilities at Spy Hill should also be considered.*

Response: UCVM concurs with this assessment in broad terms. This has been addressed in our Spatial Master Plan and UCVM continues to work the University and the CSM to ensure our needs are considered and where possible met.

Service

35. Consider offering a diagnostic laboratory for veterinary medicine and food safety for the Province and potentially Western Canada.

Response: Broadly speaking, UCVM concurs with this assessment. There have been discussions on-going with the Government of Alberta (specifically the Ministry of Agriculture and Forestry) for ten years and with the four western provinces for the last five years. An acceptable collaborative plan has been agreed to between the Ministry of Agriculture and Forestry and UCVM. Twice we have had agreement in principle, but funding from the government has fallen through because of larger economic issues in the Province. Most recently, the funding was in fact committed and then withdrawn. Animal health diagnostics is complex and the primary role of veterinary colleges is in the public good aspect. This requires heavy subsidization from governments to offer. UCVM continues to work towards this goal, but cannot take it on without the additional resources as it would drain the other aspects of our programs. In short, this has been explored, is agreed to in principle and awaits funding with the Government of Alberta. We are also in discussions with private concerns to bring the profitable aspects of small animal diagnostics to the Spyhill Campus through a partnership. We have agreed in principle on a plan and we expect in the next 6 months to bring a formal proposal forward.

COMMUNICATIONS, MARKETING AND BRANDING

Communications and Marketing

36. Develop a robust plan for Communications and Marketing

Response: UCVM concurs and the plan is under development. As the plan is finalized, it will be important to consult and share this plan with the faculty and staff so they understand its direction and how they can contribute to and support the global efforts. This needs also to be aligned with university efforts. The relatively recent recruitment of a Communications Manager and Associate Director of Development will assist in these areas. With the recent adjustments in Alumni Management at UCalgary, a new and effective alumni strategy is required and should be developed over the next year. The strategies should be transparent and support effective communications within UCVM and with its stakeholders, encouraging and supporting individual involvement.

37. A review of IT should be undertaken to investigate how technology can support the goals of UCVM.

Response: UCVM concurs. Given the nature of our program (distributed across multiple campuses and the province), excellent IT and AV support are essential. We continue to work with the University to improve support, technology and in particular support for improved

internet conferences. Lack of reliable internet conferencing on campus and across the province is a major detriment and limits many things that we could be doing. The lack of reliable and intuitive internet conferencing and other IT functionality has had a negative impact on program development and delivery, in DVM and graduate education, in research and on faculty and staff morale. UCVM and the University continue to invest to try and improve IT and enhance distance communications.

38. *Build strong links with university central communications and target marketing to specific audiences to help tell the story of the exceptional work being done at UCVM.*

Response: This is already being done and is a constant work-in-progress.

Fundraising

39. *Develop a fund-raising plan that is linked to the strategic plan of the UCVM and the Eyes High initiative.*

Response: UCVM has a fund-raising plan that is linked to the strategic plan of UCVM and the Eyes High initiative. UCVM was without a dedicated development officer for nearly two years. The recent addition of an Associate Director has reinvigorated development activities.

SITUATIONAL ANALYSIS AND ONE HEALTH AND THE COLLEGE'S FUTURE

40. *Create a university-wide institute of One Health embedded in the UCVM but strongly linked academically and with broad research capacity across the entire university.*

Response: UCVM has worked hard to ensure that animal health and the animal-human health and animal-human-environment interface issues are recognized across the University and are included in our Comprehensive Institutional Plan, our Strategic Research Plans, and in our communication and development plans. There are two schools of thought: that animal health and the animal-human-environment interface need to be integrated across all relevant areas or that it should be encapsulated in a separate structure. The creation of an Institute of One Health may be effective if all partners (it cannot be a UCVM only initiative or it is not One Health) are completely invested. If all partners are not invested, then it simply creates another silo and isolates animal health from the areas where it needs to be addressed. UCVM agrees that a further discussion may be warranted, but recognizes that efforts to collaborate and integrate across the full range, from comparative biomedical research to public and population health may in the end provide more value. We strongly encourage greater discussion and engagement at the University level. A clear set of goals, outcomes and deliverables would be required to support this concept. An Institute of One Health could not only strengthen relevant research programs, but could facilitate development of educational opportunities as discussed elsewhere in this document.

41. UCVM is approaching a critical crossroads and UCVM will need to decide on scope and direction of the Faculty's activities, programs and responsibilities for the future.

Response: UCVM concurs that its development is at a critical juncture. We effectively launched a novel DVM program, a graduate program and an ambitious research agenda at the same time. Over the last five years, the University itself has also undergone a remarkable transformation. It is now time to evaluate and adjust all of our programs (an on-going activity) to achieve a new strategic direction and reach our full potential. Leading this activity will be the responsibility of the new dean.

Follow-up

The Review Team recommendations will be revisited mid-way through the cycle. At that point, the Faculty of Veterinary Medicine will be required to report on its status in acting on the recommendations, providing explanations and timelines for those which have not been met. This interim report should be submitted to the Provost in September 2018, with the next full review scheduled in 2020-2021.