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**REPORT ON THE VISIT TO THE UNIVERSITY OF VETERINARY MEDICINE  
VIENNA, AUSTRIA**

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**by the EXPERT GROUP**

**Ana Bravo del Moral (Chair), Lugo, Spain**  
*Visitor on Training in Basic Sciences*

**Riitta-Mari Tulamo, Helsinki, Finland**  
*Visitor on Training in Clinical Sciences (Academic)*

**Einar Rudi, Lier, Norway**  
*Visitor on Training in Clinical Sciences (Practitioner)*

**Jill Nute, Wadebridge, UK**  
*Visitor on Training in Animal Production*

**Armando Louza, Lisbon, Portugal**  
*Visitor on Training in Food Safety*

**Isa Immonen, Helsinki, Finland**  
*Student Member*

**John Pascoe, Davis, California, USA**  
*Observer, Council on Education, AVMA*

**AsgerLundorff Jensen, Copenhagen, Denmark**  
*Stage II Expert*

**Zsuzsanna Nagy, EAEVE Head Office, Wien, Austria**  
*Rapporteur*

**Hans Henrik Dietz, Copenhagen, Denmark**  
*EAEVE Programme Coordinator*

*Stage II Expert (accidental)*

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## **INTRODUCTION**

The University of Veterinary Medicine in Vienna, Austria is a sovereign university and the only one in Austria graduating veterinarians. It was established in 1765 and moved to its present location in Vienna's 21<sup>st</sup> district in 1996.

The latest and very successful EAEVE evaluation was in 2006.

The mass of mostly new and well maintained buildings covers a huge area rendering a very good physical frame for the campus including excellent research and clinical facilities as well as student facilities including dormitories at the other side of the road. This offers a very good and professional learning environment for veterinary students and in many places serves as an international guideline for a modern veterinary teaching establishment.

The extensive Self Evaluation Report including relevant annexes for the stage 2 evaluation was prepared according to the SOP laid down in the EAEVE guidelines.

The team experienced a very well organized site visit, greatest hospitality and an open door policy, where all requests from the team were professionally fulfilled.

Suggestions of Major Deficiencies have not been made.

Suggestions for improvement have been made to help the University of Veterinary Medicine in Vienna, Austria to improve even further.

## **1 OBJECTIVES & STRATEGY**

### **1.1 Findings**

The University of Veterinary Medicine, Wien (UVMW) presents a clear and very well argued statement of objectives which includes (SER1, p10)

- offering higher education and continuing education to produce outstanding graduates that are committed to their academic and scientific responsibilities
- providing excellent research based on scientific specialisation and the development of innovations from which animal patients benefit directly
- continuously improving scientific services and veterinary care for animals
- preventing the spread of animal diseases
- working to increase the quality and safety of animal-based products

In addition to these a SWOT analysis is presented in the introductory chapter (SER1, p8).

Strategic objectives are prepared together with the Ministry for Science and Research on a three year basis and the revision is done within the frame of the official Development Plan which is in effect until 2020. The development plan focuses on the core areas of education, continuing education, research, clinics and diagnostic facilities.

The UVMW has stipulated goals of increased internationalisation, change in the prerequisites of veterinary students towards a student mass with more emphasis on production animals, development of recruitment and retention strategies, strengthening the continuing education programme and introduction of the clinics as national and international centres of excellence.

Among other important issues the UVMW mentions that technology transfer is an important of the university's *raison d'etre* leading to promotion of international visibility of the university.

The education of DVM-graduates is the main goal of the UVMW and the total education leading to the DVM title is covered by the objectives for the education program (SER1, p13):

- comprehensive basic knowledge of the disciplines that form the basis of the work of a veterinarian, including food safety and veterinary public health
- the ability to make scientifically and ethically justified decisions independently and critically
- the ability to communicate and cooperate in a variety of ways
- the ability to perform the professional duties of a veterinarian and practise veterinary medicine independently with respect to economics and entrepreneurship
- the ability to identify and solve scientific problems
- the ability to follow developments in the field and to continue learning
- the ability to pursue further academic and professional training
- the awareness of a veterinarian's responsibility towards patients, clients and society.

## 1.2 Comments

The UVMW has very clear although widespread objectives indicating the size of the university which allows it to focus on many important issues at the same time and in a highly coordinated way. This is done according to a 2020 development plan explicated as continuous strategic objectives in a three year frame.

Clearly the university is well aware of the importance of professional management and leadership. And this includes a professional attitude towards recruitment and retention of highly qualified staff ("recruited internationally and honed internally").

There is a very relevant thought of changing the learning environment in a veterinary university from injection of knowledge into the students to student centred approaches where teachers are guiding and stimulating student learning. This is done e.g. by focusing more on interaction between students and teachers – students should train and learn to be active learners and teachers should stimulate deep learning which also requires new assessment methods. And teachers should accept and promote the idea of changing from subject matter and individual disciplines to integration and interdisciplinary.

This has led to the UVMW's to-do list with respect to changing the veterinary education (SER1, p15)

- decreasing reliance on conventional teaching (teacher-centred education) and increasing reliance on student-centred education
- focus on subject-matter-based veterinary education integrated into broader, interdisciplinary themes
- increasing emphasis on academic skills development
- increasing emphasis on generic, non-technical competencies that are relevant to the veterinary profession as a whole, such as communication skills and business management skills

It is the opinion of the team, that the requirements regarding Objectives as they are laid down in Annex I of the SOP are met.

## 1.3 Suggestions

- None

## 2 ORGANISATION

### 2.1 Findings

The University of Veterinary Medicine, Wien (UVMW) is located in the eastern part of Vienna with Dr. Sonja Hammerschmid as the Rector. The university campus is owned by the federal government and the UVMW pays rent for the campus. It is a sovereign university and the only veterinary university in Austria and the UVMW is supervised by the Federal Ministry for Science and Research (University Act 2002 (Universitätsgesetz 2002 (UG2002))).

UG2002 stipulates the frame for the UVMW's statute which is proposed by the Rector to be approved by the Senate.

The organisational chart is depicted in the SER1 (Fig.2.1, p27) figuring an organisation consisting of three levels plus holding companies and external cooperative partners.

1. Rectorate, the Senate and the University Council
2. Administration and Service
  - a. Rector
  - b. Vice Rector for Research and International Relations
  - c. Vice Rector for Resources
  - d. Vice Rector for Student Affairs and Clinical Veterinary Medicine
3. Research and Education
  - a. Department of Biomedical Sciences
  - b. Department of Pathobiology
  - c. Department/Clinic for Farm Animals and Veterinary Public Health
  - d. Department/Clinic for Companion Animals and Horses
  - e. Department of Integrative Biology and Evolution
4. Holding Companies and External Cooperation

Details of the tasks of the different levels in the organisation of UVMW are given on pages 17 – 27, showing a high level of inclusion of viewpoints from management, staff and students.

Each of the five departments is subdivided in institutes and other subsections. Each department has an administrative staff member with special knowledge of finances to support the department head's financial decisions and to qualify the material for the regular financial meetings with the management.

The departments have a very slim administrative structure as most administrative issues are handled by the central administration.

Briefly the Rector and the Vice Rectors are appointed by the Council after a selection process conducted by a finding commission (heads of Council and Senate) which presents a shortlist of 3 candidates to the Council. The Vice Rectors are nominated by the Rector.

The Rectorate heads the university including e.g. preparing development plans, organisation plans, annual performance reports, and allocation of the annual budget (SER1, p19). The Rectorate meets once a month for strategic planning.

The Rector is the chair and spokesman of the Rectorate and has a number of obligations including negotiating the performance agreements with the ministry, selecting professors from a shortlist presented by appointment committees, appointing heads of organisational units (dept.heads e.g.) and appointing the members of the Scientific Advisory Board and the Research Evaluation Committee (SER1, p19).

The Vice Rectors are responsible for both horizontal and vertical coordination, integration and implementation and a huge responsibility for the day-to-day running of the university. It should be

pointed out that the Vice Rector for Study Affairs and Clinical Veterinary Medicine is also head of the Animal Hospital.

The Management consists of the Rector, the Vice Rectors, the director of the animal hospital and the director of HR and infrastructure. They meet once a week.

The Extended University Management consists of the Rectorate and the Department Heads. They meet once a month, and twice a year they meet in closed meetings to discuss strategies and development.

The Senate has 18 elected members (9 professors, 4 assist. and assoc. professors, 4 students and 1 staff) sitting in office for 3 years. The duties of the Senate includes e.g. approving organisation and development plans, expressing views on the Rector's recommendations for Vice Rectors and participating in the appointment of the Rector(SER1, p22).

The Curriculum Committees consist of 6 members (equal numbers of professors, assoc. professors and students) with duties relating to enactment of the curriculum. The UVMW currently has 4 curriculum committees (SER1, Table 2.1, p24)

- DVM committee
- Biomedicine and Biotechnology
- Equine Science and Human Animal Interactions
- Postgraduate Education

Additionally the UVMW has 4 working committees (SER1, p24)

- Ethics and Animal Welfare Committee
- Equal Opportunities Working Party
- Ombudsman for Good Scientific Practice
- Arbitration Board

## 2.2 Comments

Within the UG2002 the UVMW has full autonomy and the university is fully focused at the veterinary program. The responsibility at the various levels of the university indicating a clear decisional structure where the Rector after having been appointed by the Council sets the team at all levels.

The clear organisation facilitates effective decision making and clearly places the responsibility for execution of decisions made. However, the UVMW mentions as one of the weaknesses of the university that "organisational changes are enacted but now and then not "actively" implemented" (SER1, p8).

The UVMW has a clear and implemented strategy for cooperation with alumni, the public and the veterinary profession exemplified by a representative of the Austrian Veterinary Chamber being a member of the Council, alumni and external lecturers and instructors are involved in SWOT analyses of the veterinary program, evaluation of day-one competencies, jointly publishing a veterinary journal, an active press release policy, guided tours of the university and other activities directed towards the public.

It is not mentioned in the SER1 that the Rector, the Vice Rectors nor the Dept. Heads must be veterinarians.

It is commendable that the central administration functions very effectively dedicated to service departments and their subunits.

It is the opinion of the team, that the requirements regarding Organisation as they are laid down in Annex I of the SOP are met.

## **2.3 Suggestions**

- The UVMW should continue its efforts to strengthen the organisation, and to make sure that all branches of the organisation follow management decisions. It is often advisable with a guided bottom-up process (which already was done during formation of the present development plan) of securing acceptance of top-down decisions although the structure and the organisation of the UVMW places a considerable executive power in the hands of the rector. This type of process is described under Finances (SER1, p30-31).

## **3 FINANCES**

### **3.1 Findings**

The finances are described very clearly in the SER. Overall the accounting principles applied at the UVMW follows the principles applied in private companies, but the university is not a private company.

The UVMW receives the main part of its budget (88 mio €) from the federal government out of a total revenue of 112 mio € (SER1, Table 3.1, p33). The federal budget has gradually increased over the last 5 years from 81 mio € in 2007 to 88 mio € in 2011.

The allocated money is given as a lump sum with only a minor part being designated for specific purposes (e.g. a research institute for wildlife). The allocated budget is subdivided into a basic budget (80 %) negotiated every third year with the ministry and a performance relying budget (20 %) linked to 11 indicators within 4 headlines (SER1, p29).

#### **Indicators**

##### **Education**

- number of students taking examinations within the normal timeframe specified by their course of studies
- number of graduating students
- number of students graduating within the normal timeframe specified by their course of studies
- success rate of students

##### **Research**

- number of graduates in Doctoral Programmes
- revenue from research projects funded by the Austrian Science Fund (FWF) or the EU
- other revenue from research projects in accordance with §26(1) and §27(1)2 and §27(1)3 University Act of 2002 (UG 2002)

##### **Societal objectives: advancement of women**

- proportion of women among full professors
- number of women graduating from Doctoral Programmes

##### **Societal objectives: student mobility**

- number of students taking part in international mobility (i.e., exchange) programmes
- number of students with a foreign undergraduate degree enrolled in a master's degree or Doctoral Programme at the University of Veterinary Medicine, Vienna



The UVMW has full autonomy to spend the budget with the strings attached to the negotiations (in a three year cycle) with the ministry and within the limits given by the Performance Agreement with the ministry and the university's Development Plan. The latter two documents are the core strategic documents of the UVMW. It is important to stress that the financial plan is run on a three year basis, next period being 2013-2015. At the 2 annual follow up meetings with the ministry the budget is followed up but the budget is fixed for a 3 year period.

Within the university funding is allocated based on a mixture of a top-down process decided by the Rectorate and a bottom-up process based on the needs and wishes within the organisation. Planning at each level within the UVMW is settled with the immediate higher level and at the end the whole process is approved by the Rectorate and the Council.

The budget is discussed and corrected four times a year with the department heads and once a year with the institute heads.

Parallel to the financial negotiations the university has a staff plan and in case of vacancies or wishes for new staff members the staff plan is re-evaluated to make sure that staff is allocated to areas in most need. The staff plan is discussed at the various levels of the organisation and in the end decided/approved by the Rector.

During the annual negotiations between the management and the department heads and heads of institutes the different costs of the various types of student training is taken into consideration approving the fact that clinical training is usually more expensive than teaching large groups of students in lecture halls.

It is important to realise that all basic costs including running costs are paid centrally at the university and that all financial and HR administration is done centrally.

The Vice Rector for Resources is in charge of the following duties related to financing (p21):

- preparing a draft version of the financial statements
- allocating budgets to their respective cost centres and operative controlling
- finance and investment management
- optimising the utilisation and occupancy rate of resources

The Vice Rector for Study Affairs and Clinical Veterinary Medicine is in charge, amongst other duties, of organising the collection of tuition fees in the amount provided for by law (p21).

Revenue from third parties (which includes the revenue in the clinics) is at the full disposal for the university. Overhead is at 20% of which 10% is retained centrally and 5% being retained by the unit and 5% by the department. Further to this units receive special endowments for guest lecturers, excursions and clinical training in the university hospitals.

Investments in equipment are paid fifty-fifty by central funds and the unit, while reinvestments are paid 75% by central funds and 25% locally by the unit.

Students generally don't pay tuition and this elicits a federal compensation of approx. 1.4 mio €. Non-EU students pay a 363.36 € tuition per semester. This income goes directly to student related projects e.g. development of skills labs.

There is a good balance between research and teaching funding.

It is the opinion of the team, that the requirements regarding Finances as they are laid down in Annex I of the SOP are met.

### **3.2 Comments**

The university should be commended for a very clear, transparent and well communicated financial structure.

The UVMW has a healthy financial situation with a surplus of around 3 mio € in 2011. However, the team shares the university's worry about the new model for university funding in Austria (*Kapazitätsorientierte Studienplatzfinanzierung*). This model will be based on 4 major indicators (SER1, p35):

- number of active studies (60%)
- number of graduates (10%)
- knowledge transfer (15%)
- cooperation agreements (15%)

The suggested model will not necessarily be to the benefit of the UVMW due to the fact that most veterinary students are very active already and often the capacity of a veterinary university is already maximized, meaning that there is very little room for improvement concerning the most influential indicators.

### **3.3. Suggestions**

- The influence of a new more output oriented budget allocation model with heavy reliance on student numbers may have a severe, negative impact on a veterinary program which is already maximized with respect to class size and student efficiency. The team suggests a strong line of arguments in the future negotiations to secure a solid financial basis for the UVMW which in turn secures a continuous compliance with international specifications laid down by e.g. EAEVE.

## **4 CURRICULUM**

### **4.1 GENERAL ASPECTS**

#### **4.1.1 Findings**

Through the application of the University Act (Universitätsgesetz UG 2002), in 2004, the curriculum has just to be approved by the University. The same Act determines that all Austrian medical education degree programmes should be continuous being the Bachelor/Master of the recommended Bologna structure, in the case of Veterinary Medicine, substituted by three successive phases.

Proposals for curricular development need to be approved by the Senate. These proposals which are prepared by the DVM Curricular Committee have to receive an opinion statement by the University Council and the Rectorate with financial feasibility clearance to avoid being vetoed.

In SER1, the present curriculum is the version installed in 2002 with some improvements recommended by the EAEVE/FVE Team which has visited Vienna in 2006. However, it is also mentioned at 4.2.2 that a methodical curriculum reform was initiated at the end of 2010 and is still in progress with the planned start in the course 2013/14.

The curriculum described in SER1 fulfils Directive 2005/36/EC both in terms of length and contents. It spans over 6 years organised in 11 curricular semesters and one final semester for exams and Diploma Thesis conclusion, equivalent to a total of 5,152 hours of training or 360 ECTS. At completion of the Diploma Programme students are awarded the academic degree of “Magister/Magistramedicinaeveterinariae”. By Austrian law, it is taken for granted that students with

this academic degree obtain the necessary EAEVE Day-one skills needed to start a professional career or to be accepted for a PhD or a doctoral programme.

The curriculum coverage is adequate. The course is organized in three successive phases of one (basic sciences), two (pre- and paraclinical subjects) and three (clinical education) years, respectively. To have access to the next phase the students have to pass all exams of the preceding phase. From semester 1 to 9, all students have the same curricular teaching and training corresponding to 234 ECTS. In semesters 10 and 11, besides some uniform teaching and training (9 ECTS), students can choose one among eight different specialisation tracks performing 39 ECTS corresponding to 495 hours of training (including 10 ECTS of compulsory track electives, meaning that the subjects are compulsory and the student elects the period of training these subjects). All students have also to take from semester 1 to 12 compulsory and free electives summing up 19 ECTS and another 39 ECTS of mostly extramural practical work. At completion of the Master' Degree (semester 12) another 20 ECTS are attributed to sum up a final total of 360 ECTS.

In the curriculum published in the UVMW web site ("*StudienplanDiplomstudiumVeterinärmedizin*") it is specified a total student workload of 9,000 hours/360 ECTS where 1 ECTS is equal to 25 hours.

Considering the data addressed in the SER1, some of them corrected during the on-site visitation, the hours of training followed by all students could be summarized as follows:

<b>Subjects</b>	<b>Hours of training (%)</b>	<b>SER1</b>
<b>Basic subjects</b>	228.60 ( <b>04.44%</b> ) <sup>(1)</sup>	Table 4.2 and additional Table 4.2
<b>Basic sciences</b>	1,079.40 ( <b>20.95%</b> )	Table 4.2 (p45)
<b>Clinical sciences</b>	( <b>54.93%</b> )	Table 4.2 and additional Table 4.2
- Subjects	1,330.50 (25.82%)	
- Professional knowledge	285.00 (05.53%) <sup>(2)</sup>	
- Extramural obligatory work	160.00 (03.10%)	
- Track specialization	1,055.00 (20.48%) <sup>(3)(4)</sup>	
<b>Animal Production</b>	194.25 ( <b>3.77%</b> ) <sup>(4)</sup>	Table 4.2 and additional Table 4.2
<b>Food Hygiene/Public Health</b>	306.25 ( <b>5.94%</b> ) <sup>(4)</sup>	Table 4.2 and additional Table 4.2
<b>Professional knowledge</b> (career planning & opportunities)	22.50 ( <b>0.44%</b> )	Table 4.2 (p47)
<b>Diploma work</b> (Final thesis)	240.00 ( <b>4.66%</b> )	Table 4.4 (p49)
<b>Others</b> (Electives, ...)	250.50 ( <b>4.86%</b> )	
<b>TOTAL</b>	<b>5,152.00 (100%)</b>	Table 4.1 (p43)

(1) Correction of the Table 4.2 of the SER1 after revising the additional Table 4.2: 15 h in the subject *Animal Biology* about "Breed studies, animal husbandry and ethology" are considered as hours of training in Animal Production not in Basic subjects.

(2) Most part of *Professional knowledge* is considered as clinical training since it is based in Practice management and Veterinary certification and report writing.

(3) All students must follow one track of specialization that is consider as clinical training since 7 up to 8 of the tracks are focused in the clinics (see p50 of SER1), even the track in Food Safety and Veterinary Public Health integrates with training in population medicine. Then, track of specialization is considered as part of clinical

training; the team verified that students receive the general clinical education in all common domestic species from 1<sup>st</sup> to 9<sup>th</sup> semester and after completing it they focus/specialize in one of the clinical tracks.

(4) Hours of training in Animal Production and Food Hygiene/Public Health may look low but during the track of specialization the team verified that students receive an integrated training in the clinic + production + food safety of food producing animals; taking into consideration the difficulty to allocate the hours of such training in the different blocks of subjects, the team decides to put all of them in the clinical sciences.

It is the opinion of the team, that the requirements regarding Curriculum, General Aspects as they are laid down in Annex I of the SOP are met.

#### **4.1.2 Comments**

It may be redundant to use a semester to revise basic concepts of Animal and Plant biology, Chemistry and Physics.

For the design of the new curriculum the UVMW should balance the distribution of hours needed to reflect the main goals proposed for the veterinary course, not only in the clinics, but also in Animal Production and Food Safety and Veterinary Public Health.

Adequately, the specialisation track corresponds to 10.8% of the total curriculum. The emphasis in practical activities associated to the tracking system in clinical areas could be extended to other non-clinical areas such as food hygiene and technology.

The present tracking system offering eight different specialities seems to be sufficiently broad to cover the more professional areas for veterinarians in Austria.

Hands-on clinical work should have a greater time allocation in the student's training. Also, the team strongly supports an increase in self-directed learning.

#### **4.1.3 Suggestions**

- In the new curriculum starting in the course 2013/2014 the time allotted to Basic Subjects and Basic Sciences should be reduced to increase the time dedicated to those subjects related to Animal Production and Food Safety/Veterinary Public Health and to increase the time allowed for all students (general curriculum) to practical training in small animal clinic (see 4.4.3).
- It is advisable to increase hands-on training of students in all subjects, but especially in the small animal clinics.
- The UVMW should go ahead in the increasing of self-directed learning and student-centred learning.

## **4.2 BASIC SUBJECTS & BASIC SCIENCES**

### **4.2.1 Findings**

Basic subjects form part of the core curriculum and are mainly taught by the Department of Biomedical Sciences (*Biophysics* and *Bioinformatics & Biostatistics*), the Department of Integrative Biology and Evolution (*Biology*) and the Department for Farm Animals and Veterinary Public Health (*Applied botany*). *Chemistry* is integrated in the basic science *Biochemistry*.

Basic Subjects are taught in the Faculty during the first 5 semesters of the course to a total of 228.60 h. Basic Subjects plus Basic Sciences account for 25.39% of the EU listed subjects (see table in chapter 4.1.General curriculum). The level of practical work offered depends on the given subject. The media of practical work for Basic subjects is very low (9.23%) and for Basic Sciences is good (37.93%). The group size in practicals is large but well assisted by a teacher, technicians and PhD students. As it will be stated in more detail in Chapter 7, cadavers for use in Anatomy and Anatomical Pathology are sufficient to guarantee hands-on training of the students.

After a SWOT analysis of the UVMW, as part of its Development Plan, it was stressed that there is a need for improvement of vertical and horizontal integration of disciplines and their teaching. To this purpose, the new curriculum 2002 promotes more integration, for example, clinicians are present during basic training to ensure clinical focus of course content, although there is still a too discipline-oriented teaching in most of the subjects.

The UVMW has a restricted admissions system in place to ensure quality-based selection of students through an aptitude test, which includes some general questions on Chemistry, Physics and Biology and interviews. Regarding students promotion, they must complete successfully the exercises and related examinations of the first tier (Basic Science) as prerequisites for admission and examinations in the second tier (pre-clinical studies).

#### **4.2.2 Comments**

The curriculum includes the major basic subjects and sciences required for veterinary training.

The most important items of the basic disciplines are taught.

In the EU-listed subjects the curriculum offers excessive hours of training in Physics (90h), Animal Biology (60h), Biochemistry, cellular and molecular biology (180h) and Anatomy, Histology and Embryology (390h) in comparison with other important subjects in the curriculum.

Even when the admission procedure since 2005 includes an aptitude test with questions about Chemistry, Physics and Biology the level of the incoming students in basic subjects is very heterogeneous and in some students very low.

It is the opinion of the team, that the requirements regarding Basic Subjects & Basic Sciences as they are laid down in Annex I of the SOP are met.

#### **4.2.3 Suggestions**

- With respect to Basic subjects and sciences, the team expects the UVMW to continue remodelling of the curriculum from the core teaching in the traditional independent subjects to a more interdisciplinary teaching.
- The curriculum should continue on prioritising horizontal and vertical integration of academic content and student-centred learning.
- The new curriculum should reduce the percentage of training dedicated to Basic subjects and sciences.
- Basic subjects and sciences should increase practicals to a minimum of 30% of the total hours taken by the student in the given subject.
- The admission procedure should be revised to guarantee a more homogeneous and high level in basic subjects of the incoming students.

## **4.3 ANIMAL PRODUCTION**

### **4.3.1 Findings**

There is a Teaching and Research Farm (TRF) where students can experience hands-on learning, and do practical work in animal production.

Most of the first year students do not have prior experience of agricultural production so the curriculum offers introductory information on this at the outset, additionally the subject of domestic animal science is compulsory in the first semester. During third year animal husbandry and welfare basics are also taught, complemented by courses in reproductive medicine and intensive herd health management with a focus on preventive medicine and farm monitoring. Students can take elective courses to further their knowledge of animal handling and husbandry.

The SER1 indicates theoretical training in Animal Production is provided by lectures, with self-directed learning, (114.75 hours) with supervised practical training in non-clinical animal work + laboratory/desk based work (72.5 hours).

Tracking in clinical years gives options in Ruminant Medicine, Pig & Poultry Medicine and Reproduction/Reproductive Biotechnology, where further training in individual as well as herd health management is covered as well as Laboratory Animals.

Premises off campus are also described in the SER1 which cover raising young stock and rearing systems for different species, including cattle, horses, pigs and small ruminants, poultry and aviaries and the Reproduction Centre Wieselburg (RCW). The Graf-Lehndorff Institute for Equine Science allows tracking and thesis student the opportunity to gain extramural training or conduct supervised research on equine subjects. Agreements appear to be in place to facilitate the use of these external resources which are not under the control of the University.

Bio-safety and bio-security were in order on the off-campus sites which were visited.

SER1 7.1.3 gives a full description of the animal availability for teaching purposes across the major species and partner institutions.

### **4.3.2 Comments**

Following EAEVE suggestions in 2006 the UVMW increased the amount of small group learning in the animal production disciplines at TRF, and tracks of specialisation at the end of the Diploma Programme to ensure hands-on training in small groups among both students and species.

The same applies to an improvement of the coverage of applied agronomical aspects and applied economics including orienting botany teaching towards toxic and feed plants by an increased offer of economics education. An introduction to agricultural economics is given to all students. Silage production is covered at the TRF, while aspects of plant toxicology/ feed production are covered by the Institute of Animal Nutrition and Functional Plant Compounds and the Department of Biomedical Sciences.

The UVMW is using more efficiently the animals and facilities on the TRF for the training of undergraduates since courses and training at TRF became part of the compulsory education in 2008. Visits to the TRF and RCW confirmed the availability of excellent facilities for all undergraduates to receive a good hands-on training in animal production with the benefit of small group learning and in-depth exposure for those students choosing to follow e.g. bovine reproduction in more detail.

There appears to be some integration between related subjects, and herd health management is done in connection with local practitioners to give access to additional production sites.

Veterinary certification training is delivered by the relevant department or institute according to the subject matter so is integrated and embedded in the appropriate course rather than being taught as a separate item.

Discussion with both students and practitioners confirmed their satisfaction with the level of knowledge and expertise, acknowledging that day one skills are met, and that new graduates develop their confidence as they put their day one skills in to practice.

It is the opinion of the team, that the requirements regarding Curriculum: Animal Production as they are laid down in Annex I of the SOP are met.

### **4.3.3 Suggestions**

- The new curriculum development should provide an opportunity to further integrate the work of different departments and institutes.

## **4.4 CLINICAL SCIENCES**

### **4.4.1 Findings**

General table of curriculum hours taken by all students indicates in SER1 p. 43 table 4.1 that during 4<sup>th</sup> and 5<sup>th</sup> year, altogether 612 hours are spent in clinical work, and during tracking, another 495 hours, totalling in 1107 hours. Curriculum hours for Clinical sciences are listed in Table 4.2 (SER p. 45 EU-listed subjects taken by each student) and Table 4.3 (SER p.48 Electives). Each student has 490.5 hours of clinical lectures, 211.5 hours of self-directed learning and 627 hours of clinical work. Elective clinical sciences lectures Table 4.3 comprise 266 hours, with 250 hours for self-study plus 116 hours in clinical work (total 638 hours).

Clinical lectures are given according to curriculum hours and fulfil the criteria set for lecture hours.

Clinical rotation is a total of 12 weeks and is spent as general training in different species specific clinics (small animals 3.5 weeks, horses 4 weeks, farm animals 4.5 weeks). General clinical training is during the 9<sup>th</sup> semester (autumn of the 5<sup>th</sup> year). In this training, students are divided into 2 sections. Regarding group sizes in clinical work, there are 12 groups rotating in different clinics at the time (average 6-7 students /group). Prior to clinical training starts in small groups, students need to have passed training in propaedeutic and theoretical examination on the diseases of all species.

These 12 weeks of rotations are comprised of the following sections: TRF-farm, ruminants, swine, poultry, small animal internal medicine, small animal surgery, small animal anaesthesia, small animal reproduction, large animal reproduction, equine surgery, equine orthopaedics and equine internal medicine.

Tracks of specialisation (8 elective tracks) are done during 10<sup>th</sup> semester and 11<sup>th</sup> semester (SER1 p. 40). It is altogether 39 ECTS credits i.e. 495 hours). Currently there are selected number of places in each track determined by Senate: Small animals 50, equine 25, ruminant medicine 45, pig and poultry medicine 12, food safety and VPH 45, zoo and wildlife medicine 10, reproduction 10 and lab animal medicine 15 (new 2012/2013). These places sum up a total of 212 students. The drop-out rate of students is fairly high (close to 30%). Concerning the places admitted each year (n=203) the allocation of these places will be likely enough for tracking also in future. Students prioritize their track choices and selection into a specific track is ranked by their OSCE scores (all species regardless of track) and spaces available. A student may attend more than 1 track during the studies (re-application). The hours of "special training" allocated in small animal, equine, pig and poultry, wildlife and reproduction tracks is specified in Tables 4.3a-4.3h (SER1 p 53-71).

There is a compulsory extramural clinical training requirement (SER1 Tables 4.5 and 4.5a) and students can choose from different options, including the possibility of completing this training within University Animal Hospital. After 5<sup>th</sup> year track they can choose doing an extramural 400 hours either in practice outside or in hospital. Ruminant- or Pig-poultry track students can do 40 hours in TRF.

Total time spent in hands-on clinical training was evaluated on site. Overall the general indicators of training (ratios R6-R8) determined by EAEVE are OK especially on R7 indicating that the amount of Laboratory, desk-based and non-clinical work related to Clinical work is very good, 1.01, highly above the standard (1.88-2.21).

There are 24 hour-emergency veterinary services, 7 days a week, operating in the small animal, equine, and production clinics on the Vienna campus. During their 8<sup>th</sup> semester, students have to participate in at least 1 obligatory night shift in emergency services and during their general 12 weeks clinical rotation; they have to complete another 5 night shifts.

During the ‘specialisation’ tracks, students are required to complete another 8 night shifts. Furthermore, they have an opportunity to take part in after-hours emergency service at the Animal Hospital as volunteers to enhance their hands-on training: 21 emergency services make Emergency Elective worth 6 ECTS credits. In addition, students are encouraged to do extra voluntary clinical service.

Mobile clinic – students are trained at the Teaching and Research farm (TRF) about 50 km south from Vienna where there is also a mobile clinic available for outpatient treatment and herd health management. This operates in collaboration with local practitioners with 13 farms routinely visited, typically on 2 days a week with students attending and participating in all procedures.

Students are covered by liability insurance during their extramural work, provided the experience is arranged in advance through the university. Also, students have accident insurance during the entire course of studies.

There is no mention about ambulatory equine practice available for student teaching and acute cases may come to Vienna campus for emergency. However, students who are taking the equine track are doing their extramural training by practitioners and are likely to be exposed to emergency cases there.

The extramural training has been revised recently by re-electing the practitioners whose practices were chosen for extramural training places. Practitioners need to fulfil certain criteria and they are evaluating the students as well as the students are evaluating the practitioner and setting they have worked in. Student keep a log book during the time of extramural training and checked by faculty teachers. Practitioners are given the guidelines what the students should learn and perform during their extramural rotation. There are also practitioners who are teaching, and they apply the permission/mandate for 3 years to teach, which is reviewed and can be renewed provided a suitable student training experience is provided.

Clinical facilities in Vienna are excellent space-wise and the whole area is very large, and each discipline has its own premises (see later comments on chapter 6).

Small animal clinics are separated by various disciplines although distances are not very large. There is a lack of smaller rooms for group work, in particular for clinical case presentations. There are also plenty of additional facilities to support hands-on training and practical teaching and research projects of students (see chapter 6.2.1)

Students are encouraged to do more time in self-study (student centred learning) – especially in clinical fields – and the new skills lab VetSIM provides this especially in small animals.

#### **4.4.2 Comments**



Generally, the curriculum of the clinical sciences is very effectively and well organized – taking into account the large numbers of students that need to be trained in a relatively short time.

Even when all indicators of clinical training (R6-R8) fit or are above EAEVE standards, all student evaluations indicate that students would need more guided supervised teaching, hands-on training, interactive instructions, advice on decision-making, problem-centred learning and problem-solving skills and business and communication skills.

Also in the clinical setting, there are clear outlines how the days are organized and the patient flow can be followed adequately. Students are allocated into small groups and personal supervision is therefore granted in most cases. It seems that students have reasonable experience in writing in medical records with faculty oversight; however, the opportunities for direct client interaction and communication by students were variable between and within species clinics.

Exposure to different animal species is taken care of during clinical rotation received by all students, however, only 3.5 weeks at this stage in small animals maybe insufficient taking into account that it should cover small animal internal medicine (including diagnostic imaging), small animal surgery, anaesthesia and reproduction, and is not taking advantage of the caseload.

During general training, one week (5 days) may not be adequate to attain basic skills needed e.g. in small animal surgery. In many rotations, students are divided into different areas of operation (admission, in-patients and special procedures). According to the SER1 students in Small Animal Clinic get the opportunity to follow clinical cases from the initial examination to the end of treatment. This may be possible in tracking system but not during the general training.

In equine section, students are able, especially during their tracking period to perform most usual procedures and feel confident for equine practice after extramural training. The equine clinicians attempt to ensure all tracking student have the opportunity to castrate a horse. Experiences in equine reproduction were quite good.

Visit to TRF showed that these premises are used very well and effectively for educating students and on their hands-on-training. They also provide a standardized system for students to practice various skills, both on healthy and diseased animals, in feeding and nutrition as well as in animal welfare, animal husbandry and herd health management in a safe and secure learning environment with a very dedicated teaching staff. So these rural production animal facilities and ambulatory practice experiences are really worth the expenditure.

The caseload is impressive, over 30,000 dogs and cats, over 1,500 exotics (reptiles, birds etc) as well as over 3,100 horses provide excellent material for student training. Also the various farms with large number of production animals provide excellent material to students. This is quite exceptional.

Balance between animal species in teaching seems generally adequate. During the whole year, however, there are some weeks/months when there are no students working with the cases, and valuable material is lost in this respect, especially in equine clinic. This may also be possible in other clinics. In the small animal clinic, there is a good surgical caseload for training in surgical principles and judgment; however there is seemingly insufficient basic exposure or opportunity for training of students in routine dog and cat castration and spays. This has been tried to solve by efforts to include a shelter to the small animal surgery program but so far it has been unsuccessful. However, negotiations with a new shelter are on-going and this effort is appreciated.

The pathology unit demonstrated a good training of students in gross pathology of all domestic species received in the service and necropsy procedure in small animals. Students do not perform by themselves a necropsy in a large animal since the hours of daily training in the subjects are 1.5, which does not allow students to do this service insufficient to this purpose.

It is the opinion of the team, that the requirements regarding Curriculum: Clinical Sciences as they are laid down in Annex I of the SOP are met.

#### **4.4.3 Suggestions**

- Time spent in general clinical rotation is quite limited and consideration should be given to allocating more time to acquiring day-1-practical skills. For the development of the new curriculum, the team strongly recommends the UVMW to increase the time for practical hands-on training of all students in small animal clinical rotation.
- Rotations should be extended so that students are handling the clinical cases every day. There should not be cases in animal hospital that the students are not involved with.
- Efforts should be made to increase the experience of students on direct client interaction and communication in the clinics.
- Distance, although short between the different small animal sections, makes it somewhat difficult for both students and veterinarians to handle and communicate over the cases especially if they have multiple problems. Also, a centralized outpatient Clinic for Small Animals is still needed. Seasonal adjustment of student assignments to various large animal clinics would optimize student clinical learning and clinic staffing.
- The UVMV should guarantee that all students receive hands-on training in a castration and spay in the small animal surgery service.
- In the new curriculum, efforts should be made to allocate enough hours in the sessions of practical training in pathology to guarantee the possibility of performing necropsies in equine and bovine by the students (i.e. minimum 3 hours/practical session).

### **4.5 FOOD HYGIENE & TECHNOLOGY AND VETERINARY PUBLIC HEALTH**

#### **4.5.1 Findings**

The teaching and training areas of Food Hygiene and Technology and of Veterinary Public Health are organized in three Institutes (Institute of Meat Hygiene; Institute of Milk Hygiene; Institute of Veterinary Public Health) within the Department of Clinic of Farm Animals and Veterinary Public Health. At the same Department are integrated the Institute of Animal Husbandry and Animal Welfare and the Institute of Animal Nutrition as well as the Clinics for Ruminants, for Swine and for Avian, Reptile and Fish Medicine.

The distribution of teaching and training in Food Hygiene and Technology and Veterinary Public Health starts at the 6<sup>th</sup> semester and follow up in 9<sup>th</sup>, 10<sup>th</sup> and 11<sup>th</sup> semesters. There is a professional written examination at the end of 2<sup>nd</sup> phase (6<sup>th</sup> semester) in Food Sciences and Public Health Services associated with Animal Husbandry and Welfare and another oral professional examination is taken at the end of track "Food Safety and Veterinary Public Health" at 11<sup>th</sup> semester.

A basic course in meat hygiene common to all students takes place at 9<sup>th</sup> semester, during one week, and is referred to the ethic, legal and technical aspects of slaughter of cattle, pigs and poultry and to the general concerns of industrial hygiene. It also includes meat inspection practical training using swine carcasses and internal organs obtained locally. In overall it sums up to a total of 30 hours. All students, after performing the previous training week, and in groups of 6 to 8, also visit a cattle and a pig slaughterhouse for a full morning session tutored by a staff member.

The proportion of FH/VPH uniform teaching and training (306.25 hours) in the Vienna veterinary school is just 5.94% of the overall curriculum for the students that do not choose this specific specialisation track. All students have 146.25 hours of theoretical and practical training on campus

supervised by University staff. The other component (160 hours of practical activities) refers to individual and compulsory extra-mural work consisting in a one-month internship to be conducted at certain slaughterhouses and supervised by an instructor. Adding the compulsory elective subjects, another 120 hours of theoretical teaching sums up to 426.25 hours (8.27%). In the academic year of reference, there were 45 places allocated to that specific track.

Students choosing “Food Safety and Veterinary Public Health” track have to perform both a uniform part of extra 240 hours of theoretical teaching (seminars) in subjects as: “Animal welfare during transportation and slaughtering” (15h); “Examination of food” (120h); and “Food hygiene and technology” (105h), and a minimum of 135h of elective subjects. In total, these students have 681.25 hours of teaching and training.

Students of the Food Safety and Veterinary Public Health Track have to complete an internship at designated slaughterhouses (slaughtering of cattle, pigs and poultry is mandatory).

The University has no slaughterhouse facilities. However, through several cooperation agreements students have access to three commercial slaughterhouses and food processing units located between 50 and 80 km outside of Vienna. They travel on University minibus in groups of seven students and one teacher.

There is a food processing unit with the essential equipment for manufacturing meat products available at the University’s Institute of Meat Hygiene, Meat Technology and Food Science. Inspection of fish and seafood products, game meat, eggs and honey is also addressed.

Due to an adequate collaboration within the Department and between Departments transmissible diseases, pharmacology and toxicology (residues and withdrawal times) subjects are addressed.

FS/VPH track students have sufficient teaching and training to be able to perform as meat inspectors after just a two-week additional training.

The number of teaching staff allocated to the Food Hygiene and VPH areas is adequate and highly qualified as a number of specific textbooks in Food Hygiene were prepared and made available for students.

#### **4.5.2 Comments**

The departmental set up of Food Hygiene and VPH subjects within a Department of Farm Animals Clinic is highly adequate as it promotes useful interdisciplinary initiatives and facilitates problem-oriented education.

In general, the University offers most of the facilities (access to commercial slaughterhouses, food processing unit, diagnostic and research laboratories) and expertise (close collaboration with regional veterinarian and public authorities) need to perform a high quality teaching and training in FH/VPH matters.

The students choosing the specific Food Hygiene track have a proportion of 13.22% (681.25h) of total curriculum which is considered satisfactory and the two ratios - R9 and R10 - related to FH/VPH areas are both satisfactory.

Herd health management is shared between two animal farm tracks and food safety and VPH track, fulfilling a recommendation from the EAEVE 2006 Team. The other three recommendations referred to FH/VPH areas are being prepared to be implemented in the new curriculum.

It is the opinion of the team, that the requirements regarding Curriculum: Food Hygiene & Technology and Veterinary Public Health as they are laid down in Annex I of the SOP are met.

#### **4.5.3 Suggestions**

- The Team was very impressed with the departmental setup, the available facilities and the expertise integrated in the Department of Farm Animals and Veterinary Public Health. Furthermore, the UVMW goals correctly designate Public Health intervention as one of the milestones with significant social and economic impact for Austria.
- Given the data shown in the SER1 and confirmed during the visit, the proportion of Food Hygiene and VPH matters taken by all students (5.94% or 8.27%, according to text) in relation to the overall curriculum could be improved and taking in consideration that a new curriculum is being prepared, the Team suggests that a better teaching and training time allocation should be addressed to Food Hygiene and Veterinary Public Health fields in order to better profit from the existing excellent teaching and research environment and to fulfil with the EAEVE/FVE present recommendations for this professional field.

## **4.6 ELECTIVES, OPTIONAL DISCIPLINES & OTHER SUBJECTS**

### **4.6.1 Findings**

Tracking is well described in the SER1, under “Tracks of specialisation”.

Small group problem-based and problem-oriented learning allow students to develop lifelong learning skills with some other mandatory lectures. The number of places per track is determined by the Senate. There is a clear description of the guidelines which cover the assignment of these places.

Each track consists of compulsory courses and compulsory electives, which can be chosen by the students according to the curriculum, these are listed in the SER1 Tables 4.3a-4.3h.

### **4.6.2 Comments**

It is perhaps preferable that the words *omni-competence* are considered rather as *omni-potential*, even with tracking new graduates still need experience, and time to develop their newly discovered knowledge and techniques. Within the context of this it should be understood that all students reach a level of skills and understanding across all disciplines that allows them to carry out basic techniques safely and without risk to their patients, clients and colleagues, while accepting that tracking allows those following a particular career or interest path to develop further knowledge and skills in these areas.

The SER1 reference to “compulsory electives” was considered, as this appears on first sight to be contradictory, but it was satisfactorily explained that the subject is compulsory, but there is some choice for the student for the placement in time during which the course is taken.

SER1, p.88 states that “all Day-one skills are embedded in the curriculum and thus passing the obligatory examinations vouchsafes that the student has acquired the requisite knowledge and skills”.

Discussion with both students and practitioners confirmed their satisfaction with the level of knowledge and expertise gained during the course, acknowledging that day-one skills are met and that new graduates must then develop their confidence as they put their day one skills into practice.

It is the opinion of the team, that the requirements regarding Electives, Optional Disciplines & Other Subjects as they are laid down in Annex I of the SOP are met.

### **4.6.3 Suggestions**

- None

## **5 TEACHING QUALITY & EVALUATION**

### **5.1 TEACHING METHODOLOGY**

#### **5.1.1 Findings**

The curriculum covers all major areas of Veterinary Medicine i.e.: Small Animals and Large Animals clinic, Food Safety, Veterinary Public Health, Laboratory Animals, Conservation Medicine, etc. The curriculum provides of a variety of educational tools: lectures, practical exercises, clinical practical exercises, project-based learning, case-based learning, e-learning, laboratory skills, etc. Lectures are the most common way of transmitting knowledge and teachers encourage students to actively take part in creating an interactive learning environment by using for example problem-based learning. In addition to lectures and practicals the teachers use seminars (for scientific academic discussions in small groups where students are required to participate actively) as well as self-directed learning organised in “*Konversatorien*” (courses where lecturers are answering students questions), Problem-oriented seminars (topics to prepare and present by the students) and Journal Club (critical review of scientific publications).

Clinical work with the students is organised in 3 types of training: Clinical training (admission of patients, diagnosis, therapy, surgery and overall care of patients by the students under supervision), Clinical rotation (students attend clinical visits and practice hands-on training on patients under supervision) and Special training (students participate in special examination, surgery or treatments).

The university has increased the possibilities on independent studying possibilities by using the e-learning platforms Vetucation (for blended learning), VetSIM (for skills training), Vetmediathek (central multimedia database for pictures, videos, etc.) and extending library hours.

SER1 states the learning objectives clearly. Undergraduates have an official list of objectives in the study guide. VetmedOnline is a management system that lecturers and students must use where they find course information, learning objectives, prerequisites, etc. Responsible professors and lecturers are in charge of presenting the course objectives to the students.

Subjects are illustrated with the help of real-life examples and cases. Students are encouraged to use veterinary textbooks as a supportive measure for studying; they should be listed in the course descriptions. Some courses offer scripts and teacher hand-outs. Students are recommended to make notes of their lectures.

The evaluation of teaching is regulated by the UG 2002, §14, which states that Austrian universities are obliged to perform quality assurance and assessments of evaluation on the animal hospital, teaching, research and services. According to the statutes of the University of Veterinary Medicine Vienna the course lecturers have to conduct and provide an evaluation on their courses to the Vice Rector for Study Affairs and Clinical Veterinary Medicine in regular intervals. The evaluations are conducted via the intranet tool VetmedOnline and starting the year 2012/2013 the evaluation will comprise both the views of the students as well as the instructors. Evaluation takes place 4 times during a semester and lecturers can conduct additional evaluations when they please. A mirrored questionnaire will be provided for the lecturers to fill out and to reflect on the aims of the courses which will offer a possibility to compare the answers between the students and the lecturers. After the evaluation closes, the lecturer in charge of the evaluation will get the results and they can give their opinion on the results to the Vice Rector for Study Affairs and Clinical Veterinary Medicine and decide whether or not they want the results to be published. Evaluations are not mandatory for the students and according to the SER1 the response rates have been low. According to the students, they tend to answer evaluations when the course being evaluated has been inadequate or poorly conducted

and they want to improve certain aspects or on the contrary the course has been a very good learning experience. The evaluations have a sufficient effect on the teaching and according to the students methods and teaching are changed and modified accordingly.

The evaluation of day-one skills is based on the presumption and fact that the obligatory examinations measure and ensure that the student has acquired sufficient knowledge and skills in passing the exams. Oral and written assignments, presentations and reports are held through courses and seen as an additional measure of the day-one skills. At the clinic it is ensured that every student has hands-on experience or has seen needed demonstrations to perform certain tasks. Online surveys and meetings with the instructors are held to evaluate and improve teaching from the student point of view. Furthermore in the last semesters the focus is on the acquisition of Day-one skills in the chosen field of specialisation.

### **5.1.2 Comments**

Accordingly to the evaluation surveys, the students feel that interactive instruction, decision-making, practical training, problem-solving skills, problem-centred learning, business and communication skills should be more emphasized in the curriculum. SER1 also states that the amount of students responding has been relatively low. For the team it seems excessive asking the students to fill out up to 4 surveys for a course during its progression; this may well explain the poor response rates.

The UVMW is developing a new curriculum for 2013 that emphasises on radical changes over the 2002 curriculum as student-centred learning, vertical integration of subjects and increased importance of communication skills, critical review of medical research literature, social skills and basic economic knowledge.

Even when the Curriculum Committee supervises the content of the courses and subjects, the subject content and its representation in teaching is organised and determined mainly by the professors or responsible lecturers and it is not easy for them to keep track of the entire curriculum in terms of learning outcomes and course contents. When only teachers are responsible of it sometimes is difficult to them to balance the subject (content, difficulty of progression) in the context of the course and the whole curriculum.

It is the opinion of the team, that the requirements regarding Teaching Quality & Evaluation: Teaching Methodology as they are laid down in Annex I of the SOP are met.

### **5.1.3 Suggestions**

- The UVMW itself suggests there is a need of a further expanding of e-learning offerings and web-based, interactive discussion platforms and courses.
- The UVMW should expand the skills offered in lab VetSIM to offer innovative and interactive teaching and learning elements.
- As the students' survey and the UVMW itself suggests, the skills for decision-making, problem-solving, problem-centred learning, business and communication skills should be more emphasized in the curriculum.
- The Curriculum Committee should review and suggest changes in the content of subjects and in the evaluation methods, etc. based on progression of students, evaluation surveys, suggestions from alumni, external lecturers, etc.
- Students should be motivated to fill in the surveys of all subjects, not only for those with deficiencies because this is the only way to have a whole picture of the quality standard of a given subject in comparison with the media of the course and the whole curriculum. It is the opinion of the team that for this purpose, it could be helpful to leave the option open for the

students to add to evaluations during the semester and close them out at the end of the semester.

## **5.2 EXAMINATIONS**

### **5.2.1 Findings**

The examination system is described in section 5.1.3 of the SER1, with a clear description of the types of examination and testing system.

Table 5.1 gives an overview of the professional examinations.

Assessment of skills includes several different types of oral and written assignments, presentations, OSCEs and reports that must be completed satisfactorily for students to pass courses or training modules and examinations.

Assessment of competence is embedded in the curriculum, with appraisal of day-one skills being performed in meetings with instructors and via online surveys.

Professional examinations are fixed in the course schedule, and clearly described in the SER1.

Examinations can be retaken several times if unsuccessful, from 3-5 according to the time & type of examination, with a little used option of retaking the exam within 6 months if successful in order to improve the grade. For the last two retakes the examination committee will have at least three examiners, and the student can ask for an accompanying senior examiner as listener.

There appear to be a number of students whose courses are delayed by failing examinations, particularly from the first year.

The students, whose course is delayed for instance due to pregnancy/maternity, appear to receive a good level of support from the government Young Parent scheme. They can also use the university kindergarten.

There appear to be no external examiners, although due to the numbers of staff it is possible that the examiners are not the same as the teachers for students.

VetmedOnline is the compulsory administrative study management system for lecturers and students. Registration and deregistration for examinations is done via this and it also documents the results of assessments from which students can print out their official grade certificates. Satisfactory levels of security appear to be in place to ensure the integrity of these records.

### **5.2.2 Comments**

Continuing the course of studies is only possible if all examinations from the previous year have been successfully completed and passed, if the student does not pass the professional examination at the first or second attempt this impedes progress to the next stage of study and can mean a waiting period of up to two semesters. Apart from this condition, students can decide on their own when to take exams and in what timeframe they will complete their education.

It is the opinion of the team, that the requirements regarding Teaching Quality & Evaluation: Examinations as they are laid down in Annex I of the SOP are met.

### 5.2.3 Suggestions

- The UVMW should further develop the examination system towards evaluation of the understanding and application of knowledge in an integrated way. Consideration could be given to the use of external examiners, either from other institutions or practice in addition to those from the university.

## 6 PHYSICAL FACILITIES & EQUIPMENT

### 6.1 GENERAL ASPECTS

#### 6.1.1 Findings

The main campus of the University is located not far from Vienna city centre, consisting of 47 buildings distributed in 15ha. From 2010, an interdisciplinary institute (*Messerli-Research-Institute*) was added to the campus. Four of the departments divide and share the premises in the main campus. At another location in Vienna the University has two research institutes merged in the Department of Integrative Biology and Evolution which has adjacent to the buildings an enclosed forest of 45 ha.

Out of town, the University has three other teaching and research units namely the *Pottenstein* teaching and research farm (TRF), the interdisciplinary research centre (*Wieselburg*) and the Graf-Lehndorff-Institute for Equine Science in Germany.

The Vice Rector for Resources delegates the operative tasks concerning infrastructures to the director of human resources and infrastructure that has to collaborate close with the works council consisting of representatives of academic and support staff.

The main campus has 9 lecture halls with a total of 1444 places. For supervised group work there are 46 rooms with a total capacity of 1004 places. For practical laboratory work there are 75 premises distributed among the different locations with a capacity of 1059 places. The campus offers the students 90 computers work stations free of charge and some studying rooms equipped with personal computers as well as access to the internet for private or academic use for free. For clinical work and student training there are 21 consulting rooms and 9 surgical suites for small animals and 7 examination areas and 5 surgical theatres for equines and farm animals. For supervised clinical training in the VetSIM there is a new discussion corner and a tutorial room equipped with multimedia devices.

There are two dissection rooms for Anatomy, two necropsy rooms for post-mortem examination and a food processing unit with the essential equipment for processing meat products. Necropsy rooms are equipped with adequate tables and devices to guarantee the appropriate and safe hands-on training of the students.

Students are transported for practical classes or visits outside the campus in University minibuses or rental cars. For animal transport the Faculty has a special emergency truck but in general, owners are expected to arrange transportation for their animals; for horses and small animals there are commercial transport companies offering emergency transportation 24 h a day. For on farm teaching and herd health management in cattle, the unit has two cars (VW Golf Variants). For the ambulatory (mobile) clinic provided to farms there is one Nissan Primastar Kombi with 9 seats.

Students also have access to a campus cantina and a café shop.

Students have accident insurance in effect during the entire course of studies and the team verified that they receive a suitable training in health and safety issues; the buildings and the daily routines as well



have all requisites and measures to ensure a safe and normal work environment. Students, or everyone handling animals, must be vaccinated against rabies. For hands-on work students must wear protective clothing.

Each department has appointed safety officers among the academic and support staff and relevant safety protocols are posted in the respective facilities.

There are no slaughterhouse facilities on campus. However, the University has protocols with three excellent commercial slaughterhouses and meat processing plants that allow students to be trained hands-on in meat inspection of farm animals (cattle, pigs and poultry). The University has a food processing plant at the Institute of Meat Hygiene, Meat Technology and Food Science. For microbiological and sensory analyses consumer food, meat, organs and meat products are bought in retail shops or provided by the food industry.

Waste management is performed according to Austrian and EU safety rules. The UVMW has a Waste Management Department with technical services for waste disposal under the supervision of qualified waste manager in compliance with the Austrian Waste Management Act. This Department is in charge of reducing waste and disposing it economically guaranteeing sustainability while avoiding humans, animals or environmental risks. The UVMW has detailed SOPs for waste management, for example, dangerous or toxic biological waste is disposed of in special black bins and moved to a central collection point in the campus; biological waste in laboratories is disposed of in orange bags for hospital waste; cadavers and carcasses are collected in cadaver bins removed once a day to the central point in Pathology that also has special waste thermo disinfection equipment shared with Virology; cadavers from necropsy room, dissection room, etc. are disposed of in a large container into a cold-storage house that is taken to an animal carcass disposal plant (*Tierkörperverwertungsanlage*) once a week.

The Vice Rector for Research and International Relations is in charge, amongst other duties, of coordination and contextual governance of the post for bio-security.

### **6.1.2 Comments**

The team was impressed by the adequacy and quality of the campus facilities. However, the UVMW itself recognises a lack of small rooms for group work, in particular for clinical case presentations. Also, laboratories for group discussion and practicals in Physiology were found very small for the size of the group.

The team verified that the equipment for teaching and research purposes is updated and suitable for a very high level teaching and training.

In the necropsy room during practicals students wear their own lab coat and boots that they should clean at home. It is a biological risk that this protective equipment for the students is not cleaned and kept in the Pathology service. The team noticed that no eye washers and showers were present in necropsy rooms.

After visiting all premises in the campus, the team recognizes that they would be used more efficiently for teaching and research purposes. Also, it was noted that some of the laboratories for practicals with chemical and or biological risks lacked eye washers or these were malfunctioning.

It is the opinion of the team, that the requirements regarding Physical Facilities & Equipment: General Aspects as they are laid down in Annex I of the SOP are met.

### **6.1.3 Suggestions**

- The UVMW should evaluate the use of the premises and facilities in the campus for teaching and research and propose a more efficient use accordingly to the future requirements in the new curriculum, expected size of the groups of practicals, etc.
- The University should guarantee that the size of the rooms for group work is adequate for all the subjects.
- In Pathology, especially in the necropsy rooms, protective clothing for the students (lab coats, aprons, boots, and gloves) should be provided by the service. Also eye washers and showers to remove infective or hazardous material should be installed in both necropsy rooms. The bandsaw for the opening of the head or cutting bones should be protected as well to prevent accidents.

## 6.2 CLINICAL FACILITIES & ORGANISATION

### 6.2.1 Findings

In the clinics, departments 3 and 4 form the Animal Hospital. University also maintains specialized off-campus infrastructure to support hands-on training and practical teaching as well as research projects of students and staff; teaching and research farm (TRF) in *Pottenstein* estate with over 100 dairy cows, Reproduction Centre *Wieselburg* (RCW) mainly for research but also for teaching purposes (interdisciplinary) and the *Graft-Lehndorf* Institute for Equine Sciences in *Neustadt an der Dosse* in Germany to support reproduction, breeding and welfare studies and research. There is also *Hof Rehngas* in lower Austria raising 130 young cows accommodating also research horses during summer pasture time, *Hof Medau* with 35 sows, 90 sheep and 40 goats and new facilities being built for 140 sows, 720 piglets, *Hof Haidlhof* (for poultry, pigs, large animals – animal husbandry, feeding and welfare, avian species etc.), and *Messerli*-Research-Institute to study research for animal-human bond and interaction, animal cognition and behaviour etc. All these offer excellent and exceptional opportunities for students to get hands-on clinical training as well as perform their research projects during the last semester of their studies.

Premises used for clinics and hospitalization are also large (SER1 p. 104, Table 6.1.2); Large animals - horses 84 stalls, cattle 44 places, small ruminants/camelids 17, pigs 19 – Small animals – dogs 56, cats 63, birds 16 and reptiles/amphibians 16. Premises for isolation are: farm animals and horses 10; small animals 38; birds 39; rabbits/guinea pigs 6.

Animals for teaching purposes are also kept in hospital premises with no contact with the patients (16 beagles, some horses for reproduction work; swine 60-70 animals per year; and some ruminants). Most cows and pigs are located in the farms owned by university located outside Vienna.

Premises used for theoretical, practical and supervised teaching for clinical work and training includes a small animal hospital which is located in 2 different buildings, there are 21 consulting rooms for clinical patient handling. There are 9 surgical suites including endoscopy and dental surgery which both procedures require general anaesthesia. Equine hospital has medicine and surgery units combined now forming one centre of excellence for equine work. In equine and farm animals, there are 7 examination areas and 5 surgical suites.

Diagnostic laboratories and clinical support services includes Lab Diagnostic Platform established in 1999 after previous EAEVE visit (1996). Quality management system is well in place. The laboratory is fully equipped and also accepted by ECVCP and runs also a residency program. Altogether 75% of samples come from clinics and research and 25% from outside/other research institutes. Virology, bacteriology (and mycology & hygiene), parasitology and pathology laboratories function well and all support clinical sciences.

Special equipment is located in several clinical units depending on their function and need for analyses (ruminant, pigs, avian, reptile, fish) reported in SER1 p. 115-6.

Central clinical support services includes *Diagnostic imaging* has long time had CT (1993) and MRI (1997) as well as picture archiving and communication system (PAC) since 2007. Digital radiography was installed 2009 and indirect fluoroscopy 2011. All diagnostic imaging equipment has been completely replaced in recent years (CT 2009 and MRI 2011).

Imaging facilities are in referral basis use, both for hospitalized patients as well as for outside practitioners' consultation basis. Services are available during weekdays daily and on emergency hours (after 4 pm and weekends) on emergency basis.

*Anaesthesiology* has 2500-3000 cases per year and gives also residency training having state of the art equipment and infrastructure (2 ECVAA and 2 ACVA Diplomates and 2 residents). One month practical internship is included in undergraduate training.

*PICU* intensive care unit operates 24/7 and handles mainly postoperative surgical or medical patient care. It has all modern monitoring devices (SER1 p. 118). Students in anaesthesia rotation as well as students getting special training are working in PICU.

*Radiation therapy* platform was established in 2012 covering oncology treatment as well as scintigraphy unit (SCINTIvet) offering diagnostic services for horses and small animals. Teaching is limited to residents and interns.

*Pathology* has comprehensive service unit for post-mortem examinations and special examinations and diagnostic services for tissue samples.

*Pharmacy* has a central unit that handles procurement and storage of medicines. It is also in charge of smaller units throughout the animal hospital.

*Vet Core* is a facility for research and provides high level of technical support to research projects with strong focus on genomics, transcriptomics, proteomics, cellular imaging and mouse imaging.

### **6.2.2 Comments**

The area is large (15ha) with over 40 buildings altogether. Buildings are very well built and maintained. Splitting different functions in many buildings partially obstructs the fluent patient flow as well as contact of teachers/researchers. This cannot easily be corrected.

Some important teaching material is lost as students are not always enrolled with the handling of the cases.

Several specialty services are run by respective Diplomates in different clinics.

Isolation and infection protocols seem to work fine and there are responsible persons in each section of the clinics. Hand-hygiene protocols are also effectively instituted throughout the facilities. No major hospital infection problems have been identified in recent years. The use of wooden partitions between equine stalls is of concern from a biosecurity/infectious disease control perspective because it does not allow optimal disinfection and cleaning.

The team verified the presence of outdated medicines in various clinical services visited.

It is the opinion of the team, that the requirements regarding Clinical Facilities & Organization as they are laid down in Annex I of the SOP are met.

### **6.2.3 Suggestions**

- To strengthen and further develop the specialty services in clinical sciences fields by providing attractive positions for junior staff that have successfully completed their residency training and become Diplomates. This will strengthen the university's role as a superior expert compared with the practitioners who work outside the faculty.
- In small animals, patients arrive to 2 different places depending on their problem. One central reception and admitting area is suggested for fluent patient management.
- Students should be involved at all times with all cases coming to the hospitals.
- Consideration should be given to providing impervious walls between equine stalls for adequate disinfection for biosecurity/infectious disease control.
- The UVMV should guarantee a more rigorous control procedure of the waste management of expired medicines in all the clinics.

## **7 ANIMALS & TEACHING MATERIALS OF ANIMAL ORIGIN**

### **7.1 Findings**

The Animal Hospital and its clinics and the Teaching and Research Farm (TRF) provide students with excellent access to animals for teaching material, facilities which are used from the first year of the course. Teaching is also being provided at the *Graf Lehndorff* Institute for Equine Science and at a number of off-campus institutions and farms with whom the Faculty has formal agreements.

TRF offers students enrolled in any of the animal production subjects to have hands-on practicals with cattle (beef and dairy) and small ruminants. A new unit for pig production is also under planning. Further hands-on training in horses pigs and poultry are performed at the *Graf Lehndorff* Institute for Equine Science and at other intensive production commercial farms.

For Anatomy training, preserved cadavers of cats, dogs, pigs, small and large ruminants and horses mainly obtained from the institute of Pathology or private clinics are supplemented with fresh poultry carcasses. Those specimens are preserved by a variety of methods, such as perfusion with preservation fluid, impregnation with PEG or plastination. Formalin is still used for preservation and the organs and cadavers are washed in water for 3 days before being used in practicals with the students. Specimens are also available for students in the anatomical museum and in the self-study facilities. The caseload of necropsies is sufficient to guarantee hands-on training of the students.

Both the clinical practical training with equines and with different farm animal species and the mobile ambulatory clinic provides access by students in small groups to farm animals. These various types of training are supplemented by herd health management visits mainly to 13 partner private dairy farms and to commercial pig and poultry units.

The laboratory support of the different animal species in the clinics is provided by the Central Laboratory as well as the Imaging Service. Both assist the small and large animal clinics in the Hospital. A data retrieval system handles all patients clinical and laboratory testing history as well as the administrative and billing procedures of the client.

A sound cooperation between the University and the veterinary practitioners is in place. Over 100 local veterinarians act as instructors, on a voluntary basis, to train students in their extra-mural work. The instructors have to apply for a three-year period and have clearance from the University Department and the Veterinary Chamber.

Ante and post mortem inspection of cattle and pigs is performed at three different private slaughterhouse units. For sensory and microbiological laboratory analysis raw meat and meat products are usually purchased at retail shops.

## **7.2 Comments**

The clinical training of students although adequate as it is shown by the corresponding indicators could be improved and expanded exploring the excellent facilities and expertise available together with a very significant caseload.

Even when the carcasses and organs fixed in formalin are previously washed before practicals of Anatomy, it is recommended to avoid using this sort of material because of the recognized toxic effects of this fixative, especially for the staff using it on a regular basis.

It is the opinion of the team, that the requirements regarding Animals & Teaching Materials of Animal Origin as they are laid down in Annex I of the SOP are met.

## **7.3 Suggestions**

- The UVM could increase the hands-on training of students in the clinics to take advantage of the important caseload and the excellent facilities, equipment and staff.
- For safety measures, Anatomy should change the use of carcasses and organs fixed in formalin for fresh materials from the Institute of pathology or private clinics.

# **8 LIBRARY & EDUCATIONAL RESOURCES**

## **8.1 Findings**

The areas covering library and educational resources are described in the SER 1, p. 141.

The SER1 lists efficiently library resources. The University of Vienna library is a part of the administration department and consists of a main library and 54 satellite libraries. Departmental libraries hold smaller amount of material and are accessible to students. The library works as a training establishment and holds approximately 10,230 text books, 4,635 full access electronic journals and 811 hard copy journals and specializes in veterinary medicine material. According to the table 8.1 on page 142 during the year of 2010 there were 81,836 physical and 95,545 virtual visitors annually to the library, not all of which were students. At that time there was also a number of 2,254 current borrowers. During 2010 30,639 loans were taken. There is always at least one copy of a textbook in the library not for loan but which students can take and read inside the library premises. Journals can be read in the library but are not for loan.

The main library is equipped with 158 places to study, 19 computer stations, 4 conference rooms, 6 student carrels and microscopes for the students to use. The visitors can access Internet via computers or by using the wireless Eduroam network inside the building. The library is open from 8:30 am to 10:00 pm during terms, slightly shorter time during Christmas and August. On weekends the library is closed. The satellite library opening hours depend on the department they belong to. In addition the satellite libraries hold approximately 1,500 volumes each. The staff working in the main library is listed in the SE 1 and is efficient enough to fulfil the needs of the students.

The libraries are connected to the library automation system of the Austrian Academic Library Network and all acquisitions are placed online. Books can be ordered and loaned by the Vienna University library from other network libraries. A vetmed:seeker search engine is embedded with the access to Primo Central holding an index with millions of full texts and bibliographic records. The library has access to Electronic Journals Library EZB and Database Information System DBIS. In addition access to licenced journals and databases is possible with a VNP-authorisation out of the university ip-range.

Students are taken to a guided tour through the library during their first year and they are informed of the different information retrieval methods.

## **8.2 Comments**

Student and customer satisfaction is monitored and the library committee is responsible for interpreting the results and improving library services.

The library inside the campus is the only veterinary library in Austria. Books are organised by their topics and can be found without difficulties. The library is efficient and sufficiently meets its purposes.

It is the opinion of the team, that the requirements regarding Library& Education Resources as they are laid down in Annex I of the SOP are met.

## **8.3 Suggestions**

- To help independent studying and improve student responsibility for learning it should be considered to open the library during weekends.

# **9 ADMISSION & ENROLMENT**

## **9.1 Findings**

Student admission is restricted by law.

From 2005 to 2015, there is a selective admission of students based in following general criteria: A secondary school completion certificate (Abitur, Matura); approbation in an aptitude test (knowledge level in physics, chemistry, biology and mathematics; grades in German, physics, chemistry, biology and mathematics; and previous academic or vocational qualifications) for entrance qualification; sufficient command of the German language; fulfilment of the admission restrictions to be applied to the programmes offered by the University of Veterinary Medicine, Vienna for a particular academic year.

Applicants without a secondary school completion certificate but having completed apprenticeship or training as a nurse or medical-technician and passed a special examination, are allowed to apply for admission to veterinary schools.

The present annual restricted number of places for the Diploma Programme in Veterinary Medicine is 203. The admission is granted to 75% of the places for the best-ranked applicants.

For the admission of the remaining 25% of available places candidates are submitted to an interview which evaluates the motivation for veterinary medicine. The final ranking list results in the combination of the results of the interview with the credits previously achieved. A number of additional applicants are admitted in order to match the anticipated early drop-outs among admitted applicants.

There is no direct link between the University budget and the number of students admitted. Financial support by the Federal Ministry is allocated on the basis of compliance with targets and milestones defined in the Performance Agreements. Only formula-based budget that accounts to 20% of the total University budget has four out of eleven indicators related to education. In 2011, revenues from tuition fees have accounted for just 1% of the total revenue of the University.

A significant drop-out exists ranging from 66 in the academic year 2005/06 to 13 in 2011/12 considering that the drop out rate increases with the duration of studies. However, The value for 2005 refers to the final number whereas the value for 2011 refers to the initial number of students. The male/female ratio has increased by more than half from 2005/06 (12.2%/87.8%=0.139) to 2011/12 (23.3%/76.7% =0.304) due to the advertisement of the veterinary course in the Austrian agriculture schools.

## 9.2 Comments

On average 16.7% of the applicants will gain admission according to the table 9.2. According to tables 9.2 and 9.4, 69.9% of the students graduate with the average duration of more than 12 semesters. According to SER1, 12 weeks are planned to be embedded to the curriculum for time to work on thesis and research to help students graduate within 12 semesters.

The selection procedures differentiate between the students that have a solid foundation in sciences and knowledge needed for veterinary training. The 1<sup>st</sup> year students are asked to self-evaluate their knowledge on basic subjects and depending on the results the university attempts to bring every student to the necessary level of knowledge. All students have a large amount of hours dedicated to the teaching of chemistry during first year of studies.

Taking in consideration the present total number of students (1410), the EU students (457) and the non-EU students (55) represent 36.3% of the student population in the academic year 2010-2011.

On the other hand, the indication in SER1 of a quota of 20% for EU students is in fact of 32.4%. In the case of the non-EU students the proportion is of 3.9%.

Taking in consideration the average (196) of the intake of students for the period of 2007 to 2011 and the average (137) of students graduating annually for the same period, the average of the drop out is of 30% for this period. However, it must be considered, that the numbers of graduates can't be compared with the numbers of intakes, because the graduates started before the present admission procedure was implemented. In the years before 2005 the UVMW had about 400 intakes. As far as data can be evaluated at the present (only students who started 2005 and 2006 had the chance to finish their study programme already) the admission procedure has decreased the drop out rate significantly.

The number of Austrian students involved in exchange programmes with other EU and non-EU universities in the last four academic years shows a slight trend towards outgoings and is always over one hundred.

It is the opinion of the team, that the requirements regarding Admission& Enrolment as they are laid down in Annex I of the SOP are met.

## 9.3 Suggestions

- Students are presented to a large number of hours dedicated to chemistry and basic sciences during the first year to bring them to the same level on certain subjects (chemistry, physics, biology, plant biology). Some of these hours could be directed and used for other subjects if the evaluation and criteria of these basic subjects could be tightened in the admission procedures.

- The alternative could be to measure the level of the knowledge on the basic subjects, for example a starting examination. The applicants without sufficient knowledge should be guided through additional lectures or teaching on the basic subjects.

## **10 ACADEMIC TEACHING & SUPPORT STAFF**

### **10.1 Findings**

Ratio of teaching staff *versus* students is 10.11 and teaching staff *versus* support staff 0.91. All staff appointments and staffing levels are decided through University budget and Rectorate. Percentage of staff who are veterinarians is 52.7%. Staff ratios are well over the ratios expressed in SOP. Some important professorships (equine surgery, physiology, diagnostic imaging) have been vacant for some time. There is underrepresentation of veterinarians in basic science units. Staff can move within the University. Posts that become vacant are not automatically filled as each post is considered carefully and also staff allocation closely reviewed. The university is supportive of, and encourages staff to acquire additional skills and training widely. Applications of re-staffing are closely reviewed and aligned with available resources. However, a unit may hire additional staff with revenues from income if sees it necessary. Research and teaching merits as well as Diplomate status especially in clinical fields are evaluated and emphasized. Professorships are internationally advertised.

Total budgeted academic staff is around 291 and total support staff 397 bringing the total staff to 689, and non-budgeted respectively 106 and 40 adding up to 146. The total staff figures are 835 (excluding externally funded researchers).

The University is free to decide types and distribution of staff positions. Allocation of staff to different departments is based on long term planning. There are Diplomates of 24 European and 4 American colleges (53 Diplomates) with 12 residents in 8 on-going programs currently based on SER1.

Vacancies, especially professorships seem to be hard to fill especially in some clinical fields. Also in basic sciences, teaching staff is mainly non-veterinarians (over 50%) whereas in clinical fields, departments 3 and 4, the staff is mostly veterinarians (73 and 95%).

It is also a challenge to recruit young academicians to stay and continue to work in a university setting.

Outside work, consultations and private practise is allowed but must be reported and approved by Rectorate.

There is money for staff to attend scientific meetings.

Sabbaticals are 6-12 months maximum. Salary may be reduced and this is all negotiable. However, persons employed according to Civil Service Regulations (Beamtendienstrechtsgesetz) may be off on leave for up to 10 years. There are structured annual performance reviews for the staff. Salaries are based on category of use, qualifications and periods of prior employment.

### **10.2 Comments**

Veterinarians may be underrepresented in university personnel in the future and this may affect also their role in deciding and governing bodies.

Also, as noted in the SER1, there is a substantial challenge recruiting young academicians to stay and continue working in a university setting, this should be strongly assessed and improved.

The University of Vienna seems to have a very competent and highly motivated support personnel.



It is the opinion of the team, that the requirements regarding Academic Teaching & Support Staff as they are laid down in Annex I of the SOP are met.

### 10.3 Suggestions

- The UVMV should promote recruitment of veterinarians even for training in basic subjects and sciences.
- As residents are being trained through the present programs and they become highly competent after passing their Board examination, a system to retain the new Diplomates in the faculty should be prioritized – to secure the future teaching and supervision of the students, interns and residents.
- As research is an essential part of university functions, research time should be clearly allocated also to the clinicians/teachers working in the clinical setting in the animal hospitals.

## 11 CONTINUING EDUCATION

### 11.1 Findings

As the only academic institution for veterinary medicine in Austria, the UVMW has a duty to offer CPE. As defined in the Veterinary Act, CPE is mandatory for all practitioners, state veterinarians, specialists, production animal / herd health veterinarians, small animal veterinarians and veterinarians responsible for food and meat inspection. Only veterinarians who are working under cover of "Food Safety and Consumer Act" and "Veterinary Health Service Bylaw" need to document CPE.

The legal base for CPE encompasses:

Guidelines for Continuing Education laid down by the Austrian Veterinary Chamber

The Veterinary Act and bylaw of the Federal Ministry, defining CPE needed for specialist certification  
Food Safety and Consumer Protection Act

Veterinary Health Service Bylaw

UG 2002, § 56, regulating university courses

The UVMW offers a wide range CPE university courses as well as lectures, seminars and workshops. The courses are primarily directed at postgraduate veterinarians.

CPE is strongly encouraged by the Rectorate as a means to strengthen the position of the university, thus CPE is one of the main issues addressed in the University's Development Plan.

At all CPE events, the University acts in close collaboration with the Austrian Veterinary Chamber.

For every course suggested, the Austrian Veterinary Chamber defines the amount of "*Bildungsstunden*" (teaching hours). The veterinarians then have to collect a certain amount of "*Bildungsstunden*" within a defined period of time to fulfil the demands set for their type of work.

As an integral part of its Performance Agreement with the Federal Ministry for Science and Research, the University allocates a certain amount of its budget each year for CPE. In addition, individual units receive a budget which is earmarked for Continuing Education of its staff.

Regarding farm animals and horses, the UVMW has implemented CPE in cooperation with partners for funding or professional support.

The University is partner in The Austrian Soc.Vet.Med., one of the main suppliers of veterinary CPE in Austria. They publish a scientific peer-reviewed journal "The Veterinary Medicine Austria" 6 times a year.

Additionally there is a new concept in the field of oncology: The Veterinary Oncology Network Austria, a joint effort of the UVMW, a pharmaceutical company (Richter Pharma AG) and The Austrian Veterinary Chamber.

The University has defined its own LLL concept, which comprises 7 LLL categories for CPE and postgraduate education; see SER1, Table 11.1, p. 160.

## 11.2 Comments

The UVMW has a strong commitment to Life Long Learning. The CPE programme at the University is well organized and offers a broad spectre of courses to Life Long Learning.

It is the opinion of the team, that the requirements regarding Continuing Education as they are laid down in Annex I of the SOP are met.

## 11.3 Suggestions

- None

# 12 POSTGRADUATE EDUCATION

## 12.1 Findings

Postgraduate training is provided by Internship, Residency, Doctorate, PhD, Postdoc as well as international Masters Programmes.

The Vice Rector for Study Affairs and Clinical Veterinary Medicine is in charge, amongst other duties of supporting the Senate in establishing Master and Doctoral studies, Postgraduate Studies and Continuing Education, in particular PhD Studies and of coordinating affairs concerning clinical postgraduate and continuing education, in particular Internships and Residencies.

*Clinical specialty training* is done through internships and residencies and presented in SER1 table 12.1 p.163. There are 17 interns and 12 residents working currently in the UVM.

*Rotating Internships* are available in the small animal (10 places) and the equine (5 places) hospital. Subject specific Internships are available for Reproduction (2 places). All internships last for 1 year. Positions are advertised and a special committee selects suitable candidates. Interns are evaluated regularly during their training. Graduates following internships are employed part time (50%, 20 hours /week) and part of their salary is financed by course fees.

The UVM has 53 Diplomates in 58 different fields (25% of the veterinary staff) who offer clinical specialty training to 12 residents in 8 programmes (SER1 Table 12.1, p.163-4); two Residency Programmes (ECBHM and EVPC) are recently offered and have not any resident yet; EBVS coordinates all Residency Programmes and some programmes are also approved by the American respective body, ABVS.

The Residency Advisory Board (RAB) in the UVM is responsible for the number of annual residencies, and follows the programmes but the number of positions available is determined not only by RAB, but also by the Rectorate and need (patient load). Applications are regulated by the University's residency statute and internationally advertised. EBVS accepted residency programmes also include research training and projects as well as reporting research results in international refereed

journals. With the help of feedback questionnaires both residents and supervisors are being evaluated annually. In case of problems, RAB deals with the issue through discussions with both parties. Residents are financed by the UVMV global budget as well as clinic income and amounts financed from different sources vary (%-shares) during the training.

*Postgraduate Research Programmes* are presented in Table 12.2. The UVM offers two options:

- *PhD programmes*: there are 20/21 fulltime/part-time lasting for 3 years; currently 54 students are enrolled and 41 of them are employed by the UVM.
- *Doctorate programmes*: 38/20 fulltime/part-time going on lasting for 3 years.

Requirements are in the *PhD programmes* to produce 3 internationally accepted refereed scientific papers (one of which has to be in upper 30% quantile of the field) and in *Doctorate programmes* only 1 paper.

The *PhD programme* is meant for undergraduates with at least 300 ECTS credits but exceptions can be made by Curricular Committee (CC). The official language is English which offers then options to more international collaboration and atmosphere. There are 4 defined PhD programmes: HIP porcine immune system; BIOREC-biological responses to environmental challenges; PopGenVienna-population and evolutionary genetics and VetMed PhD research linked to veterinary medicine with a broader scope of research subjects. Training is individually designed for each student. Students spend at least 155/180 credits in research work (60ECTS/year, 3 years) and CC follows the progress.

The *Doctorate-programme* aims for developing skills needed in independent scientific veterinary work and programme is structured lasting 3 years.

The *Postdoc Programme* offers a junior phase after PhD to serve as independent group leader, but they need success in applying for outside funding. After 6 years one can become a senior researcher. However, tenure starts only after 8 years of successful funding. The University has established 'qualifying positions' in order to ease this step in career development.

The UVM offers 5 *Master Programmes* that are operating in international and national networks.

During the academic year 2010/11 degrees results were as follows: 4 PhD (68% of students currently non-veterinarians); 60 Doctorate (of these 94% are veterinarians) and 14 Masters Diplomas.

## 12.2 Comments

Financing is always a problem in research. However, there is an ear-marked amount in the budget for research purposes for the above mentioned programmes (PhD, Postdoc, residencies, internships). The Austrian Science fund is also important in providing funding for PhD and Doctorate programmes.

Language in rotating internships and residency programmes is mainly German which may affect negatively internationalization.

Even when the UVM has a sound number of Diplomates in comparison with most European Faculties (53.5 of them with double College Diploma), apparently there is not an extensive interest to train new residents as only 10 programmes are actively calling for participants. Very central and important fields have all several Diplomates like Bovine (5) and Porcine (4) Health management, Poultry (2), Pathology (3) and Public Health-Food Science (4) but no residents' enrolment.

There only seem to be limited opportunities available at UVM for residents who have been successfully trained and passed their Board examinations.

PhD is a quite new offer of postgraduate program so the number of graduates is still very low in comparison with the number of Doctorates.

Doctorate programme has a defined scientific production rather low (1 paper). This has effect on long term research career development since writing only 1 paper does not really guide for scientific career yet.

It is the opinion of the team, that the requirements regarding Postgraduate Education as they are laid down in Annex I of the SOP are met.

### **12.3 Suggestions**

- The Internship and Residency Programmes offered by the UVM should consider using English language at least in some of the programs to increase internationalization and facilitate board examinations and seeking positions for residents in other Universities where good English communication skills would be important.
- Taking into consideration that Diplomates are supposed to start residency programmes and pass their experience to younger generation, the UVM should increase the number of residency programmes through motivation and recognition of the staff involved in such programmes, which will benefit to strengthen the current clinical profile.
- To further strengthen the clinical competence of UVM, a system should be created within UVM to provide opportunities for at least some of the newly board certified Diplomates to remain on the permanent staff of university. Also the attained Diplomate status and gained expertise should be acknowledged in the salary of the young colleagues.
- To increase the number of veterinarians following postgraduate studies it is highly recommended to adopt a common Veterinary PhD programme.
- The Doctorate programme should increase the defined scientific production.

## **13 RESEARCH**

### **13.1 Findings**

The research commitment and concepts are clearly outlined in section 13.1 of the SER1. They are key components of the academic education, and all students are required to write a diploma thesis, adhering to the requirements of Good Scientific Practice (Annex 2.10). All departments are available for students to choose from when selecting their subject area.

The Research Profile Areas (RPA) are listed as Physiological processes; Infection and prevention, focus on farm animals; Animal models and veterinary biotechnology; Food safety and risk analysis; Animal behaviour and human-animal interactions. This was done as a direct result of the University's societal mandate and the specific expertise on campus and within national and international cooperation projects.

This allows for the interaction of basic and applied clinical research fields and supports the coherence of research efforts.

Internal systems to support young scientists and encourage external funding are established and described in the SER1, including the Research Support and Innovation (FFI) to support young researchers.

Access to potential industrial cooperation partners is via a specialised unit, the VetWidi GmbH.

The SER1 contains tables indicating the classification of internationally visible main areas of research according to the RPAs and of additional research potentials.

The University provides a series of research structures both internally and in cooperation with other organizations, these are described in the SER1 with the core facility “VetCore” being the central technology platform, complemented by off-campus facilities.

Funding is described in the SER1. Third party funding is necessary for the major part, either from national or international public funding agencies or industrial research partners. A limited amount of the university’s income generated through scientific and clinical services is also allowed to fund campus research activities. Table 13.1 shows third party funding 2009-11.

Within the budget allocated by the Federal Ministry a certain amount is earmarked for furthering PhD, Postdoc and Residency Programmes, other agreements and sources of funding are described in 12.1.

### **13.2 Comments**

The opportunities for students to be involved in research are good, with an appreciation by the University that this is an area to be developed further.

The University plans to increase the involvement of students in research activities, helped by reforming the curriculum to meet the demands of “student-centred learning” and actively engaging students, encouraging them to prepare papers, attend introductory courses on scientific working and offering individual scientific guidance. This appears to be continuing, with good support from the university.

The University has suggested the adoption of a veterinary specific, clinical and/or interdisciplinary Doctoral Programme within the PhD Programme, with the aim of increasing the number of veterinarians in research and academic careers and to broaden the professional fields available. This appears to be well supported with the development with the PhD programme and increased access to the PhD for those who previously had been on the doctoral programme, although there are some funding issues as the PhD requires a higher level of departmental funding.

It is the opinion of the team, that the requirements regarding Research as they are laid down in Annex I of the SOP are met.

### **13.3 Suggestions**

- Junior academic staff confirmed that there is an increased collaborative approach to research, and that this is a developing area that should be strongly supported by the UVMW and offered for the students.

## EXECUTIVE SUMMARY

The visit was carried out in a cordial and very friendly and professional atmosphere and the team was supplied with all further information asked for. The team met open doors and helpful colleagues throughout the entire visit.

The very professional self-evaluation report was a really helpful tool, reflecting the true status of the veterinary school in Vienna. It was easy to read and in an exemplary way it explained all aspects of the veterinary training program in Austria. It was a great pleasure to get a solid report in full accordance with the SOP. The team had a feeling that a great deal of this quality in the report is due to the fact that the university has been through a guided process with broad involvement from all corners of the departments and the administration.

All over the campus the team noted that the spacious university was clean and tidy. The team saw many examples of excellent teaching. By excellent teaching the means a process where there is productive and intensive interaction between teachers at different levels and students. But it also includes an environment where it is obvious that there is mutual respect for each other at all levels from first year students to senior professors.

The University of Veterinary Medicine in Wien (UVMW) has its strengths and weaknesses, opportunities and threats. The team has identified several really strong points.

- A clinically oriented curriculum and an impressive caseload in all relevant animal species is an advantage of the university. Moreover, this is supported by interns, residents or diplomates of 25 European and 4 American colleges of veterinary specialization.
- The financial situation is supportive of a very high quality teaching in a high profiled research environment.
- The structure, housing, equipment and financial management of the university is at a very high level.
- Across the university, from basic sciences to the clinics, we saw well performing units, with excellent professional reputation, teaching and research.
- The electronic clinical record system based on SNOMed is comprehensive, easily accessible and fully introduced in all clinical units. The system incorporates all types of recordings including X-rays, CT-scans, ultrasonographs, lab results etc.
- The university has dedicated, enthusiastic and open-minded personnel, from professors to support staff. The same is true for students, who are well appreciated within the university as excellent students.
- The teaching farm is an important tool for practical teaching and the university should be commended for maintaining this facility.
- The SOP's governing the whole university quality assurance system are in place, well maintained, fully understood and followed by relevant members of staff and students.

As it often occurs, strengths are accompanied with some weaknesses. Their identification by the team should provide the university with incentives for further improvements.

- There is a good balance between animal species in teaching. During the whole year, however, there are some weeks/months when there are no or a limited number of students working with the cases, and valuable teaching material is lost in this respect, especially in the equine clinic. This may also be possible in other clinics. Seasonal adjustment of student assignments to various large animal clinics would optimize student clinical learning and hands-on experience and clinic staffing. At the same time the university should consider reducing the amount of hours in basic sciences. There is some variation in the overall level of safety within the University. The team especially noted that eye washers were almost absent or malfunctioning

in relevant places. The team noted outdated medicinal products in some places. A more rigorous control procedure should be established.

With respect to the Stage II accreditation it is clear that all of the documentation received shows that the vast majority of quality procedures, and all critical quality control procedures, have been in action for at least 2 years.

The SER2 report was prepared following the EAEVE requests and examples of documentation were present from the start of the visit for each assessment procedure. All the documentation was in English.

Full documentation of the assessment procedures and figures explaining the procedures were available from the start of the visit. The persons responsible for quality assurance were always available and very helpful, and the communication with all students and employees interviewed and met was pleasant and profitable.

Various procedures exist to handle unexpected events and to be prepared for accidents, drills, e.g. fire drills and drills concerning accidental spilling of chemotherapeutics, are regularly conducted. The handling by the University of the present situation where one of the two Stage-2 experts had to cancel participation also reflects that the University as a whole has the capacity and ability to amend to acute situations.

With the provided documents, the access to the Internet and Intranet web systems, and the interviews conducted, the amount of material available for the evaluation was considered definitely satisfactory.

Target agreements as well as goals defined in the framework of annual staff appraisals for academic and support (including technical) staff were provided during the site visitation, as well as their evaluation.

There were no references to SER-1 in the SER-2 material.

The Stage II evaluation conducted identified no deficiencies.

All procedures were adequately subjected to Quality Assurance and Quality Management.

It is evident that the University has a very strong focus on Quality, Quality Control, Quality Assurance and Quality Management of all of its actions and initiatives.

It is suggested:

- To facilitate internationalisation and international mobility, it is suggested that at least all key documents relating to quality assurance are presented in English on the University's websites
- To further develop the system for monitoring the grade (or pass/fail) distribution of each course on a regular basis as an additional means for the University's focus on constructive alignment
- To pursue further means for formal, regular input from stakeholders and graduates
- To maintain or even further increase the ISO certifications

All together, it is the opinion of the both the Stage I and Stage II evaluators that the University of Veterinary Medicine, Vienna fulfils all the standards provided for Stage I and II.

**The team found no major deficiencies and full accreditation of the Veterinary University, Vienna is suggested to ECOVE.**

**Annex 1 Indicators (version date: Budapest GA, 2012)**

<b>Ratio for Wien, Austria,</b>	<b>Numerator/Denominator calculated by faculty</b>	<b>1/Denominator faculty figures</b>	<b>Established range of denominators</b>	<b>Notes</b>
<b>R1</b> p155 SER	397.59/1410	1/3.55	8.832 (UL)	Better than
<b>R2</b> p155 SER	411.11/1658	1/4.03	9.619 (UL)	Better than
<b>R3</b> p155 SER	209.97/1410	1/6.72	11.389 (UL)	Better than
<b>R4</b> p156 SER	209.97/173	1/0.8	2.203 (UL)	Better than
<b>R5</b> p156 SER	397.59/437.06	1/1.10	0.474 – 1.944 (Range)	Within range
<b>R6</b> p75 SER	2394/1233	1/0.52	0.576 (LL)	Within the guidelines 0.51-0.36
<b>R7</b> p75 SER	612/621	1/1.01	1.952 (UL)	Better than
<b>R8</b> p75 SER	690/5152	1/7.47	2.576-103.746 (Range)	Within range
<b>R9</b> p76 SER	276/5152	1/18.65	0.725-98.437 (Range)	Within range
<b>R10</b> p76 SER	276/160	1/0.58	0.061-0.881 (Range)	Within range
<b>R11</b> p138 SER	173/1043	1/6.03	0.956 (LL)	Above level = better than
<b>R12</b> p138 SER	173/4176	1/24.14	7.345 (LL)	Above level = better than
<b>R13</b> p138 SER	173/179	1/1.03	0.307 (LL)	Above level = better than
<b>R14</b> p138 SER	173/3071	1/17.75	2.590 (LL)	Above level = better than
<b>R15</b> p139 SER	173/966	1/5.58	0.505 (LL)	Above level = better than
<b>R16</b> p139 SER	173/32991	1/190.7	43.462 (LL)	Above level = better than
<b>R17</b> p139 SER	173/33	1/0.19	0.040 (LL)	Above level = better than
<b>R18</b> p139 SER	173/491	1/2.84	0.998 (LL)	Above level = better than
<b>R19</b> p139 SER	173/1914	1/11.06	0.547 (LL)	Above level = better than
<b>R20</b> p139 SER	173/549	1/3.17	1.498 (UL)	Above level = better than

**DECISION BY ECOVE: FULL APPROVAL**