

**European Association of Establishments for Veterinary  
Education and the Federation of Veterinarians of Europe**

**European System of Evaluation of Veterinary Training**

**REPORT ON THE STAGE 1 VISIT TO THE VETERINARY  
FACULTY, UNIVERSITY OF LJUBLJANA**

**12. - 16. October 2009**

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## **INTRODUCTION**

In 1990, a significant historical change was made when the Veterinary Department of the Biotechnical Faculty in Ljubljana became the independent Veterinary Faculty, University of Ljubljana (VF UL) which is now one of the stand-alone 26 Faculties of the University of Ljubljana. It was evaluated and approved by EAEVE/FVE during 1998. Since this first visit, the Faculty has been restructured, consolidated and the existing buildings have been thoroughly renovated and some new custom-built facilities have been constructed in recent years. The Faculty is the only veterinary teaching establishment in Slovenia.

The second evaluation of the Faculty by an EAEVE/FVE Team took place from 12. - 16. October 2009. The Faculty had prepared a fair Self-Evaluation-Report and the organization of the visit was excellent.

As can be seen on page 14 SER, the Faculty is comprised of 6 Centres, 3 Clinics, 1 Department, 11 Institutes and 2 Units. In addition, in 2001, the National Veterinary Institute (NVI) with its 5 Units and 20 Sub-Units was semi-incorporated into the Faculty and there are 7 Regional NVI Dependencies. This structure has improved quite dramatically the funding and teaching options of the Faculty in general.

In 2000, the Centre for Information Technology and the Library were merged into a single unit, which has further developed into an excellent physical and virtual source of information both at national and international levels.

Much attention has and is being paid to the implementation of up-graded 6-year undergraduate and post-graduate curricula as designated by the "Bologna Process", with particular attention to the "first day competences" which should be able to be offered at the time of graduation.

The VF UL has established firm contacts with neighbour country Faculties and participates in the Socrates/Erasmus programme.

*(Note: More details on acquisitions/changes etc., can be seen in pages 2-7 SER)*

## **1. OBJECTIVES & STRATEGY**

### **1.1 Findings:**

The University of Ljubljana has a mission statement which emphasizes the aim of excellence in basic, applied and developmental research as well as the encouragement of interdisciplinary and multidisciplinary study. Strategic goals are well set out in a well presented booklet on the subject.

On page 8 SER, the list of overall objectives of the VF UL was referred to as being available on the Faculty website. These could not be found, since most of the website is only in Slovenian. Nevertheless, on page 9 under Comments, it is clear that the primary objectives are aimed at teaching, with a clear statement to improve clinical training, extending the programme to 6 years in order to improve the application of practical work and to integrate and utilise the National Veterinary Institute (NVI) in terms of facilities, instruments, expertise and funds to maximise their use for the upgrading of teaching.

## 1.2 Comments

- Comments, strengths and weaknesses can all be found on pages 9 -10 SER, but although research is mentioned several times, the impression is not created, that it has any particular priority.
- In the last ten years the number of students has increased by 25%, the total staff by 150%, the veterinary staff by 40% and the revenue by almost 100%

## 1.3 Suggestions

**1.3.1 It is recommended that the clear Mission Statement and Strategic Objectives of the University set out in the booklet and a set of VF UL Objectives and Strategies setting out priorities should be published on the Faculty Website in both Slovenian and particularly in English in order to enhance comprehension in an international context.**

**1.3.2 Since Veterinary Training is a research-based function, the heavy weighting towards teaching would appear to override the need for the VF UL to become more known and respected in the international research scene and it is recommended that this imbalance be adjusted and redirected towards a modest increase in research with a genuine attempt to stimulated interest and involvement of undergraduates.**

## 2. ORGANISATION

### 2.1 Findings

Since 1990 the VF UL has been one of the 26 independent Faculties of the University of Ljubljana

The Organization has been well explained on pages 11-18 SER

On page 14 SER, the complexity of the current organizational structure of the VF UL becomes apparent.

### 2.2 Comments

- Currently, the VF UL consists of 6 Centres, 3 Clinics, 1 Department, 11 Institutes and 2 Units. In addition, the NVI has 5 Units, 20 Sub-Units and 7 Regional Dependencies. This has to be a managerial nightmare and is, in reality, unnecessary.
- *Just to give an example: One Germany Faculty has recently assigned their 11 Institutes, 2 Departments, 3 Large Animal Clinics, a Clinic for Birds and Exotics and a Department of Small Animal Medicine to 5 Budgetary Centres, a situation, which can bring economies of scale and reduce administration costs significantly.*

- The Faculty appears to have a good degree of control over its policy but there is limited information on its influence on University policy. An annual meeting appears to be all that occurs. It does appear to be autonomous and to have an effective structure for decision making.

- Influence on University policy is apparent on different levels:

The Dean is a member of the University Senate which sits monthly. All important issues are discussed at the Senate meetings

The Vice Dean for Education is invited regularly (once monthly) to the meetings of Vice Deans.

Some VF UL teachers are members or even chairmen of different university committees like Commission for Elections, QA Commission, Commission for University Statutes.

- There were comments about difficult relations with the veterinary chamber in the Continuing Education field with University staff not being invited to participate on a regular basis, but many clinical staff are involved in the work of the chamber.

## **2.2 Suggestions**

**2.2.1 Consider seriously reducing the number of budgetary units (VF UL 23; NVI 32) at the VF UL to a maximum of 5 Centres.**

**2.2.2 It would be useful to continue to improve relations with the Veterinary Chamber, as Continuing Education and Specialization Training are important parts of the postgraduate veterinarians` life and can be an important income stream to Veterinary Faculties.**

## **3. FINANCES**

### **3.1 Findings**

The key findings are contained in the tables 3.1.and 3.2 on page 22 SER in which Income and Expenditure are set out.

Since both the budgets for Teaching (Ministry of Higher Education, Science and Technology) and Research (Research Agency) are allotted to the University for all 26 Faculties, it is up to the Rector and his/her staff to distribute the proceeds to each Faculty.

Where the National Veterinary Institute (NVI) is concerned, all “state activities”, including investment in equipment are funded directly to the VF UL by the Ministry of Agriculture, Food and Forestry.

In 2008, the University of Ljubljana received € 161.00 million from the Ministry of Higher Education, Science & Technology for all 26 Faculties. Since Veterinary Science is classified at the top of the training ladder, the annual contribution for each veterinary student was just under € 10.000,00

The Ministry of Education, Science and Technology budget assigned to the VF UL in 2008 was € 3.24 million of which 94% was expended on salaries.

The approximate proportions of the total income sources are as follows:

Education: **18%**; Research: **9%**; NVI Govt: **45%**; NVI Gen Inc: **11%**; Other Gen Inc: **17%**

### **3.2 Comments**

- It is conclusively clear from the above calculations, that the VF UL is totally underfinanced. Whilst this is not an exceptional statement with Veterinary Faculties across Europe, the fact that the findings indicate, that without the National Veterinary Institute, the Faculty could not exist is of great concern.
- The Ministry of Agriculture supplied a budget in 2008 for the NVI, which was 45% of the total Faculty income and the NVI generated through charged activities a further 11% i.e. The NVI was responsible therefore for 56% of the total Faculty income. The Faculty facilities generated an amazing further 17% with charged activities.
- The irony of the situation is that the 2 supposedly primary financiers of Veterinary Training supplied only 27% of the Faculty budget in 2008, Education @ 18% and Research @ 9%.
- It would appear to be clear that with a little strategic restructuring as has already been mentioned, some savings could be achieved, but these could only be roughly estimated to have a 5-10% maximum cost reduction effect.

### **3.3. Suggestions**

**3.3.1 It is suggested, that with the primary aim of getting improved financing, meetings at the highest level should be sought with the Minister of Higher Education, Science and Technology and the Rector of Ljubljana University involving EAEVE in order to explain the situation within the European Union, that EU law in the form of EC Regulation 2004/854 determines that the Veterinary Profession is responsible for protecting the public health by controlling the quality of the food chain from “farm to fork”.**

**3.3.2 At the same or similar meetings it is essential to convey the message, that the training of a veterinary surgeon is probably the most expensive in terms of equipment necessary, the need for a farm, but most of all, the intensity of the teaching commitment necessary.**

**3.3.3 Greater thought should be given to other income generating streams though the limitations of a small country are recognized. Research and**

**European grants are an extremely useful source of funding but may be temporary. As in all Universities this will present an ongoing challenge.**

## **4. CURRICULUM**

### **4.1 GENERAL ASPECTS**

#### **4.1.1 Findings**

The curriculum seems adequate but the two courses seem to cause confusion with the clinical staff being unaware of some of the aspects of the change. They will not take part in this revised curriculum for another 18 months. The situation will become clarified when the first six year course has been completed. In this final year, 20 hours of lectures appear to be dedicated to economics and "Practice Management", which would be useful to a potential new graduate.

It appears that the curriculum is developed autonomously so presumably can be altered as appropriate.

#### **4.1.2 Comments**

There does not appear to be any feedback from veterinary practices about the students undergoing Extramural Studies. There is a basic sign off for a written case but no formal reporting system from the practitioner on the general abilities of the student

#### **4.1.3 Suggestions**

**4.1.3.1 Generate a system whereby a compulsory standard feedback from veterinary practices on students undergoing extra-mural studies is made.**

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

#### **4.2.1 Findings**

The basic subjects seem to be adequately and in most cases enthusiastically taught. There is a high wastage rate in first year which does not imply a lack of knowledge as it is stated that the best students in the qualifying examinations are admitted. Discussions suggest that the failures are partly the result of a system that admits purely on high school grades, a huge difference in the learning requirements as taught in High School and University and students who immediately recognize that the veterinary course is "not for them" It appears to be insoluble and that after this large change, the number of students remains relatively stable.

Hygiene and waste disposal appears adequate

#### **4.2.2 Comments**

- There would appear to be little valid relationship between Anatomy and Genetics

#### **4.2.3 Suggestions**

##### **4.2.3.1 The Genetics Department would seem to be better placed together with Reproduction Physiology.**

### **4.3 ANIMAL PRODUCTION**

#### **4.3.1 Findings**

Animal Production subjects represent 12% in the 5 year course and 10% in the 6 year course of the core curriculum.

There is only one elective subject in the Animal Production field:

- Breeding and Health Care of Game and Wild Animals in Enclosures, with 20 h of lectures and 25 h of practical work
- The elective Ethology is included in Clinical Sciences

The teaching about fish, bees and of the wildlife population is well covered, within a specific Institute.

There is a working farm 60 km away from the Faculty where veterinary students go for practical training some days to assist ewes during lambing and learning the milking techniques (hand milking). Other contracted dairy farms are used at the end of the practical training in the Ruminants Clinic.

#### **4.3.2 Comments**

- It seems that the core curriculum of the VF UL just covers the subjects considered as requirements in the EAEVE Directive 2005/36/EC. There is a limited offering in Animal Welfare, although some knowledge is given in "Animal and Environmental Hygiene". There is limited teaching in Agronomy, because the subject "Fodder, Poisonous and Medical Plants", which only has 15+15 hours, is mostly related to botany rather than to grazing and land use in relation to food-producing animals. The latter subject is taught by a teacher from another Faculty. There is a subject of Veterinary Economy presented by a veterinary surgeon, but it is unclear whether its contents are totally in line with the objectives of the course in Rural Economics. The teaching on the subject of Animal Science is limited, particularly with regard to the relatively short practical training where the 30 hours per student are considered barely adequate.
- There is no Institute of Animal Production in the Veterinary Faculty, i.e. there is not a single Institute responsible for the teaching in the field of Animal Production, in particular concerning the main farm animal species. A global and integrated education on the role of the food-producing animal species in



the economy and within society is important in the veterinary curriculum. Most lectures, practicals etc. within the Animal Production Programme are given by teachers from the Department of Animal Production located in the Faculty of Biotechnics, including the Animal Nutrition subject in the five-year curriculum. It seems that both historical and financial reasons are involved in the fact that an Institute of Animal Science has not been set up at the Veterinary Faculty.

- In contrast, teaching on animal housing and environmental control in stables and even animal welfare are fairly well covered within the subject of Animal and Environmental Hygiene. The academic staff of the Institute for Environmental and Animal Hygiene with Animal Behaviour is really enthusiastic and willing to cooperate with other Institutes of the Veterinary Faculty or of the Faculty of Biotechnics. However, the Institute has, in terms of FTE, only 0.75 Associate Professor and 0.63 Assistant.
- With the exception of the subject of Breeding and Health Care of Game and Wild Animals in Enclosures, there are no other elective subjects in the Animal Production area.
- The teaching of pig production is poorly covered in the curriculum.
- Concerning the integration of animal production subjects with other related subjects, it seems that the Institutes of the Faculty are rather self-contained with little coordination of activities between them. This results in additional difficulty for good training in Animal Production, where a high level of cooperation and coordination amongst Departments and Institutes is essential.
- On the farm CSR Vremščica, in ewes after the weaning of lambs (6-8 weeks), machine milking is performed on 12 milking units. Hand milking is used only in cases, when the ewe has a large quantity of milk, which is not suckled by a lamb. This milk is used for feeding the lambs whose mothers have not enough milk (twins, triplets). Just for nursing of these lambs the students are doing hand milking.
- There are actually three elective subjects in the animal production area:
  - Breeding and Health Care of Game and Wild Animals in Enclosures
  - Herd Health Management
  - Rearing Conditions and Health Care of Rabbits.

### **4.3.3 Suggestions**

**4.3.3.1 The Institute for Environmental and Animal Hygiene with Animal Behaviour is really important in the context of the Veterinary Faculty, covering aspects with an increasing relevance in the Animal Production field and even connecting with areas of Food Hygiene. Taking into account that the Institute is the only one of the Faculty directly related to the Animal Production area, it is strongly suggested that a single person should be in charge of the coordination of teaching of Animal Production**

in the curriculum between the Veterinary Faculty and the Biotechnical Faculty. Since this would necessitate an additional workload, an increase in the staffing of the Institute would be immediately essential. This would be the first and most important step to improving the teaching on Animal Production in the VF UL.

- 4.3.3.2 In order to adapt to the six-year curriculum, a modification in the contents of the subject “Fodder, Poisonous and Medical Plants” should be made to cover the subject of Agronomy, with emphasis on grazing, e- identification and conservation of crops (hay, silage etc.) for nutrition of food- producing animals.
- 4.3.3.3 The contents of the subject of Veterinary Economics should be redesigned to cover teaching in Rural Economics.
- 4.3.3.4 The teaching staff of the Institute for Hygiene and Pathology of Animal Nutrition should be in charge of a new subject of Physiology of Animal Nutrition, given in the fourth semester of the six-year curriculum. Moreover, at least 50% of the practical training of this subject should be covered with animals (metabolism, rumen function etc.) using perhaps the facilities of the Clinics of the Faculty.
- 4.3.3.5 Teaching on Pig Production must be improved. It should be well covered in the subject of Animal Science and additional elective subjects could be very useful to help the students become interested in pigs.
- 4.3.3.6 The brochure provided by the Faculty to the team states that the ewes are hand milked at the experimental farm of Centre for Sustainable Recultivation (CSR) Vremscica in order to use the milk for cheese production. Under these conditions, it would appear to be essential to buy a milking machine to:
- Improve the number of ewes milked per hour (saving money on labour)
  - Give training in milking machines to the students.
  - Improve the quality of the milk and the cheese.
- 4.3.3.7 Although there appears to be limited teaching in animal production, it is really encouraging to have experienced the dedication of the staff of the Clinic for Ruminants with ambulatory clinic in offering a global practical training to the students either in their own Clinic (the students are directly involved in the milking of the cows hospitalized) or in the dairy farms contracted by the Faculty for the final training of the students. They are fully involved in many aspects of the management of dairy cows. With the aspects covering working with the ewes at the experimental farm of CSR Vremscica, the practical training in Animal Production can be considered satisfactory; however additional training has to be implemented in pig production.
- 4.3.3.8 More elective subjects in the Animal Production field should be offered in order to improve the training in this area.

## 4.4 CLINICAL SCIENCES

### 4.4.1 Findings

The clinical services are dealt with in section 7.1.5 of the report on page 75. It is apparent that while the clinics are open during the week, it is only the horse clinic that operates on a 24hour basis. Students participate in compulsory attendance at the Clinic for surgery and small animals, the farms and the animal shelter which includes the provision of a 24hour service and experience for them. The Faculty provides a mobile clinic and other on farm services (7.1.8.1 and 7.1.8.2 p 77) which cater adequately for the needs of the students. The clinical training figures in the SER, tables 7.3 p 76, 7.4a p 77 and 7.4b p 79 have been verified as reliable. (Section 4.1) and the students are receiving adequate hands on experience

Further information on the various clinics is to be found in the SER 7.1.9 p 79 – 82

The clinical premises are identified in the photograph on p61 of the SER and while old and modified are currently in a good state of repair and just adequate for the needs of the students and the patient caseload.

The staff and support staffing levels are found in table 10.2 on p 96

There would appear to be an overview of the procedures undertaken by the students which suggests that they are receiving an adequate grounding in the day 1 competencies but there does not appear to be a readily available system for identifying individual or group deficiencies. The large animal case load in the various locations would indicate that the students had ample opportunity to gain hands on experience in parturitions etc. and the assistance given by the animal shelter in allowing the students to neuter cats, both male and female is noted and applauded.

### 4.4.2 Comments

- The facilities for Parasitology are seemingly inadequate, especially taking into account the volume of Antiparasitic Products used in practice and the opportunities these types of product offer for field research and cooperation in general with the Pharmaceutical Industry, which can be a valuable source of income. Giving this section additional laboratories and more visibility in general should be considered even though the impact of Antiparasitic Products and other drugs is studied intensively in the Laboratory for Forensic Toxicology and Eco-toxicology.
- The comments 7.2 are found on p85 of the SER. Visits to two farms and discussions with staff members verify the statement that consultations outside the Faculty compensate for the lack of “in house” large animal consultations.

### 4.4.3 Suggestions

**4.4.3.1 The Clinic for Surgery and Small Animals lacks equipment that is now appearing in general practice. The most obvious example is a CT scanner and it is vital to the standards of veterinary education in Slovenia that the faculty retains its status as a centre of excellence and**

a provider of new graduates fit to meet the needs of the developing veterinary profession and its patients. Other equipment is now obviously becoming outdated and needs replacing.

**4.4.3.2** The equine clinic, whose operating suite, whilst adequate, fails to standards expected in a University institution, should be improved.

**4.4.3.3** Both the small animal and large animal clinics are operating on a system of paper based reports. This is not acceptable now and a system should be developed internally or purchased that will allow clinical histories and financial information to be stored together. It should also note the involvement of the students and the procedures undertaken to permit data mining of clinical material and student development to take place.

**4.4.3.4** The clinical teaching staff should be encouraged to develop their post graduate careers and time should be made available to enable them to study for Diplomate (specialist) status within the European or American Colleges. This is vital to motivate the staff members, will encourage the students and develop the faculty as a centre of excellence within the area, which may be outside the borders of Slovenia.

**4.4.3.5** Consideration should be given to redeveloping the clinics using modern materials and structures. It is noted that there is a plan to re-house the VF UL to a green field site and it is recommended that advice is sought from experts (*EAEVE would be able to help if required in the design of such buildings.*)

**4.4.3.6** The equipment in several clinical laboratories appears to be malfunctioning and eventually resulting in an inability to analyze samples. The large and small animal clinical laboratories appear to be separate units with a consequent duplication of staff and equipment. Consideration should be given to combining the two laboratories and renewing the equipment.

**4.4.3.7** It is recommended that students are given earlier exposure to the animals and the clinics as part of a familiarization process. This will enable their introduction to the clinical part of the course to take place more quickly and effectively.

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

### **4.5.1 Findings**

The relative amount of food hygiene-related hours in curriculum has decreased in the 6-year curriculum from 7.7 % (689/9000) to 6.4 % (690/10800) (SER pages 32-39).

The food hygiene-related subjects cover the minimum requirement for a veterinary qualification. They are strong in chemical analysis of foods but need development in

microbiological analysis of foods. This is in line with the Institute's current research, which mainly focuses on chemical and toxicological aspects. The main hindrance in the development of microbiological work is lack of modern analysis equipment and limited access to the existing equipment in the Faculty.

Currently, food hygiene-related courses are given by two Institutes, Institute of Food Hygiene and Bromatology and Institute of Environmental and Animal Hygiene with Animal Behaviour. There is no coordination between the two units in terms of the organization of the food hygiene training, although there does not seem to be significant overlap between the courses given by the two Institutes.

There are no food hygiene-related elective studies in the curriculum (SER pages 35, 39).

The curriculum does not presently cover all the subjects required for qualification as Official Veterinarian. Most attention should be paid to agricultural policy, risk analysis, population dynamics of infection and intoxication, principles and diagnostic applications of modern testing methods, with particular attention to molecular epidemiological methods together with sufficient practical training

#### **4.5.2 Comments**

- Decreasing the relative amount of food hygiene in the curriculum is an incorrect development taking the current legislation into consideration.
- For better coordination of the curriculum it would be desirable to manage all food hygiene-related courses from one Institute.
- The Institute for Food Hygiene and Bromatology should be equipped with modern microbiological analysis tools to bring related research to up-to-date level.
- Establishment of food hygiene-related elective courses increases students' knowledge in food hygiene and therefore increases also their interest in the field. The current degree does not cover all the topics required for the Official Veterinary Surgeon (OVS) qualification. There would be merit for the Faculty and also for graduating veterinarians if the required OVS training was provided as part of the undergraduate studies e.g. in the form of an elective course.

#### **4.5.3 Suggestions**

**4.5.3.1 Increase teaching hours to improve cover of the microbiological analysis of raw materials, foods and food production environments.**

**4.5.3.2 Include all food hygiene-related topics under management of one Institute (Institute for Food Hygiene and Bromatology).**

**4.5.3.3 Obtain financial resources to improve equipment in the Institute for Food Hygiene and Bromatology. Modern molecular microbiological analysis equipment is considered essential.**

**4.5.3.4 Establish food hygiene-related elective courses and include Official Veterinary Surgeon competence skills in the undergraduate curriculum.**

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

### **4.6.1 Findings**

5-year: 15 courses available, listed on SER pages 35-36, 2.6 % electivity

6-year: 27 courses available, listed on SER pages 39-41, 36 ECTS, 10 % electivity

Elective studies are strongly focused on basic and clinical subjects. No elective studies are available in food hygiene/public health.

The number of students voluntarily doing their student research work is less than 10 %, even smaller in food hygiene.

### **4.6.2 Comments**

- Elective studies in food hygiene/public health are required to ensure the students' skills in the growing field.
- Also students' interest must be woken with more in-depth courses and more intensive research, which can be included in teaching.
- Students should be better attracted to research to improve their scientific and critical thinking and to prepare them for an academic career / to carry out PhD work

### **4.6.3 Suggestions**

**4.6.3.1 See 4.5.3.**

**4.6.3.2 More efforts should be put in attracting students to research.**

**4.6.3.3 Student research work should be made available and more attractive for a larger group of students. Consider including an elective thesis work in the undergraduate course.**

## **5. TEACHING QUALITY & EVALUATION**

### **5.1 TEACHING METHODOLOGY**

#### **5.1.1 Findings**

There seems to be an excellent teaching environment. Lecturers are overall very motivated and dedicated to their teaching work and are, in general, very open and approachable for students.

In the lecture room, students are taught primarily by using power-point presentations and most of these presentations are furnished. Furthermore, for several courses, books have been translated in Slovenian.

The students have in general a good understanding of English and it is an elective subject taken by a significant number of students.

The accessibility of internet sources is excellent. PDF files of power-point presentations, lecture notes, practicals etc. are available on the internet and the library or electronic journals are available on the internet.

Evaluation of teaching by the students is well organized and the results of these evaluations are implemented to improve the courses, but are also used for feedback to individual lecturers. A negative evaluation by the students has already resulted in some teacher failing to be promoted.

The hands on contact with patients in the establishment is limited in the „old“ 5 year curriculum, due to limitations in clinical hours, limitations in space/facilities/equipment and thereto a lack of specialisation with just 1 European and 1 American Diplomate at the VF-UL.

There is limited exchange of students via the Erasmus programme.

There is a lack of specialisation or possibilities to specialise for undergraduate and PhD students.

When own research is implemented in the courses, students do not seem to be aware of this so that contact of students with research is very limited.

### **5.1.2 Comments**

- There seems to be a good balance between theoretical and practical work. In basic sciences several of the practicals are given as demonstrations with active participation of the students as a group.
- Problem-oriented teaching does not seem to have been implemented systematically in teaching, especially in the pre-clinical part.
- The presence of Slovenian books is especially useful for students as feedback for the correct Slovenian terminology, but is often insufficient to have up to date information. Students should be extra stimulated to use English information and E-learning should be integrated more than it is now the case in all courses.
- Extra motivated students can, in many labs/clinics, do additional hours, within the Faculty, supplementary to the regular curriculum. There are great opportunities for students in non-clinical subjects due to the incorporation of the National Veterinary Institute into the Veterinary Faculty. These opportunities are insufficiently used by students and students are insufficiently motivated by the teaching staff to use these opportunities.
- The Faculty is very creative in obtaining modern equipment in most non-clinical labs and some of the clinical institutes and uses several extramural activities to increase the hands on contact with patients/animals to more than acceptable levels. The implementation of the new 6 year program will further improve the hands on contact.
- There is a lack of specialisation or possibilities to specialise. This is partly due to the absence of Diplomates working at the Faculty.
- During the clinical period, students are actively involved in the clinical cases, have to write reports and obtain feedback on their work, but electronic

databases of patient files are absent so that a lot of information is lost for study and scientific purpose.

- Students do not have to write a thesis and only approximately 5 to 10 % do so. The latter students obtain no scores for this thesis and are only rewarded with a notification on the diploma and sometimes by a prize from the university for which they can compete.
- Functioning of the system to assess the quality of teaching at the visited establishment is worth praising.

### **5.1.3 Suggestions**

**5.1.3.1 The use of English books and literature should be encouraged and required and will increase national/ international opportunities for teachers/Diplomates.**

**5.1.3.2 The use of computers and E-learning should be fully implemented.**

**5.1.3.3 Problem-based learning should be fully introduced, especially since staff and students would welcome it. Try to expose the students to animals at an earlier stage i.e. extend the practicals in animal handling in the first years.**

**5.1.3.4 Students in the last year should be encouraged to write a thesis; a possibility is to implement it in the elective subjects so that a score is obtained for the work students do.**

**5.1.3.4 Action should be taken to encourage the international mobility of undergraduate students.**

## **5.2 EXAMINATIONS**

### **5.2.1 Findings**

Details of the examination system are given on pages 51 & 52 SER. The team could verify that different forms of examination are used, the continuous assessment included.

As per Statute of the University of Ljubljana, students can do examinations of each course 4 times and may enrol one of the five years a second time allowing to do all examinations of that course another 4 times.

### **5.2.2 Comments**

- The unbelievable number of times a student can redo examinations results in too long a study duration for several students. Efforts should be made to reduce this number and to reduce the study duration.
- There is no provision for external examiners with the language problem given as a reason.



### **5.2.3 Suggestions**

- 5.1.3.1 Implement a rigid system by which students are made to pass examinations. The University of Ljubljana should seriously question the regulation that allows students to take examinations for some courses 8 times. Students that do not succeed after 4 examinations should be advised officially by the educational committee of the Veterinary Faculty to change their study direction. This could decrease the number of students that overdo the number of examinations.**
- 5.1.3.2 It is very desirable to have an examinations system involving external examiners and it is strongly suggested to involve English-speaking teachers from other Faculties, where the Slovenian language is not feasible.**

## **6. PHYSICAL FACILITIES & EQUIPMENT**

### **6.1 GENERAL ASPECTS**

#### **6.1.1 Findings**

The Faculty is mainly located in two different places in the centre of the town: Gerbiceva ulica (*Institute for Anatomy, Histology and Embriology, Institute for Phisiology, Pharmacology and Toxicology, Institute for breeding and health care of game, fish and bees, Institute for Pathology, Forensic and Administrative Veterinary Medicine, Institute for Microbiology and Parasitology, Institute for Food Hygiene and Bromatology and Administration*) and Cesta v Mestni log (*Clinic for Ruminants, Clinic for Reproduction and Horses, Clinic for Surgery and Small Animals, Institute for Environmental an Animal Hygiene with Animal Behaviour, Centre for Animal Genomics, Institute for Health care of Poultry, Institute for Health Care of Pigs, Institute for Breeding and Health Care of Horses, Institute for Hygiene and Pathology of Animal Nutrition, and Horse and Sheep pens and Centre for informatics and Library*), 500m away. The Faculty has 1ha of buildings, 0.5ha of parking and 3ha of green areas.

In Page 3 of the SER it is said that “The National Veterinary Institute is an internal unit of the Veterinary Faculty”. In fact, the laboratories of the NVI are distributed in different places and departments of the Faculty, although some others are in several locations of Slovenia.

The teaching farm of CSR Vremscica is 60 km far from the Veterinary Faculty. It has 600 ewes and 20 pigs (both of them of an indigenous breed), together with 10-15 horses, 30 donkeys and 10-20 goats. The centre has also a cheese plant. Concerning the animal production teaching, the students have to spend 3 days in the farm, mainly helping during lambing and even milking the ewes for cheese production. The teaching/research farm is also used for training students from the Biotechnical Faculty, the Department of Zootechnics and the High School of Veterinarian Technicians. A council of members of the teaching staff from the Veterinary and Biotechnical Faculties approves the programme of activities for each year. Other activities of the students are the pregnancy diagnosis of the different species bred in the farm.

The slaughterhouse of farm animals is 85 km away from the Faculty and there is a van for transportation of students thereto.

### **6.1.2 Comments**

- The main strength of the Faculty seems to be the concentration of buildings in the city, making easy the relationships between the different institutes; however, it is also the main weakness, as it can difficult to update facilities for working with animals at both research and teaching levels (facilities should be out of the living areas and should comply with the bio-security rules of health, and also should be registered in the UE as Establishments for Use and Breeding of Animals Used for Experimental Purposes). A new Veterinary Faculty is foreseen to be built as late in 2012.
- The training in the teaching/research farm of CSR Vremscica could be improved. It should be mainly focused on the different aspects of management of the breeding of sheep and pigs: reproduction, nutrition, birth, lactation, fattening, environment, as well as a training suite for plant hygiene and control (see Day-One Skills 2.3 Practical Competences). There are 3 contracts with farmers and one with a Dairy Farm (page 61 of the SER). The page 72 of the SER states that the students of 4<sup>th</sup> year have a 3 days stage at the dairy farm. Although the objective seems to be mainly related to emergency care, during the visit the team has tested that the training also includes other aspects of dairy cattle production such as milking, IA, pregnancy detection, practical nutrition,...
- The buildings seem to be old but most of them have been renovated, mainly thanks to the investments of the National Veterinary Institute. The general state of the buildings and facilities is fairly good.
- The management of cadavers and of biological and chemical wastes seems to be adequate, in particular since the National Veterinary Service was setting up. Health and safety items are adequately covered.
- The equipment of the different lecture halls is adequate. All of them have blackboard, overhead projector, PC and PC projector.
- Concerning the access of students to computers, the faculty has only one computer room (12 PC's) for practical teaching, and several computers in different places: library and 2 to 3 additional locations in common areas. Internet is available, although some computers seem to be rather old.

### **6.1.3 Suggestions**

**6.1.3.1 More computer rooms for practical teaching are necessary, and the maintenance and renovation of the computers should be top priority.**

**6.1.3.2 The use of the facilities and equipment of clinics should be more coordinated, and several institutes would be involved. Clinical training should share those facilities with the animals used for practical training of other subjects, for example Physiology of Animal Nutrition.**

## **6.2 CLINICAL FACILITIES & ORGANISATION**

### **6.2.1 Findings**

The current facilities are identified on photographs 1-3 p 60-62 of the SER and are currently adequate for the number of students but are beginning to be insufficient to meet the needs of a modern teaching veterinary hospital. The facilities are listed on p 60-71 of the SER and this includes detail of the farm, slaughterhouse and foodstuff processing plant that is visited as part of the course

### **6.2.2 Comments**

- Comments are found 6.6 on p 71 of the SER and list the ages of the buildings and the problem that this is now beginning to cause.
- It has been stated earlier (4.4.3.5) that while adequate for the current needs, the buildings are inadequate to meet the needs of a modern veterinary hospital teaching veterinary excellence and will need replacing in the near future.
- There would appear to be much duplication, where diagnostic laboratories are concerned.
- The NVI plays a part in many departments and is an important income stream with much governmental and some private work.
- The Poultry / exotic animal section was run very enthusiastically.
- The Clinic for Surgery and Small Animals has an adequate caseload and is in competition with local private veterinary practices.
- The Clinic for Reproduction and Horses appeared to be separate and to lack inhalational anaesthetic facilities for small animals.
- The Clinic for Ruminants had a caseload devoted entirely to foot problems.

### **6.2.3 Suggestions**

**6.2.3.1 The consideration of the relocation of the faculty to a new site should be progressed with all speed. It is understood that plans have been drawn up and it is vitally important that these are scrutinized by an expert who has been involved in the development of other veterinary hospitals that meet modern requirements. In the past other institutions have progressed developments independently and subsequently found plans to be unworkable when animals, the requirements of the various disciplines and isolation, disease prevention and general flow through of humans and animals occurs in practice.**

**6.2.3.2 There are inadequacies in equipment in the clinical and food safety areas that are listed in paragraphs 4.4.3 and 4.5.3.**

**6.2.3.3 In order to increase efficiency and earnings and to reduce costs, consider setting up a central clinical diagnostic laboratory with top**

**equipment derived from the laboratories already existing. In this case all staff should be transferred to the central laboratory with adequate staffing generating speed and efficiency and promoting prompt reporting.**

**6.2.3.4 The Clinic for Surgery and Small Animals computer system should be upgraded to include clinical histories and student involvement.**

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

### **7.1 Findings**

The sources available which provide access to animal material are private clients, farms and the animal shelter.

The anatomy on large animals (living and cadavers) such as horses and sheep is almost absent.

The students get an adequate access to pig, bovine, horse and poultry carcasses in two different slaughterhouses to practically train ante and post mortem inspection.

The students get a limited access to food processing plants to practically train food control and hygienic control measures at least in two plants. All efforts to increase this kind of training should be made, e.g. to include plant control measures during the slaughterhouse visits when part of the students are waiting for their turn in post mortem inspection. The Vremscica cheese plant should also be utilized for this purpose.

### **7.2 Comments**

- Practical training in anatomy should include the anatomy of large animals (especially ruminants and equines) performed on whole cadavers.
- There are four working farms, a stud farm and an upland hill farm with sheep where students can do practical work in the animal production subjects.
- There is adequate fresh chilled or prepared material for anatomy as well as adequate necropsy material and it is fairly well balanced particularly up to the small ruminant level.
- All species were represented with busy clinics for horses and small animals. There was limited availability of cattle sheep and pigs but this deficiency was rectified by the ambulatory clinic
- Students are given exposure to slaughtering of pigs, cattle and poultry as well as to materials for supporting food hygiene training. However, there is a limited access to food plants to train food control on-site.

### **7.3 Suggestions**

- 7.3.1 Anatomy of large animals should be offered by using sheep as the model animal for ruminants and small donkeys or ponies instead of horses to study gross anatomy on equidae. It is absolutely necessary that students have dissected both groups of animals and at least equidae which are of prime importance in Slovenia.**
- 7.3.2 Obtain access to food plants to better train food control activities on-site, and/or utilize more efficiently the existing premises (slaughterhouse, CSR Vremscica) for this purpose.**

## **8. LIBRARY & EDUCATIONAL RESOURCES**

### **8.1 Findings**

The Library System at the University of Ljubljana is rather unique. It has two independent libraries: The National University Library and the Central Technical Library. Beside, each of the 26 Faculties have their specialized libraries and they are all networked together and also with all public libraries in Slovenia. All students have free access to any of these libraries with the University Student ID Card.

In addition to the Veterinary Faculty Library, each Institute/Unit/Department has its own small specialized library, which is networked with the main library, and even these facilities are available to the students.

The Veterinary Faculty Library is located on 3 floors of the old monastery building. Whilst the appearance is limited, they have the textbooks arranged by year of the course, which is rather a unique and convenient idea and for the textbooks normally used, they have at least 10 copies.

The opening hours are rather limited, since there are only 3 staff; 2 are veterinarians and the third is a librarian. Nevertheless, during the semesters, they open at 07.00h Monday to Friday and many students come at this early hour. The library shuts at 18.00h from Monday to Wednesday and at 15.00h on Thursday and Friday. From June to September, they are open on weekdays from 07.00h until 15.00h. There is no service offered at the weekend. It was clear that this is compensated for by the accessibility of electronic journals, books etc. on the University and Faculty websites.

All books are bar-coded and the taking out and returning of books takes via the scanner just several seconds. A ticket is issued stating latest day for returning the book.

There are 4 internet access points in the library, but since every student has a student card and can log into the University Intranet with his/her own laptop and access e-books, some lecture notes, depending upon the teacher, order any book, periodical etc. from any library in Slovenia and access the major scientific databases.

Further information can be found on pages 81-82 SER.

## 8.2 Comments

- All 3 staff personnel were very pleasant and helpful and it is clearly a student-friendly establishment.
- There is limited room for study, but apparently most students like to work on their own laptops at home.
- Some lecture notes and presentations from some teachers are available on CD/DVD.
- Complete e-learning is not yet fully available, since many teachers have not got around to getting their notes and presentations prepared for the web, but this is a gradual process and needs an additional person to follow this up.
- Wi-Fi has just recently been installed across the campus sites and students and staff alike have access.
- All in all, the functioning of the library and its staff were most impressive as it is clear that they are committed to making the best of what is available.

## 8.3 Suggestions

- 8.3.1 Ideally, the library should be available during weekday evenings until at least 20.00h and, perhaps, from 09.00h until 17.00h on Saturday, but this would, without question, require additional staff. It is doubtful whether this would justify an additional headcount due to the excellence of the internet access.**

# 9. ADMISSION & ENROLMENT

## 9.1. Findings

The enrolment of students is restricted to 70 students per year increased with up to 5 % students that are already enrolled at another Faculty at the University of Ljubljana. Furthermore they are encouraged to enrol up to 5 % of non-EU students. This results in the enrolment of 70 to 80 students in the 1st year. If more than 70 EU students apply for admittance to the studies for Veterinary Medicine, selection takes place on the basis of grades acquired in the grammar/secondary school and grades on grammar/secondary school leaving examinations. The latter are organized at the national level for all generations of students.

Since at least double the number of students applies for admittance to the studies of Veterinary Medicine than finally become enrolled, the Faculty evaluates the enrolled students belonging to the upper third best of their generation. Nevertheless, there is a high percentage of dropout students, especially in the first year.

Not all students admitted in the first year seem to be motivated.

## 9.2. Comments

- Approximately 50 students graduate annually, which is thought by the Faculty to be just sufficient for Slovenia. Since the number of students that the Faculty has to accept has been increased from 60 to 70 in the last 3 years by the authorities, the faculty is worried about the effect on teaching, especially in the clinics, and on excess in the number of veterinarians in Slovenia.
- Veterinarians have several other job opportunities than becoming clinician. However students seem to be not sufficiently aware of these other possibilities. The role of veterinarians in society e.g. through control of the food chain is not emphasised during studies and is thus not seriously considered by the students.

## 9.3. Suggestions

**9.3.1 It would be helpful to introduce a more efficient selection procedure, based at least in part, on motivation evaluation. The present scoring system and central examination in combination with e.g. interviews on motivation have been proven to be very beneficial for selecting highly motivated students in a number of other Faculties. Motivated and adequately selected students would result in a reduced number of drop-out students and “off study” students and in better study efficiency.**

**9.3.2 Since the chance that the number of admitted students will be decreased is probably nil, especially when the Faculty will have a new campus outside Ljubljana, the Faculty has to present and promote to students the alternative possibilities such as the possibility to become an official inspector in slaughterhouses or of the food chain, researcher etc. Hence the “farm to fork” concept needs to be better implemented in the entire curriculum.**

## 10. ACADEMIC & SUPPORT STAFF

### 10.1 Findings

In general, 90% of the teaching staff members are veterinarians.

The ratio of teaching staff to support staff in veterinary training is 1/0.655. In this ratio the support staff working for the National Veterinary Institute is not considered.

Number of full professors in the entire Faculty is very small.

Number of support staff in the Faculty is relatively large due to the NVI activities; however, it seems that much of the support staff workload does not support under- or postgraduate education.

Junior academic staff members feel that they have to replace the support staff in many tasks to the detriment of time dedicated to research.

Support staff does not feel overloaded.

In Food Hygiene, the Institute for Food Hygiene and Bromatology is missing a full professor. There is one associate professor, one assistant professor, two post-doctoral persons and one doctoral student involved in teaching. Most of these persons are also strongly involved with the reference laboratory and NVI activities. The time allocated for teaching is 3.58-4 FTE. The Institute has a total of 23 staff members, of which 7 are veterinarians, 5 are chemists or chemistry engineers, 10 are technicians and 1 is administrative staff. The technicians and 7 academic staff members are mainly involved with NVI and reference laboratory activities but they may occasionally help in preparing the undergraduate practical work.

## 10.2 Comments

- Research staff seems to be really scarce, in particular taking into account the high number of technical people working in the laboratories and the good level of facilities and equipment of the Institutes.
- Concerning the different categories of the academic staff, it is not necessary to have a PhD degree to be an Assistant. A system of accreditation based on both academic and research assessment is implemented to promote to a higher teaching category, i.e. Assistant Professor, Associate Professor and Full Professor. However, the accredited teacher only can take possession when a vacancy occurs.
- All three main fields of veterinary medicine (basic veterinary sciences, clinical veterinary sciences, food hygiene) should be equally supported and resourced. This includes the critical mass of qualified teachers, the most important of which is at least one full professorship to ensure continuity and development of the field both educationally and scientifically.
- Food hygiene seems to be under-resourced in terms of academic teaching staff and veterinary teaching staff.
- It is not clear how much support staff is available for non-NVI purposes. The support staff working for the NVI increases the apparent number of support staff but in reality there seems to be some shortage of sufficient support staff supporting teaching and research.
- Tasks specifically requiring more academic staff (in Institute for Food Hygiene and Bromatology) would be:
  - Research and thus qualification/promotion of academic staff (professors)
  - Inclusion of Official Veterinarian competence in DVM degree
  - Establishment of elective studies in all three fields of veterinary science
  - Establishment of professional specialization training programmes
  - Food hygiene



### **10.3 Suggestions**

**10.3.1 Academic staff involved in teaching and research should be increased in the Institute for Food Hygiene and Bromatology to better share the teaching load and allow PhD students to concentrate in their PhD.**

**10.3.2 In order to improve the competence of the future teachers/researchers of the Faculty, all PhD students should be given the opportunity to go abroad for at least 6 months after getting the PhD degree.**

**10.3.3 In the future, concerning the promotion and salary of teaching staff in the Veterinary Faculty, the University of Ljubljana should be aware of the differential situation of those teachers involved with the National Veterinary Institute or not, either in research or in technical duties.**

## **11. CONTINUING EDUCATION**

### **11.1 Findings**

The CPE programme information is found on p 101 – 103 of the SER. Continuing Education of graduates is an important part of post graduate life and its necessity is highlighted by the requirement of the Slovenian Chamber that all licensed veterinarians have to obtain a stipulated number of credits annually. As such it is a vital part of the veterinary learning experience and yet does not appear as part of the vision or the mission of the faculty.

The veterinary CPE programme for 2008 is detailed on p 101 with 16 seminars providing CPE for 486 veterinary participants. (Slovenia has 1000 licensed veterinarians.) It is reported that there is competition as a provider of CPE from countries surrounding the country as well as internally from the Veterinary Chamber.

### **11.2 Comments**

These are listed on p103 of the SER. Enquiries about the number of CPD credits needed to be obtained by licensed veterinarians on an annual basis were not answered and an invitation to refer to the Veterinary Chamber given.

### **11.3.3 Suggestions**

**11.3.3.1 The enhancement and further development of the CPE programme should be considered. In other countries the provision of CPE is developing enormously in response to the compulsory requirement and it has become an important income generating stream in universities which are all struggling with financial shortfalls currently. It may be found that motivated young research / Diplomate graduates would welcome these opportunities to demonstrate their developing skills and enhance the status of a centre of excellence for the faculty. If the courses are sufficiently attractive there may be an ability to attract veterinarians from surrounding countries into Slovenia**

## **12. POSTGRADUATE EDUCATION**

### **12.1 Findings**

PhD students do not have the time to do their PhD. This problem could be partly solved by increasing external funding to spread the teaching load to more people.

In food hygiene there is no professional specialization degree existing, but staff at the Institute for Food Hygiene and Bromatology has planned a 2-year specialization programme and plan to get the degree accepted by the Veterinary Chamber and Veterinary Administration in the next couple of years. Veterinarians working in the field have expressed their interest in the degree. Financing of the degree is unclear.

There are no ECVPH Diplomates in the Faculty and the situation does not seem to support their training.

#### *Postgraduate Research Training*

The University of Ljubljana offer a Postgraduate inter-disciplinary programme of Biomedicine since 1999 to get both Master (2 years) and PhD (4 years) degrees involving different Faculties of the University, Veterinary Medicine included, and following the ECTS system.

More recently, a new University Doctoral Program of Biomedicine has been set up, permitting achievement of the PhD degree (3 years) in Science in several scientific fields, Veterinary Medicine included. Six students were enrolled in the first year.

There are also other interdisciplinary Doctoral Programs offered by the University of Ljubljana. The most adapted to veterinary education seems to be the programme of Environmental Protection.

In the PhD programmes at the end of the research work at least one scientific article is expected.

#### *Postgraduate clinical training*

There is no a clinical postgraduate training in the Veterinary Faculty.

### **12.2 Comments**

- No veterinarians have been enrolled up to now in the interdisciplinary Doctoral Programme of Environmental Protection. This fact seems to reflect the low level of interest of the Veterinary Faculty on the education in some veterinary areas like Animal Production. On the other hand, the contents of the Doctoral Programme of Biomedicine seem to be very intensive and sometimes not always adapted to the research field of the students. Therefore, a more specific orientation of its contents to specific subjects would be necessary.
- The students are not much involved in the research and clinical activities of the Institutes, although such activities could be included in the education programme of graduates to reach teaching and research positions at the Faculty and the NVI or even in the Administration or even in Pharmaceutical Companies. In fact, in the following chapter of SER (Research), it is stated that the students

who reach an MSc or a PhD become employees of laboratories, Administration or the Veterinary Faculty.

- Although significant knowledge of the curriculum for undergraduate students is given in the clinical aspects of the veterinary profession, the lack of a programme of clinical postgraduate teaching (interns and residents) is striking.
- The food hygiene specialization programme should be established and related funding questions should be solved.
- Sufficient research resources for food hygiene are necessary in order for the current persons in charge of teaching to qualify as full professors. In addition, active research will attract undergraduate students to complete their student research work and to participate in elective courses of food hygiene.

### **12.3 Suggestions**

**12.3.1 A clinical specialized training for interns and residents should be introduced in the Clinic for Surgery and Small Animals as soon as possible. It could help to improve the prominent role of the students in the clinics and also to encourage them to be involved in the research activities of the clinic through a Postgraduate Education Programme leading to a PhD degree.**

**12.3.2 In order to improve the implication for the students in the contents of the postgraduate education leading to a PhD degree, an interdisciplinary doctoral programme could be set up covering the main aspects of the veterinary profession. The research activity of the National Veterinary Institute could be involved in such a programme, as well as the Department of Animal Husbandry of the Biotechnical Faculty. This programme could give an opportunity to connect all veterinary areas under a common objective and thus be in addition more attractive to students.**

**12.3.3 Another way to stimulate the students to be involved in research and to enrol in a Postgraduate Education Programme can be to set up several scholarships for the best students of the last year. In return, the student must dedicate some time to help in different experiments or research activities of the Institute. The scholarships could be paid by the NVI or by the University of Ljubljana or even by both institutions.**

**12.3.4 Establish professional specialization training programmes.**

## **13. RESEARCH**

### **13.1 Findings**

Less than 10% of students complete the student research work and there is generally too little time for research amongst both senior and junior academic staff.

## **13.2 Comments**

- Experience in experimental research work and reporting improves the scientific and critical thinking of students and prepares them for an academic career or PhD training.

## **13.3 Suggestions**

**13.3.1 Faculty's own research should be targeted to topics that support teaching, and results should be better utilized in teaching.**

**13.3.2 Lecturers should wherever possible implement their research in the lectures so demonstrating the importance of research to the students.**

**13.3.3 More veterinary students should be attracted to research already in the undergraduate stage.**

## EXECUTIVE SUMMARY

The SER has been an honest base to explore the main aspects that EAEVE take into account to help Faculties that accept the visit to check their standards and possibly improve them through selected suggestions.

Several positive aspects emerged during the visit, which consistently fit the SER content. Amongst the most relevant ones, the team has the pleasure to stress the following:

- the friendly family atmosphere that is clearly evident in the establishment, mirroring the good relationship between the students and the teaching and support staff;
- the wise decision to shift towards a six-year curriculum permitting additional hands-on training of the undergraduates and the reinforcement of communication and report-writing skills with minimum interference with scheduled lectures;
- the modern and efficient structures and laboratories of the National Veterinary Institute, that besides other services provide unique opportunities and material for practical training of undergraduate students and training in research of the postgraduate ones. This is a very nice example, for the whole Europe, of how resources, which are per se limited, may be optimized to the benefit of the whole community;
- the commitment and enthusiasm of the clinical staff, permitting to overcome the logistical difficulties related to the shortage of support staff, in order to actually expose the students to an adequate caseload of all species of major veterinary interest;
- the animal shelter in Ljubljana, a model arrangement for hands-on training in basic surgery by all students;
- the evaluation system of the teaching quality, in our experience one of the best structured ever seen.

Whilst the team did not identify any Category 1 Deficiencies, there is little doubt that there are some structural and equipment-related weaknesses that the team felt to be present which involve only to a limited extent the direct responsibility of the Faculty management and will be resolved automatically as soon as the Faculty campus will be relocated in the near future, as announced in the SER. Nevertheless there are some defects that, in the opinion of the visiting team, *must* be corrected independently of the Faculty relocation process and the following main items are highlighted:

1. It seems that the core curriculum, even the new six year one, only just covers the Animal Production subjects listed in Directive 2005/36/EC. This is particularly true of Agronomy and Rural economics, but also the early exposure of students to handling of farm animals, recommended in the EAEVE SOPs, seems far from achieving the goal desired. There is virtually no offer of elective subjects in the Animal Production area. Despite these weaknesses, the team acknowledge the dedication of the staff involved in Clinical Practice 1 to offer the later students hands-on non strictly clinically oriented practicals in the Ljubljana premises, in the experimental farm of CSR Vremšica and in the contracted dairy farms with which special arrangements have been arranged. Accordingly, the practical training of Ljubljana students in the animal production area can be classified as satisfactory. However, additional training has to be implemented in pig production. The team is confident that the Faculty will soon react with the

formation of an ad hoc working group in charge of the short-term restyling of the teaching activities in the Animal Production area. The enthusiastic staff of the Institute for Environmental and Animal Hygiene with Animal Behaviour is a guarantee that the necessary high level of cooperation and coordination amongst departments and institutes will be assured, in the overall interest of the whole Veterinary Medicine course. It is the opinion of the team that, in the medium term, the Faculty should consider reinforcing substantially the internal teaching and support staff in this particular area;

2. The team noticed that the relative amount of food hygiene-related hours has decreased in the 6-year curriculum and that, in addition, there are no food-hygiene electives available to students. Shortage of theoretical and practical teaching limits the possibility to fully cover all the subjects required for qualification as Official Veterinarian that a modern Faculty in such a modern country should aim at independently of current debate amongst the Veterinary Educational Establishments in Europe. In particular, the team suggests that more attention be paid to issues such as agricultural policy, risk analysis, population dynamics of infection and intoxication, principles and diagnostic applications of modern testing methods, and to reinforcing practical training in the processing plants. In more general terms, the team recommends that the “stable to table” or “farm to fork” vision be promoted throughout the multifarious disciplines at several stages of the undergraduate students education.
3. The team was made aware from several independent sources that undergraduate students – with rare exceptions – remain substantially unexposed to any research experience and do not even know of the existence of valuable research groups in the establishment. It is not a matter of debate here how this would be educationally important, and the team recommend that the dynamic momentum of the six-year curriculum implementation be used – in parallel with due attention for the above mentioned two priorities – to introduce tools (such as credit-recognized electives) encouraging the students to get in touch, “hands-on”, with advanced research activities and concepts.
4. The team addressed the Rector and Dean on their concern about the existing shortage of support staff which may, in the medium-term, adversely affect the quality of practical teaching, delivery of services to students (the International mobility in primis), veterinarians and the general public and also research opportunities in the Ljubljana Veterinary Faculty.

The Chairman, on behalf of the team, stated that the recommendation to ECOVE would be that the Ljubljana Faculty should retain its “approved” status. He conveyed to the Dean and through him to the Rector, the feeling that the Veterinary Faculty in Ljubljana is particularly aware of the priority of its teaching mission and that, as a result, the whole staff will be able to derive significant benefits from the announced relocation of the establishment. If deemed functional to the Faculty needs, the EAEVE would be glad to share the accumulated experience in the conception of new veterinary Faculties.

## Annex 1 Indicators

Ratio	Numerator/Denominator	1/Denominator	Established range of denominators	Notes
R1	68.35/359	1/5.25	8.85-10.42	
R2	104.91/359	1/3.42	8.75/12.54	
R3	61.90/359	1/5.799	10.62-12.62	
R4	61.90/48	1/0.77	4.91-7.21	
R5	68.35/44.77	1/53	0.53-2.20	Low
R6	$2573 + C/2185$	1/....	0.51-0.36	Parameter C of the formula misinterpreted
R7	1070/1115	1/1.04	1.88-2.21	
R8	$C/4898 + C$	1/....	0.51-7.87	Parameter C of the formula misinterpreted
R9	4898/330	1/0.067	Still open	
R10	330/56	1/0.17	Still open	
R11	48/161	1/3.35	2.47-1.73	
R12	48/749	1/15.60	0.51-7.87	
R13	48/72	1/1.50	0.20-0.09	
R14	48/2621	1/54.60	1.78-0.92	
R15	48/482	1/10.04	0.58-0.37	
R16	48/14094	1/293.62	48.74-37.94	
R17	48/5	1/0.104	0.07-0.02	
R18	48/366	1/7.62	0.75-0.46	
R19	48/317	1/6.60	0.26-0.12	
R20	48/219	1/4.56	1.26-0.89	

## Annex 2

### **Student Report on the EAEVE/FVE Evaluation of the Veterinary Faculty of Ljubljana University, Slovenia, 12-16. October 2009**

My personal impression of the students in this Faculty is good.

All students speak very good English which they use for reading journals and most of the speciality books. They have good relations with each other possibly because they are so few in number. They know each other and they are always ready to help one another. The representative students organize every year a week which they call "motivation week" for the new-entry freshmen.

They organize their own website where every student can enter concerns about the lectures etc. and can exchange impressions, opinions and obtain help for studying.

The Faculty offers to some students the possibility to work in the Faculty as laboratory technicians.

The relationship is very good also between students and teaching staff, the latter following up and controlling whether the students are correctly performing their practical training and they are easy to contact by the students. If there is a problem with one of them, students prefer to talk directly rather than use the evaluation of teaching activity at the end of every semester. The evaluation of teaching activity is a tool not much used by student.

The students have a good practical preparation: In their university career, they have the opportunity to see some clinical cases on all animal species and they often have the possibility to do hands-on work with animals under the supervision of a teacher.

There are, in general, adequate cases for each student because of the relatively small number of students. Clinical subjects are generally taught in small groups (2-5). The students have true hands-on experience and they do an obligatory clinical rotation with all the major types of animal. Fourth year students are required to participate regularly in 24 hour emergency clinical and management services at a dairy farm from Thursday till Sunday every week. They are supported by the Veterinary Faculty teaching staff.

Students participate in mobile field services in Equine and Ruminant clinical rotations. They also participate in after-hours clinical care at the Ljubljana Animal Shelter and assist with field services (picking up injured/sick animals, rescue missions, emergencies in the Zoological Garden) when the Animal Shelter staff are called out. Fifth year students are responsible for after-hours animal care at the Ljubljana Animal Shelter from March 1 till May 31 (Sundays and holidays included).

All the teaching staff permit particularly interested students to participate in their fields of research and to follow their activity also in extra-curricular activity.

I received a very good impression of the Animal Shelter, the structure of which permits students to do real practical work on animal. The Shelter is well managed and there are always new cases for students, which they can individually follow up the patient's progress and, with supervision, perform easy surgery like sterilizations and amputations. Students can also practice on animal cadavers since they are plentiful.



The farm has a large number of cattle, so that, in their training career, students can see many clinical cases on large animals. The idea is very good permitting a student to stay at the farm for a few days so that they see both emergency cases as well as learn the management of a farm.

The teaching and research staff offer seminars during the semester to attract and induce the students to become interested in specific scientific research and learn to use scientific journals. Students graduate without a thesis study so that the seminars are a preparation tool.

The Faculty Library is the only library in the field of Veterinary Medicine in Slovenia. All academic libraries are connected on-line to the librarian information network of the University of Ljubljana as a part of the national information network of Slovenia. Students use the library to borrow books, mostly in English, before they go to attend the relevant classes. This is feasible since the library is open from 07.00h in the morning every day until 18.00h from Monday to Wednesday and until 15.00h on Thursday and Friday. The library rooms are never crowded and students can have easy access to computers (there are 4 computer stations). They use the library more to take out books to bring books home for study rather than as a place to study. There are many scientific journals, also electronic (the student can access directly from home with a password). The personnel are well trained and willing to assist the users of the library. WiFi technology is available throughout the Faculty as of summer 2009.

Most students can speak English well and they use this knowledge to read some books and journal in the original language. There is a start to "E-learning" but the Faculty does not yet fully participate, since to date only one half of resources are electronic and available for students. The students also write a university journal called "RUCTUS".

Every year, the students of all classes have to fill in an anonymous questionnaire about the quality of all those persons participating in the teaching and study programmes. The majority of students are involved since, if they don't fill in the questionnaire about the teaching quality, they are not permitted to do the examinations. Every quality is scored from 1 (negative) to 5 (excellent) points. Positive students' opinion is required for a teacher's promotion. The quality of teaching is generally acceptable for practical learning. The teachers are helpful and they have good relationships with students. They also involve students in their own fields of study.

The students participate in all important aspects of the conception of curriculum and study programme changes. Students can arrange meetings with teachers to discuss certain problems about the study (time table, exam terms, etc.).

Regular attendance at lectures and practical workshops is a prerequisite for obtaining the required attendance certification, which is good because it helps the students to be more targeted when studying.

The Faculty has laboratories in every field and students often spend time in there.

The Faculty does not request a thesis study from the students for graduation. That does not help the student in the job world or in the research field because they do not have any basis from which to develop.

All students' associations have their annual programmes to which the Veterinary Faculty gives financial support. Within the Faculty, students have a room for their activities (meetings). They have a tutorial system which assists the students in their new

environment. They can elect between teacher tutorship and student tutorship. Students have good access to the teaching staff and one teacher-tutor per class seems to be sufficient.

All the students are vaccinated in the second class against rabies.

Before the beginning of the first year, the students have to pass a course on the safety regulations for working in the laboratory.

Any candidate who hold a matriculation certificate from a secondary school and has completed grammar school can be admitted to enrol for the 1<sup>st</sup> year of academic studies of veterinary medicine. If in a regular term more than 60 candidates apply for admission, restricted enrolment would be introduced and the applicants would be ranked exclusively on the secondary school career (only those with the highest number of points would be admitted). The main problem for students is that the Faculty decides on admission taking into account a student's secondary school career without any personal interviews to assess suitability, personal aptitude and personality for this type of study.

In February, students with some members of the teaching staff, organize an educational guidance day for the secondary school student to help them make a correct choice and to inform them about the studies programme and the opportunities in the future within the profession.

The classrooms are well equipped with "tools" for specific activities.

The Faculty has also a wildlife museum which contains the most popular Slovenian animals and birds.

Turin, 28 October 2009, **Eleonora Pagliara**, *Final year undergraduate student*

## **The visitations:**

### **a. Visitation to Liege**

The report was discussed by the ECOVE with the team chairman, Prof. Marc Gogny. He stressed that the team had been pleased with the participation of the Faculty members and had felt welcome everywhere. He explained that Liege had been visited twice before, but this time it was the first time for all four Faculties/Venues, with three of them only providing bachelor studies. The team could not help noticing an obvious lack of collaboration and communication between these Faculties.

## **The following suggestions were made**

### **A) Category I deficiencies**

- Inadequate necropsy room
- Lack of adequate isolation facilities (small animals) and isolation facilities in general (large animals)

### **B) Category II deficiencies**

- Lack of steering group for the establishments
- Lack of adequate teaching and training in milk, milk products and fish
- Lack of common adequate patient recording system
- Lack of compliance with EU-legislation in housing animals on experimental farm

### **C) Other**

- The development of integrated e-learning projects between the four establishments
- Concerning animal production the curriculum should allow for more "hands-on exposure"
- Clinical sciences are well and adequately covered though the FVM might consider to still improve the situation by establishing a 24hr on duty ambulatory service
- The design and construction of the facilities and the operating practice of some parts of the sites give concern in terms of health, safety and bio-security.
- The Faculty is further advised to implement a faculty wide safety and bio-security plan.
- Establishment of a functioning central and adequately equipped clinical laboratory.
- Work towards a central pharmacy serving all clinical units
- Increase the companion animal load
- Lack of access to rabbit production units and commercial fish production, poor access to poultry production

- High number of students entering the 2<sup>nd</sup> cycle.
- The ratios R1 and R2 indicate that the 2<sup>nd</sup> cycle teaching at the FVM is somewhat below the standard of other EAEVE-approved faculties- thus reduce the number of students pouring in.

The borderlines between Category I and II and suggestions are not clear. Why for instance is Food Hygiene not a Category One Deficiency.? Bio-security is a precedent (in Bristol), for conditional approval so it should be treated the same way in Liege.

In the Executive Summary only Category 1 Deficiencies and strong recommendations should be highlighted.

Pierre Lekeux, the Dean of FVM, said that he agreed with the suggestions and many of the deficiencies have already been resolved or are on the verge of being resolved.

ECOVE decided to put Liege on the list of “Conditionally Approved Faculties” since the deficiencies are inter-related.

Pierre Lekeux applied for a revisit in January since by then, all the Deficiencies will have been removed except for the farm which will most likely be closed and then rebuilt.

***Action Point: Send the final report and a letter informing the Faculty of the result. In order not to jeopardize the transparency imposed by ENQA, the report of the actual visit will come before the report of the revisit.***

## **b. Visitation to Helsinki**

The report was discussed with Prof. Gert Niebauer, the chairman of the visitation team who emphasized that it had been a particularly pleasant and well-organised visit and that the collaboration between the stage I and stage II experts had been excellent.

Since the last EAEVE visit 10 years ago, the Faculty has undergone major changes, such as the move to new, modern facilities at the Viikki Bioscience Campus with creation of a state-of-the-Art Veterinary Teaching Hospital and 4 Departments, new professor- and lectureships in previously critical areas, curriculum developments fulfilling or exceeding requirements of EU directive 2005/36/EC (6year curriculum) and alignment with the Bologna process (ECTS, Bachelor, Master and PhD degrees), a positive evaluation outcome and compliance with the Quality Assurance Systems of the Finnish Higher Education Evaluation Council etc (for the entire list please check the executive summary)

The Faculty has clearly formulated objectives which the team found enacted and realized throughout, such as research and research-based teaching, high-standard treatment of individual animals emphasis on the “from feed to food” concept, environmental and food hygiene as an integral part of the national veterinary public health concept, high quality post graduate formation, specialization and continuing education (life-long learning concept).

In general, it can be said, that the teaching programme, staff and facilities of the Veterinary Faculty in Helsinki exceed the requirements of EU Directive 2005/36 significantly in all aspects. No Category 1 Deficiencies were identified by the team and it can be concluded, that graduates from this Faculty meet the requirement for free movement of professionals across the European Union.

As far as stage II is concerned, the Faculty has demonstrated a high degree of responsibility for and focus on quality which is monitored by means of a thorough quality assurance system. To achieve this objective, the faculty has implemented a particular control policy and associated procedures to ascertain that the quality standards of their programmes and awards are strictly adhered to. The Faculty is strongly committed to the development of a culture which recognises the importance of both quality and quality assurance. This is e.g. reflected in a clear strategy for quality and quality control as well as a strategy for continuous enhancement of quality. The strategy, policy and procedures - which stipulate the involvement of students and other stakeholders - all have a formal status and are publicly available.

The expert visitors came to the conclusion that all 12 assessment procedures listed in the guidelines are to be classified as “Satisfactory” and thus recommend the faculty to be “fully accredited”.

***ECOVE made a unanimous decision to follow the experts' recommendations on both the stage I and II levels and make the Faculty of Veterinary Medicine of the University of Helsinki the first one on the list of "Accredited Establishments".***

The report was then discussed with the Faculty representative, Prof. Antti Sukura, the Dean, who was pleased with the positive result and with the visitation itself.

***Action Point: Send the final report and a letter informing the Faculty of the result.***

### **c. Revisit to Jelgava**

MW reported on the revisit to Jelgava.

There had been five Category 1 suggestions in the report:

1. Increase the amount of practical/clinical training, based upon „hands on” training by decreasing the number of lectures
2. Develop the provision of full-scale 24hour emergency service
3. Create isolation facilities for infected small and large animals.
4. Increase by all possible means the availability of large animal caseloads for teaching students, including pasturing them in the grounds of the FVM.
5. The University and the Faculty must rectify the problem of insufficient numbers of teaching staff in some key areas, notably in animal production and veterinary public health subjects, and in practical/clinical teaching generally.

Although the school has made a lot of progress since 2003, the year of the first visit, only one of the Category 1 Deficiencies has been fully rectified (3), the others remain only partially or not solved at all.

It is suggested to the school to get external help by establishing a steering or reference committee with external members including a foreign member or two, with

all the needed competences to fulfil their goals. Young veterinarians should go abroad to see the progress of the veterinary research. To make up for the lack in sufficient research quality and output of the faculty a joint and shared laboratory for several disciplines and departments with modern equipment ought to be established in order to intensify the collaboration among colleagues.

The ECOVE decided unanimously that the School should remain on the “List of Visited Establishments”.

***Action point: Send the final report and a letter informing the Faculty of the result.***

#### **d. Visit to Ljubljana**

Prof. Luca Rossi, the chairman of the visitation stressed that several positive aspects emerged during the visit such as the good relationship between the students/teaching/support staff, the shift towards a six-year curriculum permitting additional hands-on training of the undergraduates, the modern and efficient structures and laboratories of the National Veterinary Institute, the commitment and enthusiasm of the clinical staff, permitting to overcome the logistical difficulties related to the shortage of support staff, in order to actually expose the students to an adequate caseload of all species of major veterinary interest; the animal shelter in Ljubljana, a model arrangement for hands-on training in basic surgery by all students and one of the best structured evaluation system of the teaching quality ever experienced by the team.

Whilst the team did not identify any Category 1 Deficiencies, numerous defects were identified and suggestions given in the report – almost a record (please check the Executive Summary for details)

ECOVE thinks that:

- Case load not high enough

- Staff is not abundant, many work in National Institutes, so they have a double function
- Inefficient equipment
- Research not a priority
- Not all aspect of food aspects are covered
- Teaching of pig production (on the borderline to cat 1 deficiency)
- Animal nutrition not well covered
- They have a shelter, but it is not the same as being confronted with emergency cases.
- Lack of 24 service

The numerous suggestions are put in since it is a Faculty belonging to the former Eastern block – for them to rectify them. It seems better to give such Faculties Conditional Approval, as they will be more ambitious in trying to abolish problems.

However, it is observed that not the same kind of wording and measurements are used for all Faculties – harmonizing our wording will be one of the tasks of CIQA. Recommendations should be made to resolve deficiencies.

The Chairman, on behalf of the team, had stated that the recommendation to ECOVE would be that the Ljubljana Faculty should retain its “approved” status.

ECOVE took into account the Category 1 Deficiency concerning the absence of a 24-hour 7 days per week service for small animals and recommended that the other strong suggestions made by the Visiting Team, sometimes called Category 2 Deficiencies, be taken just as seriously. As a result, it decided unanimously that the School should not keep its “approved” status, but be granted “a Conditional Approval”, which requires a re-visit within a 2-year period to confirm that the Category 1 Deficiency has been resolved.

***Action point: Send the final report and a letter informing the Faculty of the result***

MW closed the meeting at 1pm.

20. Jan. 2010

U. Deimel