

European Association of Establishments for Veterinary Education
Federation of Veterinarians of Europe
European System of Evaluation of Veterinary Training

**REPORT ON THE VISIT TO THE SCHOOL OF
VETERINARY MEDICINE OF THE HEBREW UNIVERSITY, JERUSALEM, ISRAEL**

February 21 – 25, 2011

by the EXPERT GROUP

HORIN Petr, Brno, Czech Republic

Visitor on Training in Basic Sciences

GOGNY Marc, Nantes, France

Visitor on Training in Clinical Sciences (Academic)

ROMANO Giovanna; Turin, Italy

Visitor on Training in Clinical Sciences (Practitioner)

WANNER Marcel (*Chair*), Zürich, Switzerland

Visitor on Training in Animal Production

NESBAKKEN Truls, Oslo, Norway

Visitor on Training in Food Safety

KOHLER Martina, Zürich, Switzerland

Student Member

NIEBAUER Gert, Vienna, Austria

EAEVE Programme Coordinator

CONTENTS

Introduction

1. Objectives
 2. Organization
 3. Finance
 4. Curriculum
 - 4.1 General Aspects
 - 4.2 Basic Subjects and Sciences
 - 4.3 Animal Production
 - 4.4 Clinical Sciences
 - 4.5 Food Safety
 - 4.6 Professional, Elective, Optional and “Other” Subjects
 5. Teaching Quality and Evaluation
 - 5.1 Teaching Methodology
 - 5.2 Examinations
 6. Physical Facilities and Equipment
 - 6.1 General
 - 6.2 Clinical Facilities and Organization
 7. Animals and Teaching Materials of Animal Origin
 8. Library and Educational Resources
 9. Admission and Enrolment
 10. Academic Teaching and Support Staff
 11. Continuing Education
 12. Postgraduate Education
 13. Research
- Executive summary
- Annex 1 Indicators*
- Annex 2 Listing of Major Deficiencies as decided by ECOVE*
- Annex 3 Student`s Report*

INTRODUCTION

The Koret School of Veterinary Medicine (KSVM) of the Hebrew University of Jerusalem is the only establishment to form veterinarians in Israel. The School was founded in 1985, receiving academic help from abroad and substantial international funding, especially from the United States. Many senior lecturers and founding members of the Faculty were trained in the US. The School's operating principle is therefore closely related to the North American style of veterinary academic teaching and research. Close ties are maintained to the US and to other faculties abroad through academic exchanges, funding, donations and research projects. Professionally, geographically and culturally the School, of course, is closely linked to Europe and to the Middle East. The Faculty therefore inspires stronger integration into the European family of veterinary establishments and is since many years member of EAEVE. This is the first full on-site EAEVE/FVE visit to the School.

1 OBJECTIVES & STRATEGY

1.1 Findings

The objectives of the School are clear, comprehensive and are published. Being the only veterinary school in the country, formation of the best possible veterinarians to fulfil all needs of the Israeli society is priority. This goal shall be achieved not only through high class education and formation in areas listed in the EU directive 2005/36, but also through excellence in research with high international profile. Furthermore, the School aims to contribute strongly to the worldwide increasing and challenging needs to "feed the world". Under the same roof, the Faculty of Agriculture has already contributed significantly to this goal and is continuously developing new tools for increasing plant borne food production for animals and man. A synergistic approach to this global strategy is a high staked objective.

The School strives to be a centre of excellence and of reference for veterinary education and research in the entire Middle East region and inspires to be ranked among the very best veterinary schools in the World. In fact, Hebrew University today is listed among the best 100 universities worldwide.

1.2 Comment

The entire staff of the School, and above all the leading administrative members leave no doubt that these "Objectives & Strategies" are and will be followed indeed. Strong motivation, enthusiastic execution of duties and a profound feeling of belonging characterise all colleagues and students and seem to be an assurance for continued efforts to achieve these high set stakes.

1.3 Suggestions

Efforts for further integration into the European style of veterinary education laid down in the EU directive 2005/36 will require further adaptations to the needs of these societies, especially in the area of food animal production and food hygiene. Since common standards

of the graduates of all EAEVE/FVE-approved establishments shall be the ultimate goal, increased awareness of those needs and appropriate adaptation is recommended. That is, the Schools objectives of excellence in teaching should comprise all common domestic and food animal species, and teaching, including animal welfare teaching, should become completely unlinked of any possible restrictions by local customs or by religious believes. Scientific evidence shall be the only driving factor for teaching, as well as academic freedom is, without doubt, our common and most treasured guideline.

2 ORGANISATION

2.1 Findings

The KSVM is an autonomous part of the Robert H. Smith Faculty of Agriculture which in turn belongs to the Hebrew University of Jerusalem. Serving the needs of a relative small country, the School enrolls annually 55 students. The School has complete financial autonomy and shares with the Faculty of Agronomy (besides integration of research) some administrative tasks and lecture rooms in the Rehovot campus. On this campus, the basic sciences teaching takes place and the central administrative offices of the School are located there. The clinical facilities (the Veterinary Teaching Hospital) and the School's dairy cattle farm are located on a different campus, shared with governmental veterinary services and research laboratories, located 10 kilometers away at the Ministry of Agriculture Centre in the city of Rishon Lezion. The two sites ("Departments"), although physically separated, are closely linked by sharing teaching staff and administration, by a shuttle bus service for students, a common intra- and internet link etc. The Schools decision making committees and bodies are efficient and effective with all faculty members being represented with the exception of the technical support staff.

The Curriculum Committee for instance is not only responsible for the Doctor of Veterinary Medicine (DVM) degree program but also has influence on the veterinary science-related extent and content of the basic science teaching in the bachelor program. Besides this Curriculum Committee, each study year has a committee (year committee) dealing with any teaching related topics of the respective class.

Committees, not often seen in traditional European Schools are: Graduates Students Committee, Academic Planning and Development Committee, Subcommittee for Clinical Research, Final Dissertation Committee.

2.2 Comments

The main organisational differences to the "common European School" organisation will be described and evaluated in the respective chapters: that is, a veterinary curriculum consisting of a 3 year undergraduate bachelor degree training and a 4 year postgraduate DVM degree course in veterinary medicine (see chapter 4.1); a budget where research funding and investment funds for facilities and equipment depend largely on grants and donations (see chapter 3). The Committee structure is well developed and efficient.

2.3 Suggestions

Take corrective actions if members of the support staff are indeed underrepresented or not represented in the respective committees.

3 FINANCES

3.1 Findings

The School is integral part of the Faculty of Agriculture, nevertheless the School benefits of complete financial autonomy. That is, all funds and income received are administered, kept and used by the School. Overheads are paid to the Faculty and the University; for instance, in exchange for services rendered by the Faculty (security, power supply etc.) 7,5% of the overall budget and 20% to the University from external research grants. There is no deduction for hospital income which remains completely under the jurisdiction of the Hospital administration. The Hospital is a non-profit organisation and is free to use and invest any positive balance of the revenues generated through services. Regular funds from the University (governmental funds) are distributed to the School by a complex mechanism which is largely based on performance in every aspect (research, teaching, graduating students, grant allocation). Based on this formula, the School received last year the maximum allowable budget increase of 15%. The fund allocation is presently approximately €12000 per student and year.

The system of external funding is strongly developed and is the basis for many investments; there are no regular funds available in the budget for expenses such as building new facilities or purchasing and upgrading equipment. The fund raising tool (donors, private and public as well as the industry) and the generation of funds through research grants are highly successful, providing financing of several important projects. Among them, the building of a new emergency and critical care facility and the purchase of a MRI unit including its housing has been assured by external funds. A 5-year financial plan foresees major improvements in the clinical area, including the equine surgery facility. For that, fund raising from private and public donors and international sponsors is being anticipated.

All students in Israel (at all universities) pay a flat tuition fee of €2600 per annum.

The promotion system for teaching staff is strictly linked to performance. There are no financial restrictions or any limitations based on available positions for promotions. Funding for salary increases are commensurate with promotions and will be assured by the university administration by adding it to the allocated School budget. A financial support system is in place to compensate for expenses occurring during travel and attendance of national or international meetings and congresses. This contribution is paid regardless whether or not congress travel is effectuated and teaching staff receives, commensurate with seniority, between €2500 and €5000 per year.

Special funds are available as incentive for Israeli citizens returning to the School after training and/or graduation abroad.

The School is actively participating in a 3-year program for the formation of veterinary nursing staff, which generates some additional income, as does the organisation of continuing education meetings.

3.2 Comments

The strong emphasis on fund raising has a very positive impact on research and investments, implements the schools budget significantly and compensates for cuts in the allocated budget. Nevertheless, several, especially clinical areas, need urgently major investments; examples are: the necropsy facilities, isolation units and the equine surgery suite. Other areas such as the small animal clinics are over 20 years old and need soon major investments.

3.3 Suggestions

Funds are urgently needed for improvements of the necropsy and isolation facilities, which are both considered a potential bio-safety and bio-security hazard. Investment into the surgery suite for horses is strongly recommended as proper asepsis is not guaranteed under present circumstances on one hand, and on the other, investments in this area will likely generate higher revenues.

4 CURRICULUM

4.1 General Aspects

4.1.1 Findings

The curriculum is composed of two cycles, the first one of 3 years which earns a Bachelor degree in Life Sciences and the second cycle of 4 years which culminates in the Doctor of Veterinary Medicine. The first cycle may be studied at any of the Ministry of Education approved universities in Israel but the Koret School of Veterinary Medicine has an influence on the syllabus of this first cycle. This ensures that the bachelor's degree is of similar standard and academic content in all participating universities. The second cycle which has to be completed exclusively at the Koret Vet School consists of 6 semesters theoretical and practical training and a fourth year consisting of 12 full months of exclusive clinical work. Among the training all the students have to complete a research project which is equivalent to the thesis required for the master's degree.

There is no defined national curriculum. The Curriculum Committee of the School is responsible for defining the goal and the content of the curriculum and for setting the standards. This committee is supported at first by the School Admission Committee which deals with the admission criteria and the admission of the students. Then there are the so called Year Committees for each academic year dealing with academic issues of the specific year or class. Another committee is in charge of improvement of teaching quality, of lecturer evaluations, clinical teaching evaluation and of mentoring of new teachers.

4.1.2 Comments

The objectives listed in the EU Directive 2005/36 are covered by the curriculum.

There is absolutely no disadvantage that the curriculum is not fixed by the Israeli law. On the contrary the School can react faster on the changing needs of the society and the profession.

Teaching is research based and the students are also actively involved in research without any negative effects on the practical side of training.

After the 3 years bachelor cycle the core veterinary curriculum lasts 4 years. The study is very intensive with more than 1100 hours per year of theoretical and supervised practical training in the first 3 years of the DVM cycle. The fourth and last year consists of 12 months (= 3.5 semesters) of exclusive clinical work. It means that the core veterinary curriculum lasts 9.5 semesters but with many more weekly hours of contact time than in most (or even in all) of the European faculties. Therefore the Israeli vet curriculum can be considered equivalent to the 5 year curriculum as it is required in the EU directive 2005/36.

There is no doubt that the Koret Vet School is offering an excellent curriculum and the graduates of this school are well trained to enter the labour market. A caveat is, however, the marginal practical training in pig medicine and in food hygiene and animal welfare issues related to this species.

4.1.3 Suggestions

The workload of the students should be reassessed.

The ECTS should be adapted to the European standard (details see 4.2.3). Overall teaching in the porcine species has to be increased.

4.2 BASIC SUBJECTS & SCIENCES

4.2.1 Findings

Basic subject teaching like animal and plant biology, cell biology, statistics, physics, physiology, biochemistry, English, immunology, endocrinology, genetics, microbiology and biomathematics is extensively performed as part of the bachelor degree course (3-years duration). Based on the SER, the students should be able to understand fundamental biological principles and mechanisms at the molecular and cellular level. Basic science courses given during the first and second year at the veterinary school deal with living organisms from the cellular level to organs and body system, to the animal as a whole and to animal populations. Local and global epidemiology is also taught as part of the basic sciences course. The first year of the veterinary core curriculum is dedicated to studying and understanding the normal structure (anatomy, histology and veterinary embryology) and function of physiological systems (veterinary physiology, nutrition, and immunology). In the second year, students acquire knowledge of pathological processes, pathophysiology of different diseases (pathology) and biology of infective agents, and their vectors and basic

pharmacology (toxicology including environmental pollution, microbiology including virology, bacteriology and mycology and basic pharmacology).

In the 4-year DVM curriculum, which is basically “all clinics”, few lectures, some self-directed learning and laboratory practicals are used.

Pre-clinical practicals are being used only for anatomy, histology, entomology and parasitology. In anatomy, there are no pigs used as teaching material. Laboratory-based practical training is missing as part of the DVM curriculum in microbiology, toxicology, epidemiology, embryology, physiology and clinical immunology.

4.2.2 Comments

The 3+4 year curriculum is similar to the US higher education model. According to the current SOP (1.4.2. Study programme, Basic subjects), *“Instruction in basic subjects (physics, chemistry, animal biology, plant biology, biomathematics) may be given as part of, or in association with, other disciplines of the veterinary course. They could also advantageously be taken prior to entry to the veterinary course. These subjects should provide a solid background in chemical, physical and biological sciences, with the objective of preparing students for the subjects to one taught later in the veterinary curriculum”*.

It is somewhat difficult to judge based on the SER about the preparedness of students entering the DVM programme. During the visit, the team was provided with additional materials, especially syllabi of the BSc. programme (annexed to the ER) and with information on the quality of incoming students, (based on teachers’ personal information). Based on this, it seems that the students have indeed adequate basic knowledge. In some subjects, like physiology, students have to pass an interim examination to reach equal level of competency for students coming from different schools. In others, like cell biology, the general level is very good as assessed in specific veterinary courses (e.g. histology).

There is a permanent interaction between the Koret School of Veterinary Medicine and the Department of Animal Science and other schools in terms of the BSc. programme preparation and teaching. Some teachers from the Department of Animal Science teach in the veterinary courses as well and vice versa. For the Department of Animal Science, it is often the same person teaching in both programmes. So the impact of the school on the BSc. programme and on the quality of the students entering the DVM programme seems to be direct, flexible and significant.

The balance between practical and theoretical work seems to be adequate for the BSc. programme, while in the DVM programme, in some subjects, like virology or bacteriology, there is no practical (laboratory work) teaching. Nevertheless, practical teaching and laboratory work in microbiology is an integral part of the Bachelor of Science programmes.

The ratios characterizing the curriculum were apparently calculated based on the DVM programme and so they are not fully informative in terms of basic science teaching.

While the BSc. programme is only partly veterinary-oriented, the basic subjects taught in the DVM programme are fully shaped for the purpose of the veterinary curriculum.

4.2.3 Suggestions

As the direct teaching load is very high, less lectures and more self-learning and e-learning should be considered. These changes should also be reflected by calculating correctly the values of ECTS credits (1 credit = 25 hrs of the total workload including contact hours and self study to prepare the exam, 30 credits per semester). Less direct teaching would also allow increasing the proportion of specialized practical work in some subjects, like virology, bacteriology.

All changes of the DVM curriculum should always be coordinated and eventually reflected by appropriate changes in the BSc. programmes. Any possible alternatives, while (fully respecting the principles of academic autonomy, for a more formal basis of interactions between the Koret School of Veterinary Medicine and the 5 universities offering the BSc programmes in this field shall be investigated and sought.

Pigs as teaching material should also be used in anatomy in order to better prepare students for clinical subjects dealing with pig diseases.

More vertical as well as horizontal interactions between teachers of different subject are recommended for increasing the integrity and coherence of the curriculum as a whole. So far, such coordination has been rather informal.

4.3 ANIMAL PRODUCTION

4.3.1 Findings

The term Animal Production is used to describe the entire discipline of breeding, rearing and disposal of food-producing animals and their products by sale, slaughter for food or as waste. Tuition must cover the major food-producing species. The livestock population (the following numbers are from 2009) in Israel is very small: 340,000 cattle (120,000 dairy cows with an average milk yield of 11,000 kg/year), 550,000 sheep, 70,000 goats and 102,000 pigs. The production data show also that 1.5 billion eggs, more than 320,000 tons of chicken meat and 125,000 tons of turkey meat are produced in 2009.

Teaching in animal production is focused really on the needs of this primary production especially of milk production. The students have an intense training in dairy cow medicine (individual medicine and herd health), they are familiar with the basic principles of feed and feeding techniques and also with questions about breeding. The students start on day one of the first year and are confronted with animal production including visits to farm animal facilities and hands on experience through the whole curriculum.

In the first year theoretical and practical training include courses in animal production and management, farm animal nutrition, farm animal welfare and hands on experience to provide the student the confidence to handle domestic animals safely and ability to carry basic tasks in animal management, breeding and rearing. During the first year, students are also participating in instructed rotations at the "Volcani dairy herd" participating in milking duties and general farm duties.

In the second year, the students intensify their skills by hands-on experience and training in farm animals handling, treatments administration and sampling procedures. Students are trained on-farm to collect case history, clinical and epidemiological data (including digital data) and biological samples for laboratory analysis. This training is complementary to 6 hour lectures in clinical pharmacology of farm animals introducing the students the concepts of prophylactic and individual treatments in food producing animals taking into consideration

important issues such as economics and cost/benefit calculations, residues, animal welfare and consumers and public awareness of health and environment.

Most of the specific clinical teaching in farm animals is done during the third year. Students get to visit farm animals' facilities (dairy, feedlots, sheep farms and porcine breeding and production facilities) around the country as part of the course. Teaching is well coordinated with courses in animal production and management, nutrition, zoonotic diseases, epidemiology, public health and food technology, which are inextricably related to the clinical teaching in farm animals.

In the fourth year of the veterinary curriculum, students spend a minimum of 14 days, highly intensive, around-the-clock clinical rotation with 4 staff veterinarians. In this rotation major emphasis is devoted to farm management, breeding and reproduction, nutrition and herd health. During this rotation the students are also familiarized with farm management software and they perform instructed analyses of health, reproduction and production indicators.

4.3.2 Comments

There is a dairy farm available to the vet school in a walking distance from the teaching hospital where the students learn to handle cows. Later on the students have an intensive training on farms and they are really faced with all the problems of animal production. So the balance between lectures and practical teaching is switched to practical work.

A part of animal production is taught in the BSc-cycle such as animal production systems and environmental pollution, dairy and beef cattle husbandry and environmental consequences of ruminants feeding. During the vet curriculum the students can apply this knowledge during the farm visits.

A special attention is also given to animal transportation and to the principles of certification because Israel is importing a lot of animals.

4.3.3 Suggestions

The students have to learn more about veterinary hygiene. It is unacceptable that they work in outdoor clothes without any professional clothing on the farms.

Pig production especially in the northern part of Israel seems insufficiently controlled by veterinarians and animal welfare issues may be present there. Although the team could not verify this on-site, we received compelling information about such inadequacies and it is therefore strongly recommended that the Koret School assumes responsibilities for proper animal rearing and for welfare issues in this species.

4.4 CLINICAL SCIENCES

4.4.1 Findings

With exception of the pig species, the clinical sciences are fully covered with a very high standard of teaching. All different disciplines are well integrated and coordinated, perhaps more so than in many central European faculties. One of the reasons is that some basic sciences, for example physiology and part of pharmacology, are taught by clinicians, so that they easily can organize a proper and adequate pedagogic progression. Another reason is the very fluent and efficient collaboration between the different teachers and staff. Problem-oriented and research-based teaching is used throughout.

The theoretical aspects of the clinical sciences are gradually introduced from the 1st to the 3d year. The hands-on exposure is excellent, either by a very appropriate caseload compared to the number of students (see chapter 7 for data and ratios) or by the total number of clinical teaching hours (nearly 2500 h). The 4th year is totally dedicated to clinical training, with 25 two-weeks clinical rotations (i.e. a full year of 50 weeks with only two weeks for holidays). Furthermore, third-year students spend one full day a week at the veterinary hospital.

Most of the extramural training takes place in the last and clinical year. Between 15 to 18 out of the 25 clinical rotations of the fourth year are performed within the veterinary teaching hospital, 7 to 10 of them (two weeks each) are held in extramural facilities (table 4.5 of SER), providing hands-on exposure in production animals that are not accepted in the teaching hospital, together with the Hahaklait organization (ruminants) and other structures for poultry and pigs. Students are so exposed to major cases and surgical operations in the bovine species.

An emergency service is offered through the veterinary teaching hospital on a 24/7 basis all throughout the year, in small animals, horses and farm animals. The veterinary teaching hospital is dedicated to small animals and horses only, but good hands-on training on farm animals is given.

There is no well defined day one skills checklist, although some departments, for example surgery, use a blackboard to ensure that each student is exposed to a fixed number of given operations like cat spaying, ovariohysterectomy and so on. Such a checklist was appreciated by the team, but its absence in other departments was not considered as a concern, due to the high caseload in the hospital combined with the impressive number of Diplomates from American - European speciality colleges and Israeli national specialists. All clinical disciplines are covered.

Students are covered by a liability insurance for all their different activities during their education, wherever they are.

The facilities and organization seem very adequate to allow a good training. The teaching staff includes an impressive number of EC or AC Board-certified Diplomates and a few Israeli national specialists. The support staff is well trained and motivated. The clinical caseload in the small animal clinic is impressive and is good in the horse clinic and farm animals. The necropsy caseload reported at the Kimron Institute is high with good balance between species (pigs included) since this is the referral necropsy center for the full country. On the other hand the necropsy facilities need major revision and refurbishing (see chapter 6). The small animal facilities are well organized but need new spaces which have already been discussed and put in project (new ICU). The horse facilities are badly organized with no effective separation between the departments (surgery, internal medicine, reproduction) and

the isolation unit. There is no definition between areas open to the customers or to the staff only, new arrivals examination area and operative rooms. This topic is further developed in chapter 6 but could have consequences in the students education.

As a conclusion, the team has seen a very efficient small animal hospital with numerous dogs and cats, some exotic animals. The horse hospital is decent, and the arrangements made to allow student's exposure to clinical cases in farm animal (except pigs) are correct.

Since the academic year 2010/11 twelve hours of porcine medicine teaching are included in the farm animal medicine and surgery course, given to the third year class. This course includes 2-day compulsory excursions to pig farms and a porcine slaughterhouse. Lectures about swine-borne pathogens and zoonotic diseases transmitted by swine are included in other courses (such as zoonoses, microbiology, virology and parasitology). In addition, yet on a voluntary basis, visits to pig slaughterhouses are organised for 4th year students as part of Public Health teaching.

4.4.2 Comments

The Koret School of Veterinary Medicine puts great emphasis on the practical clinical education of students since the first year of the second 4 years period in the curriculum with the aim of really prepare them to be able to approach and solve clinical/surgical cases upon graduation. All the staff is dedicated to this project and takes it very seriously even if the work load for clinicians is very heavy due to their need to perform significantly even in the research field. However, four comments can be raised :

- despite of an important number of pigs being grown in Israël (>100.000 per year are slaughtered, that is more than cattle), the number of theoretical lectures, the lack of practicals and the scarce clinical training in this species are not in balance with the teaching time devoted to the other species.
- small animal reproduction and biotechnology was not fully covered at the time of the visit ;
- in some other departments, the academic staff is reduced to one person, leading to an overcrowded clinical load and a possible long-term demotivation ;
- the problem-based approach does not seem to be used by all teachers.

4.4.3 Suggestions

Increase the overall teaching delivered and introduce mandatory clinical rotations in the pig species.

As far as possible, add staff in some departments (for example senior staff in reproduction and diagnostic imaging, and junior staff in cardiology, dermatology, oncology ...) whose positions have to be partly or fully paid by the corresponding increased income.

Reduce the theoretical teaching hours during the first three years by a systematic use of the e-learning platform and an increase in self-directed learning and problem solving.

4.5 FOOD HYGIENE & TECHNOLOGY AND VETERINARY PUBLIC HEALTH

4.5.1 Findings

The topics regarding food hygiene are taught as lectures on-site by lecturers that are experienced DVMS, but none of them has a PhD whether in food hygiene or related topics. The co-ordinating teacher is not a food hygienist, but an epidemiologist. There is no laboratory course within food microbiology. Lectures are mainly internal on-site, and as external practicals in the rotation.

Practical aspects related to slaughtering and processing of fish, meat, poultry are taught during the two-weeks (10 working days) mandatory rotation in the 4th year:

During this rotation students undergo training in slaughterhouse management over a 2 day period, including ante mortem and post mortem examinations of domestic animals and poultry (but not pigs). The students acquaint only practical experience of the particular methods of kosher slaughter without stunning as prescribed by religious rites.

Training in detail:

- training in slaughterhouse management: 2 days (including ante- and post-mortem inspection)
- municipal veterinarians: 3 days zoonotic diseases related to meat and companion animals (quarantine centres and butcheries) including HACCP
- one day: Government approved laboratory (bacterial sampling of meat) and meat import and export control
- two days: Ministry of Agriculture, veterinarian – routine testing etc.
- one day: Control of fish industry

The student's grade received in the rotation is based on participation, quality of the seminar and HACCP project presentation.

4.5.2 Comments

Teaching in practical food microbiology is not based on a laboratory course. In total the curriculum for food microbiology (in particular), toxicology (connected to food) and food technology appeared to be limited. The introduction of laboratory practicals in food microbiology would help to strengthen the course and ensure that it fully meets the EAEVE/FVE requirements for VPH and food hygiene.

All students have training in the slaughterhouse in poultry, cattle and sheep, but are not trained in ante- and post-mortem inspection of pigs. Related to the findings, the students have only practical experience with religious slaughtering and not with slaughter methods

involving stunning before killing. This may create a compromised and biased perception of animal welfare of which veterinarians bear the main responsibility.

4.5.3 Suggestions

Since the teaching should be science and evidence-based, the teachers in charge should have at least a PhD (or be Board-certified) within food hygiene and veterinary public health. To ensure that these topics are more focused, a professor in food safety/food hygiene should be appointed.

The students should be taught about slaughtering of animals as defined by the “Council regulation (EC) No 1099/2009 of 24 September 2009 on the protection of animals at the time of killing”: Both standard slaughtering with stunning (article 4.1) and ritual slaughtering at slaughterhouses (4.4) should be presented to students in technical terms as well as from the animal welfare perspective. Risks and negative aspects of both ways of slaughtering should be objectively presented to students as a veterinary and welfare problem, which the veterinary profession is confronted with.

5 TEACHING QUALITY & EVALUATION

5.1 TEACHING METHODOLOGY

5.1.1 Findings

Clinical teaching takes place in small groups and often on a one/two to one basis with the clinician. Students are fully involved in the management of their cases under suitable supervision. The new 3rd year course (“Clinical Experience”) was recently introduced to better prepare the students to the full clinical year. It is a good initiation to the overall organization of the departments, a progressive learning of some technical skills and above all a good overture to clinical thinking. This course can be considered as an excellent improvement.

The interns and the residents have regular roundtables on clinical cases, and the residents also participate in almost all departments to journal clubs.

5.1.2 Comments

In general terms, teaching quality and evaluation at the Koret School of Veterinary Medicine seem to be of high standard and comparable to other high standard European schools.

5.1.3 Suggestions

Open some journal clubs to 4th year students, if possible in the timetable.

5.2 EXAMINATIONS

5.2.1 Findings

During the clinical year, students are examined at the end of each rotation. Three different aspects are graded: knowledge and reasoning, behaviour and skills. This system is efficient. At the end of the clinical year, the final exams (previously "OSCE"s and now MCQs followed by an oral case-based exam) are thoroughly organized.

5.2.2 Comments

No comments

5.2.3 Suggestions

No suggestions

5.3 EVALUATION OF TEACHING AND LEARNING

5.3.1 Findings

The Hebrew university of Jerusalem is running an efficient system asking students to assess the quality of teaching. Each teacher is evaluated on an individual basis and receives the results. The best teachers is awarded a congratulation letter from the university, and the best five teachers receive a letter of merit from the dean each semester, whereas the poorly evaluated teachers are convoked to consider solutions to improve. As the career in Israël is strictly related to both scientific output and quality of teaching, academic teachers are striving for excellence. Such a system is not so clearly defined for clinicians, paid by the VTH.

The curriculum committee tries its best to increase the proportion of students filling the questionnaires.

Moreover, the favourable student to teacher ratio makes easy and fluent the communication, so that informal information can be obtained in that way. The curriculum committee and the year committees are involved in finding solutions to problems that can be raised.

Interns are not asked to evaluate their rotations.

5.3.2 Comments

According to the simple principle that any formation has to be evaluated, all clinical rotations should be formally evaluated. This applies to 4th years students, but to interns too.

5.3.3 Suggestions

Improve the evaluation of each clinical rotation by students and interns.

6 PHYSICAL FACILITIES & EQUIPMENT

6.1 GENERAL ASPECTS

6.1.1 Findings

The Koret School of Veterinary Medicine is situated on 2 sites: the Robert H. Smith Faculty of Agriculture, Food and Environment Campus in Rehovot and the Ministry of Agriculture Campus in Rishon LeZion. The 2 campuses are about 10 km apart.

There is a newly constructed building of ~4,000 m² on the Rehovot Campus with administrative headquarters of the school, laboratories of anatomy and histopathology, research laboratories, level P3 laboratory animal facilities, faculty offices and three classrooms for about 60 students each. The main library, computer and multimedia classrooms are also located here.

The Ministry of Agriculture campus is the site of the Government Veterinary Diagnostic Laboratories (Kimron Veterinary Institute) and the Government Horticultural Research Institute (Volcani Research Institute). Adjacent to these institutions is the Veterinary Teaching Hospital of the Hebrew University of Jerusalem. The facilities available for teaching and research are:

The Kimron Veterinary Institute: library, post mortem and pathology facilities, department of poultry diseases, diagnostic departments (department of parasitology, department of microbiology and toxicology), pharmacology and food contaminants lab.

The Volcani Research Institute with a dairy herd, milking parlor and a flock of sheep.

Rooms and labs for histology, histopathology, necropsies, and dissection as well as computer rooms are available. The major histology lab has 57 seats, and is equipped with 36 computerized microscopes with projection and distribution facilities. Due to a reduction in laboratory work and due to relatively low numbers of students, there are only few facilities used for undergraduate teaching in the new building.

6.1.2 Comments

The new facilities are adequate and provide good teaching and learning environment. However, the necropsy facility is very poor and clearly insufficient in terms of security measures, hygiene and waste management. Facilities at the Kimron institute were not primarily facilities constructed for teaching, so we can understand them as diagnostic labs rarely used for teaching. Only students working on DVM or PhD. theses come to these laboratories.

Lecture and computer rooms are adequate; in most of them there are enough seats for a whole year.

The disadvantage of two different campuses is clear in terms of time and costs needed for transportation as well as of a sub-separation of clinical and basic sciences/research staff (although here, an effort to overcome is strong, each clinician has a research tutor and the movement between the two facilities is quite intense).

6.1.3 Suggestions

The necropsy room and the related facilities (changing rooms) must be reconstructed urgently. Immediately, more strict safety and biosecurity measures should be implemented.

The school should think of establishing at least one teaching laboratory for increasing the proportion of practical teaching in some pre-clinical and para-clinical subjects (veterinary-oriented microbiology, toxicology, pharmacology).

6.2 CLINICAL FACILITIES & ORGANISATION

6.2.1 Findings

The veterinary teaching hospital (VTH) is divided in two sections. The small animals section is devoted to dogs and cats, although some other companion or exotic animals are received too. The large animals section is quiet exclusively designed for horses. The students are exposed to the other farm animals species during external rotations. Dairy cows (170) and sheep are present for teaching and research purposes in the Volcani Institute close to the VTH. Beef cattle, poultry and pigs need visits and/or rotations in farms/plants in partnership with the Vet School.

Both sections in the VTH are divided in departments which correspond to European/American specializations. The number of specialists has already been pointed out as excellent. All topics are covered, with three exceptions:

- pathology, including necropsy diagnostics are taught in the Kimron Institute near the VTH, altogether by people from Kimron and by a specialist appointed by KSVM.
- small animal reproduction is not yet fully covered. It should be the case in a near future, by a full time position for the ACT (American College of Theriogenologists), specialist already working part-time in the Large Animal Clinics (one day/week).
- dentistry is taught only within surgery courses and not as a separate topic

Laboratory diagnostic is done both in the VTH (biochemistry, haematology, endocrinology) and at the Kimron Institute (microbiology).

The Veterinary Teaching Hospital was built in the late 80's, so that the Vet School has to cope with that age. The School tries to maintain the clinical facilities under constant evolution. Some of them have been adequately renovated, and offer a good standard. However, some of them need complete updating and refurbishment as is, for example the Intensive Care Unit, which will be rebuilt in the next future. The hospitalisation cages for dogs and cats have been separated and seem to fulfil their role. Despite of a lack of a fenced area to walk the dogs being kept in the hospital, near the cages, the overall equipment and organization of all small animal departments is good if not excellent. The team has to outline, just as an example, the presence of two hemodialysis units, which run much more than expected with specific staff.

Horse department's facilities are borderline with overlying facilities for the different departments and lack of organization of space and protocols. Surgery, internal medicine and theriogenology cases are mixed. The disinfection protocols are lacking and the waste

management needs to be upgraded. Clients and owners are coming across the clinic from any entrances. Owners, visitors and students (and cats) flow uncontrolled among the facilities. The surgery room needs renovation and the surgery table has to be updated. The equipment is basic.

All departments are working throughout the year and an emergency service is organized 24/7. Rooms for students and interns are available with five beds, a kitchen and a bathroom. This place needs renovation too, but is not considered as a priority as there is so much cases that the students have no time to sleep.

The medical records system is still paper-based.

6.2.2 Comments

In terms of biosecurity and prevention of spread of infective diseases, the overall impression on the clinical departments is a general need to better organize the public areas and the areas with limited and restricted access and to display hygiene and biosecurity procedures including disinfecting procedures.

The necropsy room in the Kimron Institute is below the contemporary biosecurity requirements. The floor and walls are antiquated and cannot be easily cleaned, the equipment needs updating but above all, the clean and dirty path have to be separated. Students and staff should not have to walk outside the room to get changed, walking across a road, a lawn and dirt where other people and cars have access.

The isolation facilities (small animal and horse clinic) are present, but need to be better adapted with separation of clean and dirty track and clear labelling of areas, materials and procedures, with restricted access for people and animals (including cats living in the VTH).

6.2.3 Suggestions

Write a general biosecurity manual applicable to staff, students and visitors, including procedures for the VTH, but also for all other sites where teachers and students are supposed to go. All relevant procedures have to be displayed and observed.

Consider with Kimron Institute any solution to renovate or rebuild the necropsy facility, with easily cleanable floors, walls and equipment, with disinfection procedures and with clear separation between clear and dirty paths.

In the VTH, define a dress code or any way to clearly identify medical staff, support staff and students or visitors. During working time, everybody should wear a blouse (or an adapted overalls) and button (or zip it) properly, including identifying badges.

Label limited and restricted access areas (using for example coloured lines on the floor).

Use disposable clothing in the isolation areas, clear labelling of dangerous items and wastes, and manage to separate clean and dirty paths.

In the horse clinic, split the reproductive section including physiologically healthy mares, foals and stallions from the surgery and medicine cases (stalls ,laboratories, examination room). Clearly identify the horse access area to the hospital (reception area) and the first examination room and restrict the access to the other facilities to clients.

Create a proper track for equine lameness examination.

Implement a computerized medical records system, as planned, with procedures designed to ensure quality of retrievable data for further use in clinical research.

7 ANIMALS & TEACHING MATERIALS OF ANIMAL ORIGIN

7.1 Findings

Animal sources for clinical teaching: dogs, cats (big caseload), horses and some exotics are referred to the Veterinary Teaching Hospital. Farm animals included poultry are provided by the Volcani Institute within the campus and by the ambulatory teaching service which is very efficient. Our overall impression is that the clinical caseload in all species (except living pigs) is very good and all the staff puts great emphasis in providing that the students get real hands-on practice. Doctors, many of them AC or EC diplomates, are teaching frontal lectures as well, in this way keeping a very good contact between theory and practics. No pigs are clinically treated but a good number (100-200 cadavers) get to the necroscopy in the Kimron Institute.

The dairy herd and the flock of sheep of the Volcani Institute adjacent to the Veterinary Teaching Hospital are available to the Koret School of Veterinary Medicine and used for teaching purposes.

The ambulatory teaching clinic gives veterinary services to 8 dairy farms (between 200 and 500 lactating cows each) in the area of the school. There are also 2 feed lots which raise bull calves from the dairy herds ranging from 40-250 head.It is very efficient and and closely linked to the faculty in the teaching curriculum. The balance between small and large animal clinical cases is fully respected.

Necroscopy caseload is adequate in all species including pigs. Cadavers are referred to the Kimron Institute for necroscopy from the all country since it is the only referral centre. The caseload as seen in the record is very good with hundreds of cadavers for each species. Poultry necroscopy is performed at the poultry Kimron center in the same establishment.

Anatomy lessons are performed on preserved specimens/sections for large animals and cadavers. Specimens for anatomy come from municipal service (about 20 dogs/year).During the laboratories, in addition to the dissections, the students have access to computers with anatomy software packages (virtual canine anatomy, CSU), videos, models and radiographs. The preparation and safety mesures are adequate.

As far as an adequate exposure to slaughtering is concerned, although this topic is compulsory for all species except pigs, it seems that many students resist practical exposure to slaughtering. This perhaps also as slaughtering is performed only ritual. Food Hygiene training has not been considered adequate by our team as mentioned in chapter 4.5

Ratios students graduating/clinical caseload and necroscopies is good (table 7.5 ser)

7.2 Comments

The clinical caseloads in small animals, horses and farm animals is absolutely high and so is the exposure to anatomy specimens and necroscopy cases. Pig clinical medicine and pig slaughtering is missing.

7.3 Suggestions

Introduction of clinical hands-on teaching on pigs. On the same species slaughtering procedures and food hygiene should be considered carefully, also taking into consideration that in Israel pig meat is actually consumed.

8 LIBRARY & EDUCATIONAL RESOURCES

8.1 Findings

There are 3 libraries existing which can be used by veterinary students. The central library of the Robert H. Smith Faculty of Agriculture, Food and Environment in the Hebrew University's Rehovot Campus is used by students, lecturers and researchers from the university. It is equipped with books and journals from all fields from the university. There are printers, scanners, photocopying machines and wireless available. It is opened on weekdays 9.00-19.45 during the semester and 9.00-17.45 during vacations. It is closed on weekends. This library offers reference and instruction services for students. Details see p119 of the SER.

The second library is a subsidiary of the first library, it is located at the Veterinary Teaching Hospital. It is opened on weekdays from 8.00-18.00 and closed on weekends. Details see p120 of the SER.

The third library is located at the Ministry of Agriculture, this is the Central Library of the Ministry of Agriculture's Kimron Veterinary Institute. This large library is available for students and staff from the School. It is the oldest and largest veterinary library in Israel. It is opened during regular working hours. Details see p120 of the SER.

In the Rehovot campus the students have access to a computer classroom equipped with 60 computers and to the anatomy classroom which is equipped with 16 computers. In the Veterinary Teaching Hospital there is a small classroom with 10 computers and there are computers available in the clinic. In the library of the Kimron Veterinary Institute there are also computers available for students.

There is wireless available for students at both campuses. Professional librarians are working in all the three libraries. No departmental libraries are available.

8.2 Comments

Due to the current renovation of the central library of the Robert H. Smith Faculty of Agriculture, Food and Environment, we didn't see this library. In pictures that were taken before the renovation this library seems to be well used. The other libraries seem to be appropriate and appreciated by the students.

In both campuses there are adequate computer workplaces and wireless available for students.

8.3 Suggestions

No suggestions

9 ADMISSION & ENROLMENT

9.1 Findings

Applicants have a BSc-degree from a recognised university in Israel with a program approved by the admission committee of the Koret Vet. School. Possible fields: Agriculture, life sciences, medicine, dental medicine, pharmacy, basic medical sciences, medical laboratory sciences, biotechnology, psycho-biology, biomedical sciences, biomedical engineering or oceanography.

During the course of the BSc studies, the applicant has to complete compulsory prerequisite courses (listed) with a grade no less than 80% in each course. They must also pass a psychometric exam. They must have an exemption in English and in Hebrew for students who are matriculated abroad. They must have Israeli citizenship.

Applicants need to prove that they have had a one month practical experience with companion and food animals.

Students meeting all the admission criteria are ranked according to their BSc average.

However, up to 5 places may be allocated to candidates who meet the minimum admission requirements, and in addition fulfil one of the following criteria:

- belong to a minority group,
- come from a rural area,
- have an extensive background in research,
- have an extensive background related to food production animals.

Due to an intake of a very limited number of students the ratio between budget/resources and the number of students is acceptable.

According to the SER veterinarians graduated abroad did not always cover the specific skills for veterinarians in Israel. This aspect seemed to be one of the most important factors when Israel established the national veterinary school.

Since the average age of the first year students is > 25 and they also have at least three years of academic studies prior to the enrolment and also passing the threshold grade

required for admittance the aspects connected to students' attitudes, knowledge base and motivation are more than satisfied.

The admission process does not seem to result in access inequalities.

9.2 Comments

In the period from 2004 to 2009 thirteen students dropped out. Accordingly, the drop of rate is rather high. In addition a considerable number of students are using more than four years despite the very high motivation and the skills of the students by enrolment. These facts might be explained by the high percentage of female students, between 25 to 30 years old, who also want to create their own families.

9.3 Suggestions

No suggestions

10 ACADEMIC & SUPPORT STAFF

10.1 Findings

Academic positions at the KSVM are funded either directly by the university or through a supplementary budget transferred by the university to the Veterinary Teaching Hospital through the Koret School of Veterinary Medicine. All academics are required to teach and perform research. Those that are clinicians are required also to perform clinical work in the Veterinary Teaching Hospital. Clinicians are granted time off clinics to perform research dependent on their academic rank. This time off clinics may range from 20-50 %. Additional clinical positions for post graduate training of interns and residents are funded mainly by income from the Veterinary Teaching Hospital (mainly), donors and training grants. Support staff is funded directly from the University budget, the school budget, research grants and hospital income. Several external teachers, and teachers from other department in the university teach either voluntarily or they are paid from the school budget.

Each academic has equal chance for career promotion, based on his/her scientific and teaching performance. There is no limitation of the numbers of professors.

Technical staff (in clinics as well in the laboratories) has often BSc. or Masters in animal sciences or sometimes DVM degree, and they use to take specialized courses, sometimes abroad.

Staff allocation in the Faculty and Veterinary Teaching Hospital is based on recommendations made to the Director of the school by the Academic planning and development committee.

Two different sources of funding are available; funding for clinical appointments in the Veterinary Teaching Hospital from the hospital budget and funding for tenure track research positions in the school from the University budget. The staff of the Veterinary Teaching

Hospital is not permitted to work privately outside of the hospital. Salaries of clinical staff are comparable to those of most the private sector. There are however large clinics in which the earning power of veterinarians is much higher. The salaries of the academic research staff is considerably less than the salaries of academics working in industry and high tech companies.

10.2 Comments

The balance between clinical and support staff is shifted in favor of clinical staff. The school feels that even more clinical support staff is needed to free clinicians from technical functions and provide them with more time for pure clinical work and result in smoother operation of the hospital.

The total number of FTE seems low, as compared to typical European veterinary schools. Taken into account the duration of the DVM programme (4 years), relatively low numbers of students and the fact that many of the basic subjects are taught in the BSc. programme, it seems appropriate

Ratios R1, R2, R3, R4, and R5. The denominators are lower than those established by SOP, which is due to large numbers of teaching staff compared to low numbers of students. Again, the ratios are influenced by the reduction of basic science teaching. In terms of the DVM programme, the ratios are quite favorable and students take benefit of it, especially in the clinics.

Problems of recruiting specialists are common in all veterinary schools. High numbers of European College diplomates and American Board certified specialists is a very strong point of the KSVM (see also Chapter 12). A full professor for food hygiene is urgently needed.

The technical staff people are satisfied with their positions, they have good relationships with teachers and students, they are skillful, specialized and self-confident. As compared to other schools, almost all of them are fluent in English and able to take courses abroad.

10.3. Suggestions

More emphasis should be put on staff employment policy in non-clinical areas, e.g. food hygiene.

11 CONTINUING EDUCATION

11.1 Findings

There is a Continuing Education Committee (subcommittee of the curriculum committee) taking care of the CE program.

The CE program is directed to local practitioners and also immigrants or foreign veterinarians and nurses. It doesn't have a real structure: KSVM staff is asked to give lectures or international guests are invited on specific topics. Seminars are organized to present new services given by the veterinary hospital to the local veterinarians as referral cases. The attendance is between 25-30 (most) and 100-150 people.

On the SER are reported between 10 to 20 seminars per year in the last 3 years. No reported practical courses or wet labs. As another form of CE the KSVM offers short externship to practical veterinarians (2 -8 weeks).

Concerning the Continuing Education of the clinical staff itself, clinicians have a yearly budget assigned by the School, different for each academic level, to be spent in seminar, congresses and course abroad according to the presentation of a project. Very often the participation to a congress is related to the acceptance of a paper.

11.2 Comments

Based on conversations with private practitioners it seems that the CE is at a good level in small animal topics. The Hahaklait organization is inviting to frequent and in- depth courses for veterinarians and farmers at a high level in continuous cooperation with the University. On the other hand, it seems that the CE in the equine field is at a rather low to medium level dealing with basic and common subjects, instead of offering advanced and state-of-the-art continuous equine medicine&surgery courses.

The externships have actually been reduced to 2 weeks rotations. Some practitioners would appreciate CE in the form of web conferences.

11.3 Suggestions

Implement CE in form of web conferences.

Organize wet lab courses for practitioners.

12 POSTGRADUATE EDUCATION

12.1 Findings

Post graduate clinical training (clinical specialization) is an ongoing priority of the Koret School of Veterinary Medicine and seen as an important educational task. The Veterinary Teaching Hospital of the Koret School of Veterinary Medicine is the only specialized hospital in Israel with 22 international specialists (17 European board certified Diplomates and 5 American board certified Diplomates) and 4 Israeli certified national specialists, a total of 26 specialists, covering 14 different specialties. These specialists actively participate in training of residents and interns in clinical specialties mainly through programmes approved by the colleges of the European Board for Veterinary Specialization (Table 12.1.1 of the SER). Candidates for specialist training are selected by the interns and residents committee which is appointed by the Director of the school. This committee also supervises and evaluates programmes. The specialization programmes conform to the demands of the specific college and vary from 3-4 years. Time is also provided for rotations in different departments and for scholarly work such as reading and research. Each supervisor draws up a personal study plan for their specialization. Interns and residents are expected to perform normal working and after hours duties.

Research education programmes offered are MSc, in Vet. Sciences, PhD in Vet. Sciences, and combined programmes DVM/MSc.and DVM/PhD. The goal of post graduate studies is to acquire an in depth insight into their field of research and its social and scientific significance, learn how to independently perform and critically apply scientific research methods in their own field of research and to create and publish original scientific information, to familiarize themselves with developments, basic issues and novel research methods in their field, to follow developments in the general theory of science and other disciplines related to their field of research. To this end the school has a joint postgraduate division with the Animal Sciences Department and postgraduate studies are offered jointly by the school and this department. The postgraduate programs include:

MSc. in Veterinary Sciences: A masters of sciences degree available for both graduates of the school of veterinary medicine and to students without a veterinary degree. Research is usually of a 2 year duration and carried out under the mentorship of the Koret School's faculty members and performed in their laboratories.

PhD in Veterinary Sciences: Doctoral studies are available for both graduates of the school of veterinary medicine and to students without a veterinary degree. Research is usually of a 4-6 years duration and carried out under the mentorship of the Koret School's faculty members and performed in their laboratories.

Combined programmes:

DVM/MSc.: A combined DVM/MSc. is optional for veterinary students while taking the DVM degree. The program requires the students to take one year off from their regular veterinary studies which are devoted solely to research. This program is of a 5 years duration (at least) of which 4 years are in parallel to the veterinary studies.

DVM/PhD: A combined DVM/PhD is optional for selected DVM students while taking the DVM degree. The program requires the students to take 2 years off from their regular veterinary studies which are devoted solely to research. This PhD program is of a 6 years duration (at least) of which 4 years are in parallel to the veterinary studies.

A total of 44 students are currently involved in these programmes. Of the 31 students studying towards a PhD degree, 9 (30%) are veterinarians with a DVM degree. The research students receive stipends which are mostly obtained from competitive research grants from international and national funding agencies. Some basic funding from the Koret School and the Hebrew University is available usually for one student per scientist, and 2 students per newly recruited scientist. The main factor affecting the number of post graduate students is the shortage of supervisors in the basic sciences.

12.2 Comments

Postgraduate education both in terms of clinical specialization and research education is a very strong point of the KSVM. The school makes clear distinction between these two areas, although it allows combining them.

High numbers of European College Diplomates and American Board certified specialists are beneficial for the institutions as well as for students. Resident and internship programmes are active, based on these specialists.

As the level of research is very high, the quality of research-oriented programmes is high as well.

12.3 Suggestions

No specific suggestions, this is a strong point of the KSVM.

13 RESEARCH

13.1 Findings

The overall research activity, output and funding in the School is of high level. A strategic plan is under achievement to further develop it. The new facilities in Rehovot provide new equipment and materials, and will serve as a good tool to attract the clinicians to the Rehovot site and to let them collaborate with other teachers in basic sciences at the KSVM and at the Faculty of Agriculture as well.

The academic staff is competing to obtain international grants with a satisfying level of success. The mentorship of young teachers by a senior professor seems to be efficient in most cases. The number of PhD and DVM-PhD students is good. The implication of veterinary students in research also is good: as they all have to write a thesis, they participate in science production, and they have enough time allocated for that, even in the 1st year.

13.2 Comments

The teaching and clinical load of most academic clinicians is so important, that some of them do not have time enough for research (or are not interested in using it), especially if they are alone in their field of speciality. Nevertheless, their scientific production is reviewed on an annual basis by the School.

The Rx Works software will probably be a powerful tool to perform retrospective and even prospective studies, provided that it will be used by everybody in the same and proper way.

13.3 Suggestions

The subcommittee for advancement of clinical research could make some proposals on the way to further integrate clinicians in collaborative projects, in order to optimize the time they use for research. This may lead to an increased exposure of students to scientific reasoning.

Incentives dedicated to promotion of research done by non academic clinicians could be created.

Executive Summary

The training to become a veterinary surgeon at the Koret School of Veterinary Medicine (KSVM) is at a very high level. Teaching is research-based and –oriented with emphasis on hands-on practical work. There is no doubt about the qualification of the graduates for the (global) labour market. Graduates receive a DVM degree at the completion of their studies.

The KVSM is in many aspects different from most of the European Faculties and closer to the North American system, as is for example the overall curriculum organisation in 3+4 years, the structure and organisation of the School and the dependency of the School from external funding.

Strengths:

- The strategic plan of the KSVM gives very clear statements and defines the directions and objectives of the School on a satisfactory financial basis.
- The student-to-teacher relationship is excellent, as also shown by a favourable ratio, notably in the clinics during the 4th clinical year which has very positive effects.
- The enthusiasm of the teaching and support staff in educating students is considerable.
- The overall level of research output and funding is impressive. Research meets international standards.
- The straight collaboration with the Faculties delivering the BSc has produced positive effects so that the major prerequisites of Basic subject teaching are fulfilled. The whole curriculum is linked and integrated with a good degree of control of the KSVM faculty. This fact together with the high workload of the students and the intensive fourth (all clinical) year of the curriculum lasting 50 weeks with considerably more than 40 contact hours per week makes the Israeli curriculum doubtlessly equivalent if not superior to a 5 year curriculum in some European schools.
- The veterinary teaching hospital is a very useful tool to deliver an overall high standard service to the clients - practitioners and animal owners -, a powerful tool for applied research and obviously a good teaching platform.
- The number of Diplomates of European and American speciality colleges is very high, with a very positive impact on clinical teaching, services and postgraduate formation.
- The hands-on teaching in all animal species, including food animal species, with the clear exception of pigs, is excellent.

Weaknesses:

- Bio-security, bio-safety and general hygienic issues in different areas and facilities (for example the necropsy rooms, the large animal isolation facility) are insufficient. The bio-safety procedures should be more clearly defined throughout the curriculum, spelled out in writing, displayed and observed.
- Teaching in food hygiene and food microbiology is fulfilling marginally the requirements and should be considered for further improvement. This includes increased laboratory practice,

significantly more food hygiene teaching in pigs, and the appointment of a professor in food hygiene.

- Theoretical teaching in the porcine species has been initiated, however both theoretical and especially hands-on clinical training in this species has to be drastically intensified and has to become mandatory for all students.

- Equine medicine and surgery, despite an excellent teaching by international specialists, needs improvement in terms of facilities and organisation.

Annex 1 Indicators

Ratio	Numerator/Denominator raw	Denominator Obtained	Established range of denominators	Notes
R1	64.69/207	3.19	8.85-10.42	
R2	204.69/207	1.01	8.75/12.54	
R3	56.9/207	3.63	10.62-12.62	
R4	56.9/44	0.77	4.91-7.21	
R5	64.69/140	2.16	0.53-2.20	
R6	2670/3147	1.17	0.51-0.36	
R7	2568/489	0.19	1.88-2.21	
R8	368/2670	7.2	0.51-7.87	
R9	403/5973	14.82	Still open	
R10	403/203	0.57	Still open	
R11	44/0	0	2.47-1.73	
R12	44/9360	212.7	0.51-7.87	
R13	44/21	0.47	0.20-0.09	
R14	44/744	16.9	1.78-0.92	
R15	44/145	3.2	0.58-0.37	
R16	44/11333	257.5	48.74-37.94	
R17	44/44	1		
R18	44/1301	29.5	0.75-0.46	
R19	44/2610	59.3	0.26-0.12	
R20	44/1489	33.8	1.26-0.89	

Annex 2 Listing of Major Deficiencies as decided by ECOVE

- 1. Insufficiency in bio-security, bio-safety and general hygiene in different areas and facilities, among them, in specific, necropsy rooms and the large animal isolation ward.**

Status of the faculty: CONDITIONALLY APPROVED

.

Annex 3 Student's Report

In general, the students seem to be satisfied with this study. The main problem they have is the high workload. In the first three years they have classes 5 days a week from 8.00-17.00 in most days, not to forget the research project which also requires a lot of time. In the fourth year they work in the clinic for at least 5 days a week, where shifts of 12 hours are no rarity. Approximately every second weekend they have to work and they also have to perform night-duty. The age of the students is higher compared to other European countries because of the Israeli system (BSc degree, army service). Due to this fact many students raise a family during their study, what makes a big contribution to the high workload. Additionally to the high workload is the tuition fee, compared to other European countries, rather high. Due to the high workload they have problems to find the time to work. Even though most students don't have any free time and are working day and night they are still convinced in their study. They specially appreciate the fourth year with the good hands on clinical training. They are always under supervision of a clinical instructor, but they learn to handle cases themselves. The research project is also appreciated by most students even though it is a lot of additional work. What they appreciate is that they learn how to do research and the importance of it.

The two campus system seems to be time-consuming, but since there is a shuttle bus available and students don't have to change facilities during the day, there are no complaints about this matter.

There are always course notes available for the students, either in advance on the website or printed and handed out to them. Like in every school, there are better and worse teacher, but the students see that most of the teachers take their duty seriously and try to improve their teaching performance. The students are supposed to evaluate their teachers, but it is not compulsory, therefore they are only asked a couple times to participate in the evaluation, nothing happens if they don't. It is compulsory to attend the classes. It is controlled by attendance list every now and then. It is not handled properly, due to the fact that there are always students sick or on military service. However, in the laboratory and clinically courses the attendance is strictly controlled and missing courses is not allowed.

Summarized, the students of the KSVM have to work hard, but they are rewarded by an excellent academic and practical training in veterinary medicine.