# UNIVERSITY OF THESSALY

SCHOOL OF HEALTH SCIENCES

## FACULTY OF VETERINARY SCIENCE

**Self-evaluation report**

**Karditsa, Greece**

**August 2017**

# Contents

# Introduction

**Brief history of the Establishment and of its previous ESEVT Visitations**

The Faculty has been established in 1993 and has admitted students for the first time in September 1994.

The Faculty has been admitted as member of the EAEVE in 2003.

There has never been an EAEVE visitation to the Faculty. There was a plan for visitation in the late 2000's, which never materialised, and a schedule for visitation in 2015, which was aborted at the Establishment's request in late 2014.

**Main features of the Establishment**

The Faculty is based in the city of Karditsa, in the region of Thessaly in central Greece. The Faculty is one of the three Faculties of the School of Health Sciences of the University of Thessaly (organisational structure of the School and the University is in Appendix 1a).

The Faculty awards the 'Degree of Veterinary Science' ('*Ptychio Ktêniatrikês*'). The Faculty also awards a 'Postgraduate Diploma of Specialisation' (equivalent to Master of Science) and a Doctoral Degree (equivalent to Doctor of Philosophy).

Thusfar, the Faculty has awarded in total 431 veterinary degrees, 108 postgraduate degrees and 42 doctoral degrees.

The Faculty is governed by the General Assembly, which includes all academic members of the Faculty, as well as representatives of other Faculty personnel (teaching, technical) and of students. The Faculty is organised in 14 academic departments and the services section.

Currently, there are registered 486 active students, 10 postgraduate students and 44 PhD students. Academic staff includes 29 persons (+1 pending formal appointment) in the various academic ranks (professors, associate professors, assistant professors).

**Main developments since the veterinary degree program began**

*Governance*

Before 2006, the Dean had been appointed by the Rector of the University; no dean appointed at that time had been a veterinarian. The Faculty has received self-governing status (as per Greek legislation) in May 2006. At that time, a Dean was elected for the first time among and by members of academic staff of the Faculty. Subsequent elections of Deans have thereafter been carried out at two-yearly intervals.

*Staff*

Initially, lectures were carried out by personnel employed under short-term contracts. The first permanent member of academic staff was appointed in 1996. Further staff have been appointed to various academic disciplines and ranks, in order to cover needs, with a steady progress and increasing academic staff numbers until 2010. Posts vacated consequently to personnel mobility (details in 9.2.) had been re-advertised and filled again.

Since 2010, no new posts have become available to the Faculty (details in 9.2.); posts vacated for any reason have not been advertised again. Only recently (May 2016 and January 2017) two new academic staff posts have been allocated.

*Teaching curriculum*

The initial teaching curriculum of the Faculty had been based in the curriculum of the Faculty of Veterinary Medicine of the Aristotle University of Thessaloniki (EAEVE-approved Faculty). Minor changes and adjustments had been performed to suit local needs and requirements.

A new teaching curriculum has been introduced since academic year 2016-17.

*Facilities*

The Faculty has capitalised on existing buildings belonging to the Ministry of Education, Research and Religious Affairs, which had been renovated and completely refurbished for development of the Faculty. Other buildings (including the hospital building) have been built *de novo* at the early stage of the Faculty development. A new building has been inaugurated in 2014.

*Evaluation by the Hellenic Agency for Quality Assurance and Accreditation in Higher Education*

The Faculty has been evaluated and approved by the Hellenic Agency for Quality Assurance and Accreditation in Higher Education in 2011. The visitation team included international experts from EU Universities. The evaluation report is available at the Faculty's website.

**Major problems encountered by the Establishment**

The major problems of the Faculty are as below.

- General bureaucratic and controlled by the Ministry of Education, Research and Religious Affairs framework for operation of universities in the country.
- Continuing underfunding (2010-today), as the result of the prevailing situation in the public sector in the country.
- Significant distance from other faculties and central administration of University of Thessaly.

**Version and date of the ESEVT SOP which is valid for the Visitation**

The visitation is based on regulations provided by ESEVT 'Uppsala' SOP May 2016.

# 1. Objectives and organisation

## 1.1. Factual information

### 1.1.1. Details of the Establishment, i.e. official name, address, phone number, Email and website addresses, Establishment's Head, name and degrees of the person(s) responsible for the professional, ethical, and academic affairs of the VTH, official authority overseeing the Establishment

*Details of the Establishment*

University of Thessaly

School of Health Sciences

Faculty of Veterinary Science

| | |
|---|---|
| [in Greek] | Πανεπιστήμιο Θεσσαλίας |
| | Σχολή Επιστημών Υγείας |
| | Τμήμα Κτηνιατρικής |

*Contact details*

| | |
|---|---|
| Visiting address: | Trikalon 224, |
| | Karditsa, Greece. |
| Postal address: | P.O. Box 199, |
| | 43100 Karditsa |
| | Greece. |
| Tel. no.: | +30 2441 066000 |
| E-mail: | g-vet@vet.uth.gr |
| | head-vet@vet.uth.gr |
| Website: | www.vet.uth.gr |

*Establishment's Head*

Dean: Professor G.C. Fthenakis

Secretary: Ms M. Bountolou

*Persons responsible for professional, ethical and academic affairs in veterinary hospital teaching units*

Person responsible for matters related to companion animals

Associate professor V. Tsioli (holder of veterinary degree and PhD from Faculty of Veterinary Medicine of Aristotle University of Thessaloniki)

Person responsible for matters related to farm animals

Assistant professor V. Papatsiros (holder of veterinary degree and PhD from Faculty of Aristotle University of Thessaloniki)

*Official authority overseeing the Establishment*

The Faculty is one of the three Faculties of the School of Health Sciences (based in the city of Larisa, 60 km from Karditsa), which also includes the Faculty of Medicine and the Faculty of Biochemistry and

Biotechnology. The School of Health Sciences is one of six Schools of the University of Thessaly (based in the city of Volos, 130 km from Karditsa). Schools and Faculties of the University are detailed in Appendix 1a.

Number of students (under- and post-graduates) currently enrolled at the University of Thessaly is approx. 16,000 (not including ones admitted into the University in August 2017). Academic staff of the University are 440 persons.

The University is overseen by the Ministry of Education, Research and Religious Affairs (hereafter, Ministry).

The University is headed by the Rector. Current Rector of the University of Thessaly is Professor G. Petrakos (School of Engineering, Faculty of Planning and Regional Development). The Rector is a professor of the University, elected among members of the academic staff of the University for a four-year term (currently for 2014-18).

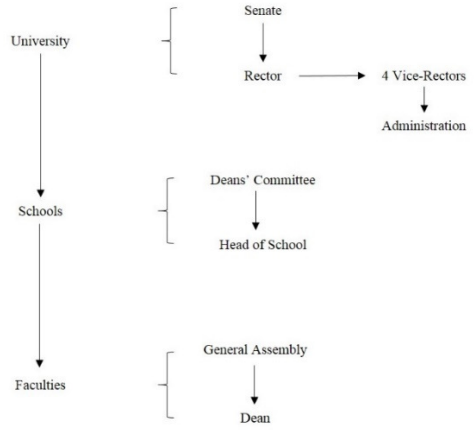
The highest academic and administrative body in the University is the Senate, which is formed by (a) the Rector, (b) the Vice Rectors (four: Vice Rectors of Research, of Financial Planning and Development, of Student and Administrative Affairs, of Public and International Relations, all nominated by the Rector), (c) the Heads of Schools, (d) the Faculty Deans, (e) three representatives of students and (f) four representatives of non-academic personnel. The Senate is responsible for taking decisions regarding academic, administrative and financial matters of the University.

The executive body of the University is the Rectorate Council, which is formed by (a) the Rector, (b) the Vice Rectors, (c) one representative of students and (d) one representatives of non-academic personnel. The Rectorate Council is responsible for taking executive decisions regarding matters of the University, based on general rules and regulations and on guiding decisions of the Senate.

Each School is headed by the Head of School. Current Head of School of the School of Health Sciences is Professor C. Billinis (Faculty of Veterinary Science). The Head of School is a professor of that school, elected among members of the academic staff of the school for a four-year term (currently for 2014-18).

The highest academic and administrative body in a School is the Deans' committee, which is formed by (a) the Head of the School, (b) the Deans of the Faculties, (c) one representative of students and (d) three representatives of non-academic personnel. The Deans' committee is responsible for taking decisions regarding academic affairs of the School.

An organisational chart of the University hierarchical structure is presented herebelow.




### 1.1.2. Summary of the Establishment Strategic Plan with an updated SWOT analysis, the mission and the objectives

*General mission of University of Thessaly*

The University of Thessaly aims to promote scientific knowledge through research and to contribute to cultural and economic development of the wider society. The University aims to be consistently among the leading establishments in Greece, with significant international relationships and recognition. Specific objectives and relevant lines of actions for development of the University are detailed in Appendix 1b.

*General mission of Faculty*

The general mission of the Faculty is to educate veterinary students and to promote scientific knowledge in the field of veterinary science. The members of the Faculty strive to provide education within a research environment for the benefit of the veterinary profession, the national economy and the local society; they aim to balance the requirements for research, teaching and clinical work, whilst reaching their full academic potential and excellence.

*Faculty objectives*

In line with its mission and the University strategic plan, the Faculty has set the following objectives.

- High-quality teaching, making possible competitiveness of graduates in the European scene.
- International recognition of research carried out, leading to development of clinical applications and to presentation of innovative output.
- Support of students and staff to achieve personal career goals.
- Strong presence in the national and international veterinary scene.

*Teaching and research plan for year 2017*

The Faculty has set specific targets for year 2017, which, in summary, were as follows. For teaching, the Faculty has decided to focus to the forthcoming ESEVT evaluation visitation, as well as to the seamless implementation of the new teaching curriculum, which has been applied since September 2016. For research, the Faculty has decided to focus to submission of research proposals in the new national research framework, which opened many calls during the first semester of the year.

*SWOT analysis (Table 1i)*

Table 1i. SWOT analysis.

**Strengths**
- High quality and dedicated staff
- Excellent reputation of academic staff in the veterinary community in Greece and abroad
- High quality undergraduate students, selected among Greece's top secondary education pupils
- Low unemployment of Faculty graduates
- Significant and continuous support of University authorities
- Increased research expertise and publication output

**Weaknesses**
- Long-standing underfunding
- Small number of academic staff
- Location in an area with small urban population
- Other academic faculties and University central administration away

**Opportunities**
- Location in a predominantly agricultural area, with increased livestock populations
- Strong connections with the veterinary profession and the relevant industries (agricultural, animal health, food etc.) in Greece
- Strong connections with research establishments in Greece and abroad
- Availability of increased research funding for temporary employment of young scientists through national relevant grants

**Threats**
- Further reductions in general funding and in staff salaries already announced
- Academic isolation
- Increased number of student adminissions, which is outside the Faculty's power
- Bad relations between members of academic staff

### 1.1.3. Summary of the Establishment Operating Plan with timeframe and indicators of achievement of its objectives

*Academic year timeframe*

Academic years run from 1st September to 31st August of the following year. Within the academic year, precise dates for allocation of weeks are decided by the Senate. Usually, the timeframe presented in Table 1ii applies in the Faculty.

Table 1ii. Yearly academic calendar.

| Month(s) | Duration | Activity |
|---|---|---|
| August-September | 4 weeks | Repeat examination period of previous academic year |
| September-January | 14 weeks | Winter teaching term |
| December-January | 2 weeks | Christmas and new year holiday break |
| January-February | 4 weeks | Examination period for winter teaching term |
| February-May | 14 weeks | Spring teaching term |
| April | 2 weeks | Easter holiday break |
| June | 4 weeks | Examination period for spring teaching term |
| July-August | 8 weeks (1-2 weeks) | No formal teaching activities (no administrative activities) |

Degrees are awarded within one month after end of each examination period, i.e., in July, October and March of each calendar year.

*Administrative actions timeframe*

The Senate meets monthly in the city of Volos. A notice for the meeting is issued 10 to 14 days prior to the date. The Rectorate Council meets weekly.

The Dean's Committee of the School of Health Sciences meets monthly in the city of Larissa or at other dates if urgent matters arise.

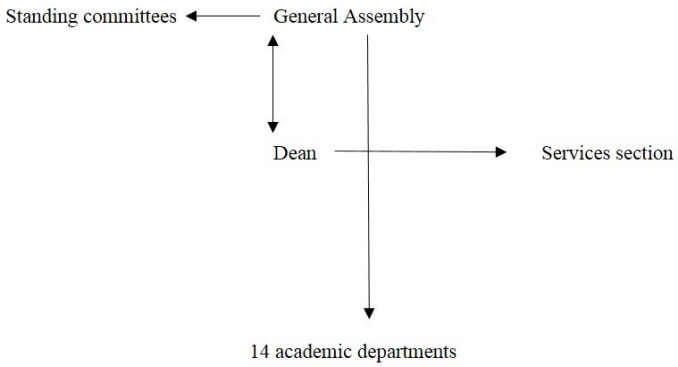
The General Assembly of the Faculty meets regularly on the first Wednesday of each calendar month. Items for the agenda proposed by members of the General Assembly are always included if submitted up to 12 days prior to the day of the meeting (and after that deadline, if feasible). Agenda is issued 6 to 7 days prior to the meeting (2 days is minimum legal deadline). Further meetings also take place between the scheduled meetings, if urgent matters arise (usually as the result of emergency action required by the Ministry or the University, with a set deadline for response or implementation).

*Evaluation*

All academic staff have to submit an annual report of activities during January of each year, which refers to activities of the previous year. These are collected by the Quality assurance committee of the Faculty, collated and submitted to the Quality Assurance Unit of the University.

The Faculty has to submit a report of activities for the previous year and a plan for the following year. These are submitted to the Head of the School by end January and discussed in the Deans' Committee. Subsequently, they are forwarded to the Rector of the University.

### 1.1.4. Organisational chart of the Establishment




### 1.1.5. List of departments/units/clinics and councils/boards/committees with a very brief description of their composition/function/responsibilities

*Departments and services of the Faculty*

The Faculty includes 14 academic departments (Table 1iii) and the services section (Table 1iv).

The academic departments are presented in the below table. Each department is headed by a member of its staff; heads of departments are elected by the General Assembly of the Faculty. Many departments also employ temporary staff for teaching or support, which is funded under short term contracts and paid by specific Ministry, University or departmental funds (Table 9.1.1. and Appendix 9b).

Table 1iii. Academic departments and numbers of permanent staff.

| Academic department | Abbreviation | Staff | |
|---|---|---|---|
| | | Academic and teaching | Support |
| Anatomy, Histology and Embryology | DAHE | 1 | 1 |
| Biochemistry | DB | 1 | |
| Epidemiology, Biostatistics and Animal Health Economics | DEBAHE | 2 | |
| Animal Husbandry and Nutrition | DAHN | 2 | |
| Aquaculture and Fish Diseases | DAFD | 1 | |
| Microbiology and Parasitology | DMP | 4(+1[a]) | 1 |
| Pathology | DPa | 1 | 1 |
| Hygiene of Foods of Animal Origin | DHFAO | 3 | |
| Pharmacology and Toxicology | DPT | 1 | |
| Physiology | DPh | 2 | |
| Medicine | DM | 6 | 1 |
| Obstetrics and Reproduction | DOR | 5 | |
| Poultry Diseases | DPD | 1 | |
| Surgery | DS | 3(+1[b]) | |
| Total | | 33(+2) | 4 |

a. One academic staff member selected, pending formal appointment.
b. Post of academic staff allocated, pending selection procedure.

The services section (Table 1iv) is headed by the Secretary of the Faculty, who has been selected and appointed by the Vice Rector of Student and Administrative Affairs, based on qualifications (holder of postgraduate degree) and years of service.

Table 1iv. Organisation of services section and number of permanent staff.

| Unit | Abbreviation | Staff |
|---|---|---|
| Administration | SA | 5 |
| Maintenance | SM | 1 |
| Library | SL | 2 |
| Information technology | SIT | 1 |
| Transport | ST | 1 |
| Total | | 10 |

*Governance of the Faculty*

The Faculty is governed by the General Assembly, which decides on academic and administration matters, as provided by law. The General Assembly is chaired by the Dean of the Faculty. The General Assembly includes (a) the Dean, (b) all members of academic staff, (c) four representatives of under- and post-graduate students and (d) representatives of non-academic personnel.

The Faculty is headed by the Dean. The Dean is a professor or associate professor of the Faculty, elected by all members of the academic and support staff of the Faculty for a two-year term (currently for 2016-18).

When the Dean is absent or unavailable, an acting Dean is appointed. The acting Dean is a professor or associate professor of the Faculty, nominated by the Dean for a short term, depending on the occasion.

*Committees of the Faculty*

Committees of the Faculty (standing or limited time, Table 1v) are instituted by the General Assembly or the Dean, who also indicate their objective(s) and nominate their members.

Table 1v. Details of standing committees.

| Committee (alphabetical order) | Chairperson | Total members | Work |
|---|---|---|---|
| Animal welfare | A.D. Galatos[a] | 3 | Objective. Monitoring use of animals in experimental / teaching procedures<br>Function. Meetings to evaluate specific proposals for animal use and to assess overall situation in Faculty |
| Education | A. Pourlis[a] | 7 | Objective. Evaluation of teaching curriculum, discussion and presentation of suggestions for resolving problems during its implementation<br>Function. Monthly regular meetings or at the invitation of the Dean |
| Quality assurance | I. Pappas[b] | 6 | Objective. Organising and coordinating quality assurance procedures of the Faculty, production of the yearly self-evaluation report of the Faculty<br>Function. Regular meetings in accord with calls from the University's Quality assurance committee |
| Student affairs | P.G. Gouletsou[a] | 3 | Objective. Assessment of student welfare, liaison with student representatives for matters related to student life and contacts with academic staff<br>Function. In confidence meetings with students or at the invitation of the Dean |

a. Member of academic staff, veterinarian.
b. Member of academic staff.

Further, a member of staff (G. Kontopidis) and their deputy (P. Xenoulis) have been appointed as general supervisor of infrastructure and a member of staff has been appointed as liaison officer (P. Kostoulas) for the Erasmus action.

### 1.1.6. Description of how and by who the strategic plan and the organisation of the Establishment are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

*Strategic plan*

The University of Thessaly has an approved strategic plan, which is used as the principal document for development actions by all members of the University. The strategic plan has been drafted by a working committee, which has been sent by the Rector to all members of the academic community. After appropriate deliberations, the strategic plan has been approved by the Senate. Subsequently, a 'bottom-up' participatory approach has been employed to set specific targets within the general frame.

At the invitation of the Rector, the Heads of School had invited the Faculties to provide detailed objectives and action course and to set specific targets for yearly evaluation. The Deans could suggest plans, objectives and targets and, through discussion within the General Assembly and contributions by all members of staff, a document is produced, that had been submitted to the School for discussion at the Deans' committee, then to the Senate for final discussion and decision.

The strategic plan of the Faculty is monitored through the various committees. Decisions regarding matters arising are taken by the General Assembly, based on appropriate suggestions by the committees or the Dean.

These processes promote participation of staff to procedures, frankness in meeting of targets and development of loyalty to the University.

*Organisation and governance*

Decisions regarding organisation of the Faculty have to be taken at various levels and through varying procedures. Some aspects of organisation (e.g., committee structuring) are formulated at Faculty basis, based on decisions of the Dean or the General Assembly. Others (e.g., reshuffling of academic departments) need an initial appropriately justified proposal by the General Assembly, a ratification by the Senate and a final decision by the Minister, with a relevant publication in the government gazette. The Dean of the Faculty has always been elected among and by members of the Faculty (although electoral body can change according to the prevailing legislation). In general, the framework of governance of the Faculty is regulated through relevant legislation, which may change according to political agenda of the Minister and the Government.

*Communication of decisions*

Decisions of the Senate are transmitted to academic staff through the relevant departments of the central administration and through the Dean informing the members of the General Assembly. All members of academic staff, as well as representatives of other staff members and representatives of students are members of the General Assembly, hence they participate in decisions and are informed about them during the General Assembly meetings. Non-academic staff members are informed of decisions through their representatives. Students are informed of decisions through their union.

### 1.2. Comments

*Faculty objectives*

The general objectives of the Faculty are being achieved to a great degree, as discussed below.

- Employment of Faculty graduates. There is little unemployment of graduates of the Faculty; although most graduates nowadays work in Greece, there are over 70 graduates (i.e., approx. 15%) who have found employment throughout EU or USA. Further, over 40 graduates have received PhD degrees from the Faculty or other establishments in Greece or abroad, whilst over 40 are currently reading for higher degrees.
- Attraction of graduates of other Faculties for postgraduate studies. Many graduates of other Faculties (mainly of the Faculty of Veterinary Medicine of Aristotle University of Thessaloniki) have been attending postgraduate training in the Faculty.
- Staff recognition. Very many members of academic staff are frequently invited to speak at national or international conferences, have organised successfully national or international scientific events and have been appointed at veterinary policy national or international committees.

- Support by University authorities. Despite the small number of students, the University has allocated disproportionately larger amount of resources to the Faculty.

However, as in all Greek universities, decisions are taken as the result of deliberations and compromises within the various bodies (General Assembly, Senate), which does not always help in achievement of targets.

*Governance*

The current model of University governance has been in place in Greece since 1982, with smaller or greater changes enforced by legislation passed according to politics of Ministry and the government. The University has a legally established chain of command (Rector, Head of School, Dean / Senate, Dean's Committee, General Assembly), although overrides may occur. There are also Quality assurance committees at University and Faculty levels for continuous assessment and evaluation of all involved.

In the model, many matters are regulated, sometimes tightly, by centrally imposed legislation, which creates bureaucracy and limits flexibility of decisions. In the recent (October 2014) self-evaluation report of the University, there is the following statement: "*The current legal frame with continuous changes increases difficulties in management and administration of the University, by introducing a series of uncertainties in the chain of command, requiring further bureaucratic difficulties to the point that –in association with very low pays- even the most conscientious staff are ultimately discouraged*".

The model allows full flexibility to Faculty only in teaching matters (e.g., establishment and implementation of teaching curriculum). This has allowed the Faculty to modify the teaching curriculum by own decisions only. The recent establishment of the Education committee and Student affairs committee has been particularly helpful, especially for smooth implementation of the new teaching curriculum; detailed discussion of matters in these committees has resulted in presentation of proposals to the General Assembly, which have then been accepted and implemented.

### 1.3. Suggestions for improvement

There is little that may be done to change general organisational and governance models, as these matters are decided at central government level. Administrative and organisational efforts can concentrate only in increasing flexibility within the Faculty. For example, the recent change of teaching curriculum has been carried out with full flexibility within the Faculty and has been ultimately approved by the Senate, resulting in its immediate implementation. Committee work has helped in flexibility and staff involvement, hence its extension may contribute to further decision taking within the Faculty.

# 2. Finances

## 2.1. Factual information

### 2.1.1. Description of the global financial process of the Establishment

*Public spending for higher education in Greece*

The higher education system in Greece is public (Provision of the Constitution of the Hellenic Republic). Undergraduate studies in Greek higher education establishments are provided with no tuition fees for students (Provision of the Constitution of the Hellenic Republic). Tuition fees may be charged for postgraduate courses (indeed most postgraduate courses in Greece charge fees), but not for PhD studies. The state provides various welfare benefits to students (e.g., textbooks, food, housing, medical insurance), which are covered by the central government budget (benefits are awarded based on finances of students and their families).

In 2017, the overall budget allocated to the Ministry of Education, Research and Religious Affairs amounted to 5.133 billion Euros or 0.83% of total state budget. Of that amount, 874.5 million Euros (17% of total budget) have been allocated to the 36 higher education establishments. Of that amount, the largest part (603.8 million Euros, 69%) refers to personnel costs; the remaining (270.7 million Euros, 31%) is allocated for all other costs, including operating costs and student welfare benefits. Further, the 'Public investment' budget (buildings, large equipment) allocated to the Ministry amounted to 615 million Euros (9.1% of total state budget).

*Funding of the University of Thessaly*

The University of Thessaly is funded primarily from the budget of the Ministry. Permanent personnel salaries are paid directly by the Ministry. Further, an amount of money is allocated to the University for operating costs and to meet student welfare benefits. Personnel costs are inflexible, i.e., not determined by University authorities; salaries are determined by law and are based on category of personnel (academic, academic support, technical, administrative etc.), rank and years of public service. Operating costs are allocated to higher education establishments based, in general, on number of students.

After allocation of the budget for operating costs to the University, a sum is allocated to each Faculty to cover daily operating expenses and expenses for teaching activities. All other operating expenses (e.g., maintenance, transport, utilities) and the welfare benefits for students of the Faculty are covered directly through the central administration services.

Other income of the University includes (a) overheads from research grants and services income (handled through the University's Research Committee), (b) overheads from tuition fees of postgraduate courses (also handled through the Research Committee), (c) various donations (also handled through the Research Committee) and (d) profits from asset management (handled through the Company for Asset Management).

### 2.1.2. Degree of autonomy of the Establishment on the financial process

*Salaries of permanent personnel*

Salaries of permanent personnel of the Faculty are regulated legally and paid by the Ministry.

*Welfare benefits of students*

Welfare benefits for students of the Faculty are paid through the central administration services directly to purveyors of respective services; for example, expenses for books are paid directly to publishing houses, expenses for food are paid directly to the business responsible for student catering etc. Only housing support is paid into students' bank accounts, as they have to pay for rent and utilities.

*Expenses for utilities, maintenance, security etc.*

All expenses for maintenance, transport, utilities, security etc. are paid through the central administration services directly to purveyors of respective services. There is a complicated model of how purveyors are chosen, which takes into account various legislative provisions. For example, the purveyor for fuel for vehicles and diesel for central heating is decided outside the University with annual appointments by the regional administration of Thessaly for all public services in Karditsa, the cleaning services provider for the Faculty is decided after a tender at the University of Thessaly for a period of two years etc.

*Operating expenses and expenses for teaching activities*

A sum is allocated by the University to the Faculty for daily operating expenses and expenses necessary for teaching activities by decision of the Senate. That sum was approx. 49,500 Euros for year 2015, 49,000 Euros for year 2016 and 9,500 Euros for year 2017. The above sums were further allocated to academic departments and service units of the Faculty by decision of the General Assembly.

Staff members can use that sum at their discretion. Nevertheless, all required purchases are regulated and should be carried out through an electronic platform for calls for tender.

*Income from research grants and services*

Management of income obtained through the Research Committee of the University (research grants, services, donations etc.) is more flexible. In those cases, the grant holder is legally responsible for appropriate management of funds, as well as for completion of the scientific task prescribed in the grant. Still, a tender is necessary for all purchases of goods or services.

### 2.1.3. % of overhead to be paid to the official authority overseeing the Establishment on revenues from services and research grants

As provided by law, Research Committees of higher education establishments can charge an overhead up to 25% in research grants and services income. Currently, the Research Committee of the University charges 12%, except in cases of (a) state-funded grants in which a smaller or higher overhead is paid directly by the funding body, as per provision of the relevant call, and (b) matching funds from the General Secretariat of Research and Technology to European Council grants, in which 25% overhead is charged.

### 2.1.4. Annual tuition fee for national and international students

No tuition fees are charged for undergraduate students (national or international) studying at the Faculty of Veterinary Science (details in 2.1.1.).

### 2.1.5. Estimation of the utilities and other expenditures directly paid by the official authority and not included in the expenditure tables

All expenses (utilities, fuel for vehicles, student welfare benefits etc.) have been included in Table 2.1.1 under operating expenses.

### 2.1.6. List of the on-going and planned major investments for developing, improving and/or refurbishing facilities and equipment, and origin of the funding

*Grant for purchase of new radiology equipment*

A repeat tender is currently under way for a grant of approx. 30,000 Euros for purchase of new radiology equipment for the Department of Surgery. An unsuccessful tender had already been carried out and the repeat tender is scheduled for conclusion by end of 2017. Funds are sourced from the 'Public investment' budget of the University as allocated by the Ministry (fiscal year 2014) (details in 4.1.8.).

*Maintenance and refurbishment grant*

A maintenance and refurbishment grant (approx. 150,000 Euros) has been allocated and, possibly, will be available in September 2017 to start work in November 2017 for conclusion in 2018. Funds are sourced from the 'Public investment' budget of the University as allocated by the Ministry (fiscal year 2017) (details in 4.1.8.).

*Upgrade of informatics hardware and software*

The University has invited (September 2016) a budget by all Faculties for upgrade of informatics and network hardware and software. A budget has been submitted for the sum of 32,500 Euros. Funding allocation will depend upon the progress of EU-funded actions in Greece. If allocated, funds will be sourced from the joint EU and Greek government-funded project on Agreement for Framework of Development ('*ΕΣΠΑ*') 2014-2020.

### 2.1.7. Prospected expenditures and revenues for the next three academic years

*Personnel*

Permanent academic staff of the Faculty will increase, as two new persons will be appointed in new posts (2018 and 2019), covered directly by Ministry budget. A new permanent support staff (administration) has been appointed and started work in July 2017, covered directly also by Ministry budget. In view of that and despite decreases in salaries of individuals, total sum for personnel in the Faculty will be increased overall.

Temporary teaching staff will increase. The University has provided a grant to support five new teaching posts (part-time) starting in September 2017; upon appropriate justification of their necessity in teaching activities of the Faculty, the grant can be renewed annually. Further, four new teaching posts

(part-time) will be supported by departmental funds starting in September 2017; these will be renewed in the future.

*Operating expenses and expenses for teaching activities*

Budget for operating expenses for the University will be similar or slightly reduced for the next two years. Hence, operating expenses and expenses for teaching activities that will be allocated in the Faculty will be around the same amount (*circa* 10,000 Euros).

*Research funding*

Members of staff have submitted increased number of proposals in recent calls for national funding, during spring and summer 2017. One may consider that some of these will be successful given the research record of academic staff of the Faculty, therefore, research funding will be available for the forthcoming years.

### 2.1.8. Description of how and by who expenditures, investments and revenues are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

*Salaries*

Salaries are decided by the Parliament. They are reviewed annually and possible changes are announced by the Ministry of Finance. Payment of salaries is scrutinised and approved by the Court of Audit (equivalent in status to supreme court), through their agency in the city of Volos.

*Expenses*

Cumulative annual allocation of funds from the Ministry to all Universities in the country are included in the national budget, which is approved by the Parliament. Specific allocations to University of Thessaly are decided subsequently by the Ministry and communicated by ministerial decision.

Welfare benefits of students are dependent on fulfilling the various financial criteria, which had been set by national legislation, approved by the Parliament.

Allocation of operating expenses and expenses for teaching activities to the Faculty is proposed by the University's administration and decided by the Senate. Also, allocation of large grants to cover specific needs of the Faculty is also proposed by the University's administration and decided by the Senate; this is based on prioritisation of needs of the Faculties. Within the Faculty, these expenses are allocated to Departments by decision of the General Assembly.

Running of accounts within the University is monitored by the relevant department of the University (Financial Management Directorate). Overspending is not possible, as all purchases are regulated through appropriate web applications, by means of which expenses are handled.

All expenses related to funding provided by the Ministry are handled through the University's accountancy service. Then, they are scrutinised and approved by the Court of Audit, through their agency in the city of Volos.

*Research funding*

National research grants are allocated after review and evaluation of proposals. Administration of grants is carried out through the Research Committee of the University. Services income is also under the same

management procedures. Running of accounts follows the same general principles as operating expenses of the University. Purchases are regulated through appropriate web applications.

Running of accounts of grants within the University is monitored by the accountancy service of the Research Committee. All grants are liable to financial evaluation by the body that awarded the grant and to scrutiny by the Ministry of Finance and ultimately by the Court of Audit.

*Transparency*

All expenses (of any nature) carried out by any public institution in Greece are publicly available in a specific website (diavgeia.gov.gr).

**Table 2.1.1. Annual expenditures during the last 3 academic years (in Euros)**

| Area of expenditure | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Personnel | 1,161,955 | 1,460,955 | 1,752,767 | 1,458,559 |
| Operating costs | 264,191 | 481,106 | 685,707 | 477,001 |
| Maintenance costs | 32,960 | 75,512 | 27,391 | 45,288 |
| Equipment | 9,935 | 32,645 | 61,451 | 34,677 |
| Total expenditure | 1,469,041 | 2,050,218 | 2,527,316 | 2,015,525 |

Note 1. As accounting data could be provided by calendar year (which corresponds to fiscal years in the Greek system), the following calculation was employed: ($D_{2014\text{-}15} = 4/12\times D_{2014}+8/12\times D_{2015}$), ($D_{2015\text{-}16} = 4/12\times D_{2015}+8/12\times D_{2016}$) and ($D_{2016\text{-}17} = 4/12\times D_{2016}+D_{2017}$), where $D_{\text{academic year}}$: figure calculated for each academic year, $D_y$: figure provided for calendar year.

Note 2. Expenses incurred from funding provided by the Ministry have been calculated until 30 June 2017; expenses incurred from service or research funding have been calculated until 24 August 2017.

**Table 2.1.2. Annual revenues during the last 3 academic years (in Euros)**

| Revenue source | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Public authorities | 1,285,978 | 1,600,222 | 1,591,202 | 1,492,467 |
| Tuition fees | | | | |
| Clinical services | | | | |
| Diagnostic services | 163,090 | 172,174 | 164,486 | 166,583 |
| Other services | | | | |
| Research grants | 51,351 | 267,412 | 537,473 | 285,412 |
| Continuing education | 6,397 | 3,747 | 0 | 3,381 |
| Donations | 11,900 | 6,030 | 8,936 | 8,955 |
| Other sources | 1,071 | 1,543 | 0 | 871 |
| Total revenue | 1,519,787 | 2,051,128 | 2,302,097 | 1,957,670 |

Note 1. As accounting data could be provided by calendar year (which corresponds to fiscal years in the Greek system), the following calculation was employed: ($D_{2014\text{-}15} = 4/12\times D_{2014}+8/12\times D_{2015}$), ($D_{2015\text{-}16} = 4/12\times D_{2015}+8/12\times D_{2016}$) and ($D_{2016\text{-}17} = 4/12\times D_{2016}+D_{2017}$), where $D_{\text{academic year}}$: figure calculated for each academic year, $D_y$: figure provided for calendar year.

Note 2. Expenses incurred from funding provided by the Ministry have been calculated until 30 June 2017; expenses incurred from service or research funding have been calculated until 27 August 2017.

**Table 2.1.3. Annual balance between expenditure and revenue (in Euros)**

| Academic year | Total expenditure | Total revenue | Balance |
|---|---|---|---|
| 2014-15 | 2,527,316 | 2,302,097 | -225,219 |
| 2015-16 | 2,050,218 | 2,051,128 | 910 |
| 2016-17 | 1,469,041 | 1,519,787 | 50,746 |

## 2.2. Comments

Funding of Universities has been greatly reduced in recent years, as the combined result of particularly small proportion of state budget allocated to Ministry of Education and increased number of higher education institutions around the country. Government policies have been attentive in supporting, mainly, personnel salaries (which have been substantially reduced anyway) and welfare benefits to a progressively increasing number of students (as family incomes in Greece have been reduced in recent years, more students are entitled to benefits), rather than operation of institutions. Further, requirements for management of expenses have become inflexible and time-consuming. There is little autonomy available to Faculties to control their finances.

Above issues in association with reduced availability of national funds, in view of the dire financial situation in the country, allow little scope for Faculties to establish financial policies contributing to development.

Research grants and services income are more flexible to manage. In the recent past, increased success by Faculty members in attracting research funding (details in 10.2.) and maximising service income has allowed recruitment of research personnel and purchase of equipment and consumables. The new period of national calls has started and members of staff have already submitted a record number of applications, many of which, hopefully, will come to fruition.

## 2.3. Suggestions for improvement

In the past, the Rectors of Greek Universities had called, jointly and repeatedly, for greater autonomy in funding of Universities, without compromising ethical spending of funds and appropriate auditing. The Rectors had even proposed that each University would receive a lump sum corresponding to the cumulative amount of funds currently allocated by the Ministry at various categories (e.g., salaries, student welfare benefits, operating costs), which would allow Universities to prioritise their function and allocate funds by decisions to be taken within each University and Faculty. Nevertheless, above proposals have never been accepted by the Ministry.

The requirement for tendering every single item of potential purchase, which contributes to significant delays and is not financially justified, is currently a matter of deliberations between the Rectors and the Ministry. In view of the various constraints, Faculty members have been advised to make full and efficient use of the (little) financial resources that are available for operating expenses and expenses for teaching activities.

Further, Faculty members have fully understood the importance of research and service income for future development and have submitted proposals for funding. Senior members of the Faculty are always available to advise junior colleagues regarding aspects of submissions. Formation of larger groups by members of different departments helps in tackling multifaceted problems and promotes collaboration between members of the Faculty. Staff should aim to maximise provision of services, that way providing valuable income for Faculty, which can be used to support teaching and reseach activities.

# 3. Curriculum

## 3.1. Factual information

*Introduction*

Currently, the Faculty implements two teaching curricula of veterinary undergraduate studies. Duration of studies in both curricula is five years (10 academic terms). Studies include theoretical and practical training and lead to award of 'Degree of Veterinary Science' (*Πτυχίο Κτηνιατρικής*).

The initial teaching curriculum (herebelow 'previous teaching curriculum') had been introduced in academic year 1994-95, when students were first admitted into the Faculty. The curriculum is currently implemented for students, who were admitted and enrolled into the program in 2015-16 (i.e., it will be implemented until 2019-20). That curriculum consisted of 65 modules with a total of 300 ECTS credits. Details are in Appendix 3a.

After appropriate deliberation, a new teaching curriculum (herebelow 'current teaching curriculum') has been introduced starting in academic year 2016-17. The curriculum is currently implemented for students, who were enrolled into the program in 2016-17 and thereafter. That curriculum consists of 81 modules with a total of 300 ECTS credits. Details are in Appendix 3b.

### 3.1.1. Description of the educational aims and strategy in order to propose a cohesive framework and to achieve the learning outcome

The Faculty of Veterinary Science aims to provide high-class education and training, based on the teaching curriculum of veterinary undergraduate studies that is being applied.

As a general objective, the curriculum aims to provide graduates with necessary knowledge and skills to prevent, diagnose and treat animal diseases, to manage livestock husbandry for achieving optimum production while maintaining health and welfare, to evaluate safety and hygiene of food of animal origin and to contribute in control of zoonotic diseases. Importantly, the curriculum and teaching in general emphasise in the significance of life-long learning and continuing professional development.

Graduates of the Faculty will be able to:

- comprehend principles of biology, as well as structure and function of animals,
- distinguish between normalcy and pathological processes and understand the pathogenetic mechanisms of animal diseases,
- manage livestock husbandry for achieving optimum productivity, while maintaining health and welfare of animals, and for protecting public health by ensuring control of zoonoses and production of safe food,
- diagnose and treat most common and important animal diseases, by interpreting and taking into account results of clinical and ancillary tests,
- comprehend the significance of public health protection and perform relevant scientific work for the benefit of the society,
- communicate efficiently with animal owners, in order to receive necessary and relevant information

and to guide them in resolving problems,
- understand difficult cases, for referral to veterinary specialists, to more experienced colleagues or clinics with increased facilities and
- fully understand the significance of taking up and following continuous professional development.

**3.1.2. Description of the legal constraints imposed on curriculum by national/regional legislations and the degree of autonomy that the Establishment has to change the curriculum**

There is no nationally defined teaching curriculum or any other legal constraints. The Faculty has full authority to decide, implement and modify the teaching curriculum.

**3.1.3. Description of how curricular overlaps, redundancies, omissions and lack of consistency, transversality and/or integration of the curriculum are identified and corrected.**

In the previous curriculum, as a consequence to its long-standing implementation, overlaps, redundancies and omissions had been corrected throughout the years of implementation.

During the stage of designing the current curriculum, there have been discussions among members of the committee, which had been, subsequently, followed by similar discussions among members of academic staff, in order to identify relevant issues. At conclusion of discussions, necessary adjustments had been carried out. Hence, the issues had been, to a large extent, resolved before implementation of the curriculum. The final draft of the curriculum had again been checked by the Education committee for any overlaps, redundancies, omissions. After approval and initiation of the current curriculum, during the first academic year of implementation (2016-17), the Education committee of the Faculty is particularly active in following up any matters referring to implementation and integration of the current curriculum.

**3.1.4. Description of the core clinical exercises/practicals/seminars prior to the start of the clinical rotations**

Prior to starting clinical rotations, during the 3rd year, all students receive training under the supervision of academic staff on clinical examination / diagnosis of animals. Students are allocated into small groups, in order to receiving as much individualised attention and gaining as much practical experience as possible. Total length of this practical training is 26 h for each student. The training is supervised and carried out by members of DM (abbreviations of departments in Table 1iv). Details are in Appendix 3c.

**3.1.5. Description of the core clinical rotations and emergency services and the direct involvement of undergraduate students in it**

*Introduction*

Attendance of practical/clinical training sessions is obligatory. With regards to clinical training, during the 4th and 5th years (7th to 10th terms) of study students follow a rotation program (Table 3i), divided into five groups as below (abbreviations of departments in Table 1iv).

- One group follows practical training in DM.
- One group follows practical training in DOR.
- One group follows practical training in DS.
- One group follows practical training in DHFAO.
- One group follows practical training in DPD and DPa.

Each group consists of 20 to 25 students and attends each of above rotations for a period of three weeks. That way, all students receive training in clinical and related disciplines. Groups consist of 4th and 5th year students, which promotes collaboration and interactions between junior (4th) and senior (5th) clinical students, the former assisting senior students, as well as sharing knowledge in a mutually beneficial learning process.

Table 3i. Rotation program for clinical training as had been planned for academic year 2016-17.

| | Dates | | | | |
|---|---|---|---|---|---|
| | Mon 26 Sep - Sun 9 Oct 2016 | Mon 10 - Sun 30 Oct 2016 | Mon 31 Oct - Sun 20 Nov 2016 | Mon 21 Nov - Sun 11 Dec 2016 | Mon 12 - Fri 23 Dec & Sat 7 - Sun 15 Jan 2017 |
| Department | Mon 13 Feb - Sun 5 Mar 2017 | Mon 6 - Sun 26 Mar 2017 | Sun 27 Mar - Sun 9 Apr & Mon 24 - 30 Apr 2017 | Mon 1 - Sun 21 May 2017 | Mon 22 May – Sun 4 Jun 2017 |
| DM | Group B | Group A | Group E | Group D | Group C |
| DS | Group C | Group B | Group A | Group E | Group D |
| DOR | Group D | Group C | Group B | Group A | Group E |
| DHFAO | Group E | Group D | Group C | Group B | Group A |
| DPD (Wed, Fri) & DPa (Mon, Tue, Thu) | Group A | Group E | Group D | Group C | Group B |

Note. Subsequently to issue of above rotation schedule, changes had been made, as, due to severely adverse weather conditions, the University was closed for the period 9-15 Jan. 2017; hence all rotas were advanced by one week.

*Specific training activities at Department of Medicine*

Clinical training in farm animal medicine involves visits to the Teaching farm of TEI Thessaly (details in 5.1.3) and commercial farms, as well as in-house training in patients brought into the Faculty. Clinical training in companion animal medicine is provided only in house; students are allocated into one of up to five subgroups, each of which is under the supervision of member of teaching staff (four subgroups are trained in clinical cases and the fifth is trained at the clinical pathology laboratory).

In farm animal medicine, students take history from the farmer and discuss points that need clarification, fill examination cards, perform clinical examinations, evaluate farm facilities, collect samples for ancillary testing, discuss differential diagnosis and treatment protocols, apply necessary treatments and participate in prevention strategy discussions with farmers.

In companion animal medicine, students are responsible for history taking, fill examination cards, clinical examination of animals, collection of samples (e.g., blood, urine, faeces), catheter placement, performing drug administration, discussion of therapeutic recommendations etc. Students participate

actively in the diagnostic management of cases (discussion of differential diagnosis, of ancillary tests to be carried out, of proposed therapeutic administration etc.). Students participate in care of hospitalised animals (24 h / 7 d basis).

Training in clinical pathology includes performing routine clinical pathology diagnostic tests with rapid turnaround time, e.g., haematological tests (CBC, reticulocyte count, blood type, cross match etc.), clinical biochemical tests, coagulation tests, urinalysis, faecal examination, fluid analysis, rapid immunographic tests, as well as discussing interpretation of their results. Often, data from archival cases are also discussed with students for evaluation, discussion and development of diagnostic algorithms. Detailed descriptions regarding training and clinical activities in DM are in Appendix 3c.

*Specific training activities at Department of Surgery*

Students attending training in DS are further allocated into one of four subgroups: one in animal reception and clinical examination, one in anaesthesia and intensive care (students actively participate in anaesthesia induction and monitoring), one in diagnostic imaging and one in companion animal surgery (1-2 fifth-year students scrub-in). Students may occasionally participate in out-of-hours service (until 22.00), whilst they always participate in care of hospitalised animals (24 h / 7 d basis). Formal student training is carried out three days a week, but students are on duty daily, throughout the week, to care for hospitalised animals.

In general, 5th year students are responsible for handling and examining animals, taking samples, performing ancillary examinations (e.g., X-ray or ultrasonographic imaging), participating in surgeries etc., with 4th year students assisting in those roles. Students in the subgroup in diagnostic imaging assist in radiographic positioning of patients, participate in radiographic evaluation, attend ultrasonographic examinations and participate in report writing. Anaesthetic cases are discussed with students, preferably before the induction of anaesthesia; students are encouraged to have an active role in selection of anaesthetic protocols. Students also participate in anaesthesia induction and monitoring and assist in surgical operation procedures. In general, administration of anaesthesia in low-anaesthetic-risk patients and peri-operative monitoring of the patients is performed by one 5th and one 4th year student under continuous supervision. Students discuss differential diagnosis and treatment of clinical cases with teaching staff.

After clinical workup of the cases is complete, all cases are further discussed with a member of teaching staff.

*Specific training activities at Department of Obstetrics and Reproduction*

Students attending training in DOR follow a weekly schedule as in Appendix 3d.

Students receive hands-on training in performing specific reproductive health tasks. These include (but are not limited to) examination of the genital system of female/male and of the udder of domestic animals (cattle, small ruminants, dogs, cats), as well as examination of newborns, pregnancy diagnosis in cows (rectal palpation and ultrasonographic examination), ewes/does (ultrasonographic examination), and companion animals (clinical examination and ultrasonographic examination), semen collection and evaluation, administration of drugs through the intrauterine or intramammary route, application of

intravaginal devices or sponges, obstetrical or reproductive surgeries, artificial insemination etc. In farm visits, students are also trained in evaluation of farm buildings and equipment (e.g., milking parlour and milking system, pens for newborns etc.).

During attendance of clinical cases or during scheduled farm visits, students are trained in history taking and in interpretation of results of clinical, paraclinical or laboratory examinations, which are discussed with students. Students participate in discussions with animal owners regarding therapeutic or preventive schemes that need to be followed in farms or individual animals. They are prompted to talk to owners regarding management of animals (and farms) and to ask specific questions, which might help in understanding the situation in a farm.

Students participate actively and according to the required dexterity, take part to or undertake exclusively the treatment of diseased animals by administering scheduled medications and perform follow up examinations of animals that had been treated.

Further, students are assigned homework, which need to be dealt with within the following 2 to 4 days (depending on extent of the work). These are assigned to small groups of students (3-5 persons). Then, each group would make a brief (10 min.) presentation, which is followed by a discussion by all students involved.

*Specific training activities in relation to emergency service and hospitalisation activities*

Each of the three clinical departments follows its own policy regarding emergency service and hospitalisation activities. In most cases, students participate actively in these.

In DM, emergency cases are accepted when the department is open and receives patients (details in 5.1.4.). Students are on-duty, along with a member of teaching staff to receive patients. When animals are hospitalised, two students are responsible for continuous (24 h / 7 d basis) supervision; they rotate every 24 hours. A teaching staff member is always supervising the patient and the students.

In DS, students participate in the care for hospitalised animals in groups of 2 to 4 persons. The hospitalisation wards are fully operational on 24 h / 7 d basis for 42 weeks annually. For this service, two members of teaching staff (one surgeon and one anaesthetist) are always on call. Students monitor hospitalised animals by performing regular examinations and attendance to their situation; also, they participate in pain estimation and administration of analgesics and other medications, in wound care and bandage changes, in placing catheters, in collecting appropriate samples for clinical pathology laboratory, in updating medical records and in communicating with animal owners.

In DOR, in relation to farm animal obstetrics and reproduction, a continuous service 24 h / 7 d basis, 48 weeks annually, is provided. Service is offered by the two senior members of the Department, who are available and can be contacted at any time, directly by farmers requesting an emergency service. Since the academic year 2016-17, a veterinarian is being employed additionally to above and to specifically cover emergency services during week-ends and holidays. A list of students for out-of-hours duty is produced at the start of each clinical rotation student group training, with two students on duty every day of the week. If an emergency would arise, students on duty must follow the teaching staff to the farm, where they participate actively in handling of cases. Further, a list of students on duty is

produced for the holiday periods, again with two students on duty every day. In case of emergencies, visits are made to the farm, where the emergency has arisen and actions are taken in the farm. If there would be a need to hospitalise animals, these are brought into departmental facilities. The students on duty will be responsible for monitoring animals during hospitalisation. In relation to companion animal obstetrics and reproduction, the department uses facilities and resources of DS for out-of-hours cover and hospitalisation of animals; one academic staff of DOR also participates in relevant service at DS.

### 3.1.6. Description of the teaching in slaughterhouses and in premises for the production, processing, distribution/sale or consumption of food of animal origin

Practical training in slaughterhouses and in premises for the production, processing, distribution/sale or consumption of food is organised under the supervision of academic staff. Details are in Table 4vi.

Visits to facilities provide training to students in a variety of topics in food safety, processing and distribution of foods of animal origin. Visits to dairy plants and to the meat processing plant are carried out during the 3rd year. Students in groups of 30 to 40 people visit these facilities twice (length of visit: 2 h). Further, regular visits to slaughterhouses are carried out during the 4th and 5th years. Visits to slaughterhouses are carried out once (at least) or (even) twice weekly through the academic years in small groups (length of training in each visit: 3 h). Further, visits to dairy plants can also be organised during the 4th and 5th years

### 3.1.7. Description of the selection procedures of the Electives by the students and the degree of freedom in their choice

*Previous teaching curriculum*

The previous teaching curriculum did not provide elective modules for the students.

*Current teaching curriculum*

In the current teaching curriculum, elective modules are available as in Table 3iii. Each student should select one elective module among those offered.

Table 3iii. Number of electives available at the current teaching curriculum.

| Year | Term | Number of elective modules |
|---|---|---|
| 1st | Spring (2nd) | 3 |
| 2nd | Spring (4th) | 3 |
| 3rd | Winter (5th) | 2 |
| 5th | Winter (9th) | 4 |
| 5th | Spring (10th) | 5 |
| Total | | Offered at the teaching curriculum: 17 |
| | | To be selected by students: 5 |

An upper limit has been set in the curriculum for proportion of students that may attend each elective module: maximum number of students that may select a module among those offered is limited to 70%, 40%, 30% and 24% of students attending the term, when number of elective modules offered in that term are 2, 3, 4 and 5, respectively.

Students can select any module that they wish, notwithstanding the above limitation. If more students select an elective module that number set by above proportions, allocation is on first-come, first-served basis.

### 3.1.8. Description of the organisation, selection procedures and supervision of the EPT

Training outside the Faculty is provided in selected veterinary practices, livestock farms, aquaculture facilities, feed producing industries, food processing facilities, animal health companies, services of the Ministry of Rural Development and Food, equine clubs, game farms and other places of veterinary interest. The EPT training is compulsory (i.e., integral part of the teaching curriculum) and takes place during summer months. Training lasts in total two calendar months and is undertaken between 3rd to 4th or between 4th to 5th year. The procedure is supervised through a relevant service at the central administration of the university, and a member of the academic staff is responsible for overseeing the procedures for students of the Faculty and for confirming academic requirements of the training.

Any practice, organisation etc. that may wish to be selected as a place for the EPT applies to the Faculty, with a description of facilities available, work carried out and role of the students that would be placed there. Students indicate their preference for a placement through the list available at the Faculty. An agreement is signed between the university and the facility. During training, students share the obligations and benefits required and enjoyed respectively by staff of the hosting place. Upon completion of the training, a confirmatory letter is provided by the director of the place where students had been placed; the academic supervisor of the program certifies successful completion. When formalities have been finalised, students can also receive their compensation for the time spent on the EPT.

### 3.1.9. Description of the procedures used to ascertain the achievement of each core practical/clinical activity by each student

Achievement of the various activities by students is confirmed by academic and teaching staff supervising training. In DOR, each student is issued a personal logbook, where specific activities are clearly described, in order to confirm acquisition of the specific skills included in the ESEVT Day One Competences; no student is allowed to sit final examination, if that logbook has not been completed appropriately. In any case in all disciplines and departments, all supervised practical training is mandatory and an attendance list is used for verification of attendance; if students fail to attend in at least 80% of training activities, they have to undertake further training to compensate for activities they had missed or, in cases of particularly reduced attendance, may have to retake the practical training.

### 3.1.10. Description of how and by who the core curriculum is decided, communicated to staff, students and stakeholders, implemented, assessed and revised

The previous teaching curriculum followed closely that of the Faculty of Veterinary Medicine of Aristotle University of Thessaloniki (an EAEVE-approved Faculty).

In 2014, a committee was formed among members of academic staff to work on and propose an updated teaching curriculum. The committee took into account (a) EU Directive 2005/36/EC, as amended by directive 2013/55/EU and its Annex V.4.1., (b) the requirements of the ESEVT, (c) the curricula of veterinary faculties in Europe and North America, (d) replies to a specific questionnaire that had been sent to (da) veterinarians practicing in Greece, (db) graduates of the Faculty (practicing in Greece or abroad), (dc) students of the Faculty, (dd) stakeholders (e.g., the Hellenic Veterinary Association) and produced a proposal with general principles. For design of the new curriculum, feedback obtained during the annual quality assurance process (details in 11.1.1.) and responses by students in the annual evaluation of teaching (details in 9.1.6.) have been taken into account by the committee, in order to make appropriate changes in the curriculum

Based on all above, the committee produced a draft of the proposed teaching curriculum. Following discussions among members of academic staff and necessary adjustments, a final document was prepared for approval by the General Assembly, which was subsequently submitted to the Senate and ratified. The current teaching curriculum has been implemented since academic year 2016-17 for students, who were enrolled into the program in 2016-17 and thereafter.

The Committee that worked on the curriculum's proposal, with the addition of two new members, has now taken up the role of the Education Committee of the Faculty. The committee is responsible for dealing with any matters or problems that arise during implementation of the new curriculum and proposing to the General Assembly remedial actions or solutions.

**Table 3.1.1. Curriculum hours in each academic year taken by each student**

*Previous teaching curriculum (up to academic year 2015-16)*

Option 1

| Academic years[1] | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| Year 1 | 468 | | | 169 | 130 | | | 767 |
| Year 2 | 403 | | | 273 | 13 | | | 689 |
| Year 3 | 468 | | | 223 | 50 | 26 | 480 | 1,247 |
| Year 4 | 572 | | | 76 | 99 | 319 | | 1,066 |
| Year 5 | 377 | | | 12 | 141 | 367 | | 897 |
| Total | 2,288 | | | 753 | 433 | 712 | 480 | 4,666 |

Option 2

| Academic years[1] | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| Year 1 | 468 | | | 169 | 130 | | | 767 |
| Year 2 | 403 | | | 273 | 13 | | | 689 |
| Year 3 | 468 | | | 223 | 50 | 26 | | 767 |
| Year 4 | 572 | | | 76 | 99 | 319 | 480 | 1,546 |
| Year 5 | 377 | | | 12 | 141 | 367 | | 897 |
| Total | 2,288 | | | 753 | 433 | 712 | 480 | 4,666 |

**Table 3.1.1. (continued)**

*Current teaching curriculum (from academic year 2016-17)*

Option 1

| Academic years[1] | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| Year 1 | 343 | | | 287 | 78 | | | 708 |
| Year 2 | 297 | | | 368 | 93 | 7 | | 765 |
| Year 3 | 411 | | | 205 | 16 | 93 | 480 | 1205 |
| Year 4 | 471 | | | 26 | 122 | 255 | | 874 |
| Year 5 | 26 | | | 26 | 208 | 474 | | 734 |
| Total | 1,548 | | | 912 | 517 | 829 | 480 | 4,286 |

Option 2

| Academic years[1] | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| Year 1 | 343 | | | 287 | 78 | | | 708 |
| Year 2 | 297 | | | 368 | 93 | 7 | | 765 |
| Year 3 | 411 | | | 205 | 16 | 93 | | 725 |
| Year 4 | 471 | | | 26 | 122 | 255 | 480 | 1,354 |
| Year 5 | 26 | | | 26 | 208 | 474 | | 734 |
| Total | 1,548 | | | 912 | 517 | 829 | 480 | 4,286 |

A: lectures; B: seminars; C: supervised self-learning; D: laboratory and desk based work, E: non-clinical animal work; F: clinical animal work; G: EPT; H: total.

1 Academic years are divided into 2 terms (winter, spring).

**Table 3.1.2. Curriculum hours in EU-listed subjects taken by each student**

*Previous teaching curriculum (up to academic year 2015-16)*

| Subjects | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| **Basic subjects** | 142 | | | 69 | | | | 211 |
| Medical physics | 26 | | | 13 | | | | 39 |
| Chemistry (inorganic and organic sections) | 26 | | | 13 | | | | 39 |
| Animal biology, zoology and cell biology | 54 | | | 17 | | | | 71 |
| Feed plant biology and toxic plants | 16 | | | 6 | | | | 22 |
| Biomedical statistics | 20 | | | 20 | | | | 40 |
| **Basic Sciences** | 737 | | | 399 | 140 | | | 1,276 |
| Anatomy, histology and embryology | 143 | | | 52 | 130 | | | 325 |
| Physiology | 117 | | | 68 | 10 | | | 195 |
| Biochemistry | 39 | | | 26 | | | | 65 |
| General and molecular genetics | 39 | | | 26 | | | | 65 |
| Pharmacology, pharmacy and pharmacotherapy | 26 | | | 26 | | | | 52 |

**Table 3.1.2. (continued)**

*Previous teaching curriculum (up to academic year 2015-16) (continued)*

| Subjects | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| **Basic Sciences** | | | | | | | | |
| Pathology | 104 | | | 26 | | | | 130 |
| Toxicology | 26 | | | 26 | | | | 52 |
| Parasitology | 26 | | | 26 | | | | 52 |
| Microbiology | 65 | | | 65 | | | | 130 |
| Immunology | 26 | | | 13 | | | | 39 |
| Epidemiology | 26 | | | 26 | | | | 52 |
| Professional communication | 34 | | | 0 | | | | 34 |
| Professional ethics | 5 | | | | | | | 5 |
| Animal ethology | 8 | | | 4 | | | | 12 |
| Animal welfare | 9 | | | 3 | | | | 12 |
| Animal nutrition | 44 | | | 12 | | | | 56 |
| **Clinical Sciences** | 968 | | | 136 | 207 | 712 | | 2,023 |
| Obstetrics, reproduction and reproductive disorders | 199 | | | 4 | 70 | | | 273 |
| Diagnostic pathology | 46 | | | 0 | 64 | | | 110 |
| Medicine and surgery including anaesthesiology | 544 | | | 111 | 41 | | | 696 |
| Clinical practical training in all common domestic animal species | | | | | | 712 | | 712 |
| Preventive medicine | 67 | | | | | | | 67 |
| Diagnostic imaging | 26 | | | | | | | 26 |
| State veterinary services and public health | 28 | | | | | | | 28 |
| Veterinary legislation, forensic medicine and certification | 6 | | | 8 | 6 | | | 20 |
| Therapy in all common domestic animal species | 26 | | | 13 | | | | 39 |

**Table 3.1.2. (continued)**

*Previous teaching curriculum (up to academic year 2015-16) (continued)*

| Subjects | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| **Clinical Sciences** | | | | | | | | |
| Propaedeutics of all common domestic animal species | 26 | | | | 26 | | | 52 |
| **Animal Production** | 155 | | | 80 | 11 | | | 246 |
| Animal production and breeding | 70 | | | 44 | 5 | | | 119 |
| Economics | 26 | | | 13 | | | | 39 |
| Animal husbandry | 32 | | | 15 | 3 | | | 50 |
| Herd health management | 27 | | | 8 | 3 | | | 38 |
| **Food Safety and Quality** | 151 | | | 37 | 75 | | | 263 |
| Inspection and control of food and feed | 56 | | | 8 | | | | 64 |
| Food hygiene and food microbiology | 56 | | | 11 | | | | 67 |
| Practical work in places for slaughtering and food processing plants | | | | | 75 | | | 75 |
| Food technology including analytical chemistry | 39 | | | 18 | | | | 57 |
| **Professional Knowledge** | 135 | | | 32 | | | | 267 |
| Professional ethics & behaviour | 16 | | | 0 | | | | 16 |
| Veterinary legislation | 16 | | | 0 | | | | 16 |
| Veterinary certification and report writing | 3 | | | 0 | | | | 3 |
| Communication skills | 70 | | | 0 | | | | 70 |
| Practice management & business | 11 | | | | | | | 11 |

**Table 3.1.2. (continued)**

*Previous teaching curriculum (up to academic year 2015-16) (continued)*

| Subjects | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| **Professional Knowledge** | | | | | | | | |
| Information literacy & data management | 19 | | | 32 | | | | 51 |
| **EPT** | | | | | | | 480 | 480 |
| Total | 2.288 | | | 753 | 433 | 712 | 480 | 4,666 |

*Current teaching curriculum (from academic year 2016-17)*

| Subjects | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| **Basic subjects** | 38 | | | 42 | | | | 80 |
| Medical physics | 2 | | | | | | | 2 |
| Chemistry (inorganic and organic sections) | 8 | | | 10 | | | | 18 |
| Animal biology, zoology and cell biology | 6 | | | 6 | | | | 12 |
| Feed plant biology and toxic plants | 6 | | | 6 | | | | 12 |
| Biomedical statistics | 16 | | | 20 | | | | 36 |
| **Basic Sciences** | 553 | | | 562 | 88 | | | 1203 |
| Anatomy, histology and embryology | 130 | | | 40 | 78 | | | 248 |
| Physiology | 78 | | | 146 | 10 | | | 234 |
| Biochemistry | 36 | | | 42 | | | | 78 |
| General and molecular genetics | 26 | | | 26 | | | | 52 |
| Pharmacology, pharmacy and pharmacotherapy | 39 | | | 39 | | | | 78 |
| Pathology | 52 | | | 52 | | | | 104 |
| Toxicology | 13 | | | 13 | | | | 26 |
| Parasitology | 20 | | | 26 | | | | 46 |
| Microbiology | 52 | | | 78 | | | | 130 |
| Immunology | 20 | | | 39 | | | | 59 |
| Epidemiology | 26 | | | 26 | | | | 52 |
| Professional communication | 20 | | | | | | | 20 |
| Professional ethics | 8 | | | 8 | | | | 16 |
| Animal ethology | 10 | | | 6 | | | | 16 |
| Animal welfare | 10 | | | 4 | | | | 14 |
| Animal nutrition | 13 | | | 17 | | | | 30 |

**Table 3.1.2. (continued)**

*Current teaching curriculum (from academic year 2016-17)*

| Subjects | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| **Clinical Sciences** | 707 | | | 89 | 227 | 827 | | 1,850 |
| Obstetrics, reproduction and reproductive disorders | 122 | | | 2 | 22 | | | 146 |
| Diagnostic pathology | 32 | | | | 96 | | | 128 |
| Medicine and surgery including anaesthesiology | 444 | | | 87 | 29 | | | 560 |
| Clinical practical training in all common domestic animal species | | | | | | 827 | | 829 |
| Preventive medicine | 33 | | | | | | | 33 |
| Diagnostic imaging | 11 | | | | | | | 11 |
| State veterinary services and public health | 16 | | | | | | | 16 |
| Veterinary legislation, forensic medicine and certification | 8 | | | | 28 | | | 36 |
| Therapy in all common domestic animal species | 13 | | | | | | | 13 |
| Propaedeutics of all common domestic animal species | 26 | | | | 52 | | | 78 |
| **Animal Production** | 91 | | | 109 | 12 | 2 | | 214 |
| Animal production and breeding | 40 | | | 46 | | | | 86 |
| Economics | 20 | | | 26 | | | | 46 |
| Animal husbandry | 16 | | | 24 | | | | 40 |
| Herd health management | 15 | | | 13 | 12 | 2 | | 42 |

**Table 3.1.2. (continued)**

*Current teaching curriculum (from academic year 2016-17)*

| Subjects | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| **Food Safety and Quality** | 105 | | | 86 | 190 | | | 381 |
| Inspection and control of food and feed | 43 | | | 42 | | | | 85 |
| Food hygiene and food microbiology | 33 | | | 10 | | | | 43 |
| Practical work in places for slaughtering and food processing plants | | | | | 190 | | | 190 |
| Food technology including analytical chemistry | 29 | | | 34 | | | | 63 |
| **Professional Knowledge** | 56 | | | 24 | | | | 80 |
| Professional ethics & behaviour | 6 | | | 6 | | | | 12 |
| Veterinary legislation | 25 | | | 5 | | | | 30 |
| Veterinary certification and report writing | 8 | | | | | | | 8 |
| Communication skills | 6 | | | | | | | 6 |
| Practice management & business | 7 | | | 7 | | | | 14 |
| Information literacy & data management | 4 | | | 6 | | | | 10 |
| **EPT** | | | | | | | 480 | 480 |
| Total | 1,548 | | | 912 | 517 | 829 | 480 | 4,286 |

A: lectures; B: seminars; C: supervised self-learning; D: laboratory and desk based work, E: non-clinical animal work; F: clinical animal work; G: EPT; H: total

**Table 3.1.3. Curriculum hours taken as electives for each student**

*Previous teaching curriculum (up to academic year 2015-16)*

The previous teaching curriculum did not provide for electives.

*Current teaching curriculum (from academic year 2016-17)*

| Subjects | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| **Basic subjects** | 38 | | | 42 | | | | 80 |
| Medical physics | 13 | | | 13 | | | 26 | 39 |
| Animal biology, zoology and cell biology | 13 | | | 13 | | | | 26 |
| Animal biology, zoology and cell biology | 13 | | | 13 | | | | 26 |
| Animal biology, zoology and cell biology | 13 | | | 13 | | | | 26 |
| **Basic Sciences** | | | | | | | | |
| Microbiology | 9 | | | 9 | | | | 18 |
| Parasitology | 4 | | | 4 | | | | 8 |
| **Clinical Sciences** | 117 | | | | 13 | 104 | | 234 |
| Obstetrics, reproduction and reproductive disorders | 13 | | | | | 13 | | 26 |
| Obstetrics, reproduction and reproductive disorders | 13 | | | | | 13 | | 26 |
| Obstetrics, reproduction and reproductive disorders | 13 | | | | | 13 | | 26 |
| Medicine and surgery including anaesthesiology | 13 | | | 9 | 4 | | | 13 |
| Medicine and surgery including anaesthesiology | 13 | | | 9 | 4 | | | 13 |
| Medicine and surgery including anaesthesiology | 13 | | | | | 13 | | 26 |
| Medicine and surgery including anaesthesiology | 13 | | | | | 13 | | 26 |
| Medicine and surgery including anaesthesiology | 13 | | | | | 13 | | 26 |

**Table 3.1.3. (continued)**

*Current teaching curriculum (from academic year 2016-17)*

| Subjects | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|
| **Clinical Sciences** | 117 | | | | 13 | 104 | | 234 |
| Medicine and surgery including anaesthesiology | 13 | | | | | 13 | | 26 |
| **Animal Production** | 26 | | | 26 | | | | 52 |
| Animal production and breeding | 13 | | | 13 | | | | 26 |
| Animal husbandry | 13 | | | 7 | 6 | | | 26 |
| **Food Safety and Quality** | 13 | | | | 13 | | | 26 |
| Food technology including analytical chemistry | 5 | | | 6 | | | | 11 |
| Food technology including analytical chemistry | 5 | | | | 7 | | | 12 |
| **Professional Knowledge** | | | | | | | | |
| Veterinary legislation | 3 | | | | | | | 3 |

A: lectures; B: seminars; C: supervised self-learning; D: laboratory and desk based work, E: non-clinical animal work; F: clinical animal work; G: others (specify); H: total.
Rows in same colour indicate elective modules taught in the term, among which one should be selected.

**Table 3.1.4. Curriculum days of External Practical Training (EPT) for each student**

*Previous teaching curriculum (up to academic year 2015-16)*

| Subjects | Minimum duration | Year of programme |
|---|---|---|
| Production animals (pre-clinical)<br>Companion animals (pre-clinical)<br>Production animals (clinical)<br>Companion animals (clinical)<br>FSQ & VPH<br>Others (details in 3.1.8) | 2 months | Equally allocated between 3rd and 4th or 4th and 5th year |

*Current teaching curriculum (from academic year 2016-17)*

| Subjects | Minimum duration | Year of programme |
|---|---|---|
| Production animals (pre-clinical)<br>Companion animals (pre-clinical)<br>Production animals (clinical)<br>Companion animals (clinical)<br>FSQ & VPH<br>Others (details in 3.1.8) | 2 months | Equally allocated between 3rd and 4th or 4th and 5th year |

**Table 3.1.5. Clinical rotations under academic staff supervision (excluding EPT)**

*Previous teaching curriculum (up to academic year 2015-16)*

| Types | List of clinical rotations (Discipline/Species) | Duration[1] | Year of programme |
|---|---|---|---|
| **Intra-mural (VTH)** | Medicine: cattle, small ruminants, pigs, equine, companion animals, exotic pets<br>Surgery: small ruminants, equine, companion animals, exotic pets<br>Obstetrics-Reproduction: small ruminants, companion animals<br>Poultry Diseases | 39.0 weeks[2] / 109.2 days[2] | 4th and 5th[3] |
| **Ambulatory clinics** | Medicine: cattle, small ruminants, pigs, equine<br>Obstetrics-Reproduction: cattle, small ruminants<br>Poultry Diseases | 20.8 weeks[2] / 31.2 days[2] | 4th and 5th[3] |
| **FSQ & VPH** | | 7.8 weeks | 4th (spring term)<br>5th (winter and spring term) |
| **Electives** | | | |
| **Diagnostic pathology** | | 7.8 weeks | 4th (spring term)<br>5th (winter and spring term) |

1 Average figures for all students, taking into account all possible rotation schemes, based on a two-year rotation program.

2 Students attend training intra-murally (VTH) and at ambulatory clinics on same week; average figures for all students provided, based on two-year rotation program

3 Poultry Diseases: 4th year and winter term of 5th year.

*Current teaching curriculum (from academic year 2016-17)*

The schedule for clinical rotations for the current teaching curriculum will be discussed and decidec during academic year 2017-18, in order to be implemented from academic year 2018-19.

**Table 3.1.6. Optional course proposed to students (not compulsory)**

Neither the previous, nor the current teaching curriculum provide optional courses available to students.

## 3.2. Comments

Establishment, implementation and modifications of teaching curriculum is one of the few functions that faculties in Greek Universities have been granted full flexibility to arrange as they would consider more appropriate, in order to optimise student training.

Continuous evaluation of teaching curriculum and potential modifications is considered to be a collective responsibility of academic staff in veterinary faculties. The continuously increasing knowledge coupled with the limited number of hours available for training sets a challenging environment, in which staff should provide essential knowledge to veterinary students in preparation for a diverse professional career. In the previous two years, the Faculty, after extensive deliberations and discussions among its members and after taking into account the opinion of stakeholders (details in 3.1.10), has approved a new teaching curriculum, the implementation of which has started recently.

The characteristics of this curriculum are, in comparison to the previous one, overall reduced teaching hours, but with increased practical and clinical teaching hours. Other significant changes are the intensive clinical training during the final year, the introduction of elective modules, which will allow students to study in depth topics of their choice and develop their particular preferences, and the introduction of modules covering as separate entities topics, which were previously covered within other modules (e.g., modules in professional knowledge).

Difficulties and issues that have arisen during the first year of implementation, have been efficiently resolved through the continuous monitoring by members of teaching staff involved, the Education committee and the Dean.

### 3.3. Suggestions for improvement

During the next academic year, the current teaching curriculum will advance to second academic year. Monitoring by all involved will be important to continue to provide remedial action for any difficulties and issues that will arise. Further, a planning for the clinical rotations, which will start in 2018-19 will take place and will need to take into account the overlap with the previous teaching curriculum, which will be inevitable for some years.

In relation to the clinical rotations, introduction of a sixth group is currently being discussed. It is proposed that the group will be a joint DM, DOR, DS interdisciplinary group, which will cover exclusively equine studies (medicine, surgery and obstetrics-reproduction). A new teaching staff has been appointed, starting on September 2017, to cover that subject. The way, students would gain significant experience in a subject, in which number of patients seen at the Faculty thusfar is small, and, further, number of students in all groups would decrease. Impending selection and appointment of a new academic staff in the subject of emergency medicine will also improve relevant teaching and increase student exposure to emergency cases. Further, the recent appointment of two academic staff as persons responsible for coordination and supervision of clinical function and training will enhance interactions between clinical departments in following common training schedules in farm animal / companion animal work, at the same time maintaining administrative structure as it is currently. This will work for the benefit of staff, students and patients.

Starting in September 2017-18, the student logbook will be implemented across the clinical departments. That will facilitate monitoring of progress of students. It will also be used for confirmation of completion and adequacy of training in clinical skills.

As students have to undertake EPT in only of the summer periods subsequently to 3rd year of study, it will be possible for them, hereafter, to attend the works in the clinical departments of the Faculty during the other summer period (i.e., if students attend EPT in the summer between 3rd to 4th year, they will be able to attend the clinical departments in the summer between 4th to 5th year). It has been decided that the scheme will be operated on voluntary basis, because the yearly academic calendar (details in 1.1.3.) approved by the Senate for implementation across the University Faculties does not provide for

compulsory training outside the academic terms. Moreover, starting in September 2017, the student list for out-of-hours duty implemented in DOR for the holiday periods, will be extended to cover out-of-hours duty also in DM. The above will increase exposure of students to patients to be seen intra-murally.

Currently, the Faculty is also evaluating veterinary practices and other veterinary institutions, in which students will be attending during the academic year. This scheme will be further to and beyond the summer EPT period. Objective will be to increase exposure of students to higher number of patients, as well as to bring them in contact with veterinary practice environments. For practices and institutions to participate in the training, it will be necessary to have above average qualified personnel (i.e., with postgraduate training and/or extensive professional experience) and also with increased number of patients attended by practices. The practices will be under periodic monitoring by the Education committee, in order to ensure that standards of veterinary science in these training places

# 4. Facilities and equipment

## 4.1. Factual information

### 4.1.1. Description of the location and organisation of the facilities used for the veterinary curriculum

The Faculty is located in one site, at the north-west part of the town of Karditsa, in the administrative unit of Karditsa, in the administrative region of Thessaly (Appendix 4a).

The town is the main settlement in the administrative unit. In the 2011 census, population of the town was approx. 56,500 people and of the administrative unit 113,500 people. The town is located 310 km from Athens (325 km from the airport) and 220 from Thessaloniki (245 from the airport). Karditsa can be reached from Athens or Thessaloniki by private car or public transport (bus, rail).

The Faculty is located 2 km from the city centre.

Total surface of the site of the Faculty is 15,216 square metres, with a covered area of 5,958 square metres. Total surface of buildings in the site is 7,067 square metres (sq.m.). The site (Appendices 4b, 4c) includes the buildings detailed in Table 4i.

Table 4i. Details of buildings.

| Building | Covered area (sq.m.) | Description[1] |
|---|---|---|
| Main building | 1,125 | Ground floor: central hall, offices for Services section, laboratory facilities and offices for DEBAHE, DAHN, DHFAO and DPh, lavatories |
| | 1,283 | First floor: one lecture room, laboratory facilities and offices for DEBAHE, DAFD, DMP, DPa, DHFAO and DPT, lavatories |
| Auditoria complex | 580 | Ground floor: two auditoria, reading room, offices for Student Union, lavatories |
| | 198 | First floor: Library, IT facilities, offices for Services section |
| Biochemisty building | 131 | Laboratory facilities and offices for DB |
| Anatomy I building | 131 | Histology teaching room, offices for DAHE |
| Anatomy II building | 224 | Anatomy teaching hall, cold room, offices for DAHE |
| Pathology building | 221 | Post-mortem teaching hall, cold room, incinerator, offices for DPh, lavatories |
| Poultry Diseases building | 119 | Examination rooms, laboratory facilities and offices for DPD, lavatories |
| New building | 552 | Two classrooms, offices for DAHE, DB, DAHN, DM, dormitory, lavatories |
| Hospital building-DM | 456 | Ground floor: waiting room, out-patient examination rooms, clinical pathology area, hospitalisation ward, feed storage room, lavatories |
| | 134 | First floor: staff offices |
| | | Basement: DAFD tanks and aquaria |
| Hospital building-DS-diagnostic imaging area | 225 | Ground floor: waiting room, X-ray examination rooms, dark room, staff offices, lavatories |

Table 4i (continued).

| Building | Covered area (sq.m.) | Description[1] |
|---|---|---|
| Hospital building-DS | 673 | Ground floor: waiting room, out-patient examination rooms, companion animal operating theatres (with annexes), farm animal houses, companion animal breeding colony houses, hospitalisation ward, staff office, lavatories |
| | 147 | First floor: staff offices, teaching room |
| Hospital building-DOR | 477 | Ground floor: waiting room, out-patient examination room, farm animal examination area, small ruminant operating theatre, assisted-reproduction area, laboratory facilities, staff offices, farm animal houses, hospitalisation ward, feed storage room, lavatories |
| | 167 | First floor: staff offices, lavatories |
| Prefabricated building | 224 | Food preparation areas, dining area, recreation area, lavatories |

Note. Abbreviations of departments in Table 1iv.

### 4.1.2. Description of the premises for:

**-) lecturing**

**-) group work**

**-) practical work**

Premises for lecturing and for laboratory or clinical teaching in groups are as in table 4ii or 4iii, respectively.

Table 4ii. Details of lecturing facilities.

| Facility | Location | Capacity | Equipment |
|---|---|---|---|
| Auditorium A | Auditoria complex | 125 | Computer and audiovisual equipment |
| Auditorium B | | 75 | Computer and audiovisual equipment |
| Teaching room | Main building | 40 | Computer and audiovisual equipment |
| New classroom A | New building | 90 | Computer and audiovisual equipment |
| New classroom B | | 90 | Computer and audiovisual equipment |

Table 4iii. Details of premises for laboratory or clinical teaching in groups.

| Facility (laboratory rooms) | Location | Number of rooms (capacity) |
|---|---|---|
| DAHN | Main building-ground floor | 1 (25 students) |
| DPh | Main building-ground floor | 2 (15 students each) |
| DEBAHE | Main building-first floor | 1 (8 students) |
| DAFD | Main building-first floor | 1 (15 students) |
| DMP | Main building-first floor | 4 (one of 30 and three of 20 students each) |
| DPa | Main building-first floor | 1 (15 students) |
| DHFAO | Main building-first floor | 2 (15 students each) |
| DPT | Main building-first floor | 1 (15 students) |
| DB | Biochemisty building | 1 (20 students) |
| DAHE | Anatomy I building | 1 (30 students) |
| DAHE | Anatomy II building | 1 (30 students) |
| DPa | Pathology building | 1 (25 students) |

Table 4iii (continued).

| Facility (rooms in clinical departments) | Location | Number of rooms (capacity) |
|---|---|---|
| DPD | Poultry Diseases building | 3 (15, 5, 12 students) |
| DM | Hospital building-DM | 4 (25, 10, 5, 15 students) |
| DS | Hospital building-DS | 7 (one of 5, two of 10, three of 25-30, one of 30) |
| DOR | Hospital building-DOR | 4 (one of 20, two of 15 and one of 5 students) |

Note. Abbreviations of departments in Table 1iv.

### 4.1.3. Description of the premises for housing:

**-) healthy animals**

**-) hospitalised animals**

**-) isolated animals**

Facilities for animal housing in the Faculty are in Table 4iv.

Table 4iv. Details of facilities for housing of animals.

| Department | Number of rooms/pens (capacity) | | |
|---|---|---|---|
| | Healthy animals | Hospitalised animals | Animals in isolation |
| DAFD | Various species of aquatic organisms: 4 tanks (700 L each), 5 aquaria (270 L each) | Various species of aquatic organisms: 4 tanks (700 L each), 4 tanks (150 L each) | Various species of aquatic organisms: 2 tanks (1,000 L each) |
| DM | 0 | Farm animals: 2 (2 cattle, 5 small ruminants, 5 pigs, 5 rabbits in total)<br>Equine: 2<br>Companion animals: 2 (12) | |
| DOR | Sheep/Goats: 1 (30-40) | Sheep/Goats: 2 (5-8 in each) | Sheep/Goats: 1 (5-8) |
| DS | Dogs: 4 (6 in each)<br>Cats: 1 (20) | Companion animals: 1 (12) | 0 |

Note. Abbreviations of departments in Table 1iv.

### 4.1.4. Description of the premises for:

**-) clinical activities**

**-) diagnostic services including necropsy**

**-) FSQ & VPH**

**-) others**

*Department of Aquaculture and Fish Diseases*

DAFA is housed in the first floor of the Main building and includes one laboratory room (capacity: 15 students each), as well as areas of smaller capacity (5 students). The areas are used for teaching purposes, as well as for routine diagnostic and research work. The Department also provides extra-mural training (Table 4v).

Table 4v. Details of premises for extra-mural training by the Department of Aquaculture and Fish Diseases.

| Name | Type | Location (distance) | Further information |
|---|---|---|---|
| Helpa SA | Commercial farm | Arta, Arta (135 km) | Eel and sturgeon farm for meat and caviar production: 500 tonnes per year |
| Missas Farm | Commercial farm | Nevropolis, Karditsa (25 km) | Rainbow trout farm for meat production: 100 tonnes per year |

*Department of Hygiene of Foods of Animal Origin*

DHFAO is housed in the first floor of the Main building and includes two laboratory rooms (capacity: 15 students each). The areas are used for teaching purposes, as well as for research work. The Department also provides extra-mural training (Table 4vi).

Table 4vi. Details of premises for extra-mural training by the Department of Hygiene of Foods of Animal Origin.

| Name | Type | Location (distance) | Further information |
|---|---|---|---|
| Sfageio Karditsas | Abattoir | Karditsomagoula, Karditsa (3 km) | Three slaughter lines (cattle, small ruminants and pigs), with hourly capacity of 10 cattle, 100 small ruminants and 100 pigs. |
| Eksarchos | Abattoir | Sodades, Karditsa (25 km) | Three slaughter lines (cattle, small ruminants and pigs) with hourly capacity of 20 cattle, 120 small ruminants and 120 pigs. |
| Trikki | Dairy plant | Trikala, Trikala (25 km) | Production of various dairy products (e.g., pasteurised milk, yogurt, feta cheese, graviera cheese, kefalotyri cheese, whey cheeses) |
| Tiras | Dairy plant | Trikala, Trikala (25 km) | Production of various dairy products (e.g., pasteurised milk, yogurt, feta cheese, sklirotyri cheese, kefalotyri cheese, whey cheeses) |
| Tsianavas | Meat processing plant | Sofades, Karditsa (25 km) | Production of various meat products (e.g., sausages, ham, skewered meat, gyros) |

*Department of Microbiology and Parasitology*

DMP is housed in the first floor of the Main building and has four rooms. One of the rooms (capacity: 30 students) is used for bacteriology work (e.g., bacterial culture and identification, antibiotic susceptibility testing), one (capacity: 20 students) for virology work (e.g., ELISA assaying, microbial DNA / viral RNA extraction from blood, tissue etc. samples, one (capacity: 20 students) for parasitology work (e.g., standard faecal, blood etc. parasitological techniques, parasite identification) and the fourth (capacity: 20 students) for molecular diagnostic applications (e.g., performing PCR / RT-PCR with DNA / RNA respectively, preparation of electrophoresis gels for loading PCR products, recognition of PCR product bands). All rooms are used for teaching, as well as for routine diagnostic work. The Department also provides extra-mural training (Table 4vii).

Table 4vii. Details of premises for extra-mural training by the Department of Microbiology and Parasitology.

| Name | Type | Location (distance) | Further information |
|---|---|---|---|
| Wildlife reserve of Karditsa Forestry Authority | Government establishment | Mouzaki, Karditsa (25 km) | Game bird farm: area 20 acres, 1,200 birds (*Phasianus colchicus*, *Alectoris chukar*) |
| Areas near the site of the Faculty | Public areas | Karditsa, Karditsa (1-2 km) | Training in using geographical information systems equipment |

*Department of Pathology*

DP is housed at two different buildings, in the Pathology building, where the main hall for post-mortem examinations is located (capacity: 25 students), and in the first floor of the Main Building, where the histopathology laboratory is (capacity: 15 students). All facilities are used for teaching, as well as for routine diagnostic work. Further, the Histology teaching room in the Anatomy I building is employed for teaching purposes (capacity: 30 students), specifically for histopathology teaching and practical work, as it is equipped with optical microscopes for use by students. DP only occasionally provides extra-mural training, if staff are called for post-mortem examinations in farms.

*Department of Poultry Diseases*

DPD is housed in a separate building (Poultry Diseases building) and includes two examination and one laboratory room. One examination room (capacity: 15 students) is used for clinical examination and necropsies of backyard and commercial poultry; all students can perform examinations and necropsies simultaneously. The second examination room (capacity: 5 students) is used for examination of companion birds and wildlife. The laboratory room (capacity: 12 students) is used to demonstrate and perform basic laboratory techniques applicable in avian medicine. The facilities are also used for diagnostic services. Further, the Anatomy teaching hall in the Anatomy II building is employed for teaching purposes, specifically for anatomies of healthy birds, as it can accommodate a larger number of students working simultaneously. The Department also provides extra-mural training (Table 4viii).

Table 4viii. Details of premises for extra-mural training by the Department of Poultry Diseases.

| Name | Type | Location (distance) | Information |
|---|---|---|---|
| George Ziogas | Commercial farm | Larissa, Larissa (65 km) | Broiler farm: 80,000 broilers per cycle |
| Antonios Bloutsos | Commercial farm | Trikala, Trikala (25 km) | Hatchery farm: 5,000 turkey poults per week |
| Apostolos Bourousis | Commercial farm | Karditsa, Karditsa (10 km) | Layer farm: 5,000 birds per cycle |
| Apostolos Papadopoulos | Commercial farm | Palamas, Karditsa (25 km) | Backyard poultry: 2,000 birds per week |

*Department of Medicine*

DM is housed in the Hospital building. It has one large area (capacity: 25 students), which is used for group work (general discussion and appraisal of clinical work) with students. Specific animal examination facilities include one examination room (capacity: 10 students) for farm animals and two examination rooms (capacity: 15 and 5 students) for companion animals. Further, there is a

hospitalisation ward. All these areas are used in clinical teaching activities. The Department also includes the clinical pathology laboratory. The clinical pathology laboratory is fully fitted with appropriate equipment, employed in routine diagnostic service and handled by students during their rounds in DM. The Department also provides extra-mural training (Table 4ix).

Table 4ix. Details of premises for extra-mural training by the Department of Medicine.

| Name | Type | Location (distance) | Information |
|---|---|---|---|
| Politis | Commercial farm | Sesklo, Magnisia (110 km) | Ruminant farm: 400 sheep, 400 goats, 20 cattle |
| Xiromeritis | Commercial farm | Agii Anargiri, Larissa (55 km) | Farrow to finish pig farm: 250 sows |
| Hirofarm | Commercial farm | Fiki, Trikala (40 km) | Four farrow to finish pig farms: 450, 250, 200 and 150 sows |

*Department of Obstetrics and Reproduction*

DOR is housed in the Hospital building. It has one examination area (capacity: 20 students) for farm animals and one (capacity: 15 students) for companion animals; the latter room is also used for small group tutorials (general discussion and appraisal of clinical work). The department has one operating theatre (capacity: 15 students) for small ruminants; surgical needs for companion animals are covered at the facilities of DS. Further, there are the sheep housing area, a hospitalisation ward and an animal quarantine facility. All these areas are used in clinical teaching activities. The Department includes the assisted-reproduction unit and an endocrinology laboratory. These are fitted with appropriate equipment (stereoscopes, lararoscopy equipment, ELISA system, *in vitro* and *in vivo* embryo production system), which are employed in research and are available for students to use during their rounds in DOR. The ultrasonography equipment is transferred and used in the above examination rooms (for farm or companion animals) and used by students during clinical training. The Department also provides extra-mural training (Table 4x).

Table 4x. Details of premises for extra-mural training by the Department of Obstetrics and Reproduction.

| Name | Type | Location (distance) | Information |
|---|---|---|---|
| Nasellos | Commercial farm | Farsala, Larissa (55 km) | Dairy farm: 500 cows |
| Bairamoglou | Commercial farm | Polydamantas, Larissa (70 km) | Dairy farm: 850 cows |
| Kerasiotis | Commercial farm | Mitropoli, Karditsa (10 km) | Small ruminant farm: 200 sheep, 30 goats |
| Karastergios | Commercial farm | Agnantero, Karditsa (25 km) | Sheep farm: 250 sheep |

*Department of Surgery*

DS is housed in the Hospital building. It has two examination rooms for companion animals, of which one is used in most cases (capacity: 20-30 students) and the other is used mainly for ophthalmological patients (capacity: 5 students). Further, it has two examination areas for farm animals/equine, one for large animals (cattle, equine) (capacity: 30 students) and one for small ruminants (capacity: 20-30

students). For companion animals, the Department has the operating premises, which include (a) a pre-surgical preparation room (for induction of anaesthesia) (capacity: 20-30 students), (b) an orthopaedic surgery suite (capacity: 6-10 students) and (c) a soft-tissue surgery suite (capacity: 6-10 students). DS also covers surgical needs for companion animals of DOR. For farm animals/equine, the examination areas are also used as respective operating suites. Further, there is the area for animal housing (dogs, cats) and a hospitalisation ward. All these areas are used in clinical teaching activities. DS also incorporates the section of Diagnostic Imaging, which is housed in a separate area of the hospital and includes a waiting room, the X-ray examination room and a dark room (nowadays redundant) (capacity: 20 students). The area is used in clinical teaching activities. The Department does not provide extra-mural training of students.

**4.1.5. Description of the premises for:**

**-) study and self-learning**

**-) catering**

**-) locker rooms**

**-) accommodation for on call students**

**-) leisure**

*Reading room*

There is one area for study at the Faculty, located in the Auditoria complex. It is a reading room, with capacity for 15 students in 8 tables. Further, the reading room of the library area (capacity: 8 students in 3 tables), also located at the same building, can also be used by students for study. The reading rooms are open and available to students on same times as library opening times (details in 6.1.2.).

*Catering area*

There is a canteen, which operates in the prefabricated building daily from 08.00 to 21.00, during term time and examination periods. The building includes dining areas and food preparation areas. Capacity of the dining areas is for 40 students. The canteen provides breakfast, lunch and dinner daily, which are free for students who receive the relevant welfare benefit or at nominal prices for other students and personnel.

*Locker rooms*

There are in total 62 lockers, which are located in the New building.

*Accommodation for on call students*

There is a dormitory, located in a dedicated area in the New building, which is equipped with basic furniture (beds, table, chairs). The area also includes a kitchenette and lavatories.

*Leisure areas*

There is a room allocated to student indoors recreation activities in the prefabricated building, with a capacity for 20 students.

**4.1.6. Description of the vehicles used for:**

**-) students transportation**

**-) ambulatory clinics**

**-) live animals transportation**

**-) cadavers transportation**

Vehicles are available for use in the Faculty (Table 4xi).

Table 4xi. Details of available vehicles.

| Type | Make | Number plate | Capacity | Year of registration | Distance travelled | Transport |
|---|---|---|---|---|---|---|
| Bus | Mercedes-Benz | KHO-9308 | 19 | 1992 | ~230,000 km[1] | Personnel |
| Bus | Man | KHY-9205 | 29 | 1998 | ~260,000 km[1] | Personnel |
| Lorry | Mercedes-Benz | KHO-9447 | 3 | 1998 | ~35,000 km[1] | Animals |

1. As in August 2017.

A driver is available in the Faculty to provide transportation services in above vehicles.

Personal vehicles of academic staff involved in clinical teaching of farm animals are used for transport to farms during out-of-hours calls.

Cadavers are brought into the Faculty by owners of the animals. Cadavers of ruminants are removed from the Faculty by a private service financed the local authority is used, which picks up and cremates all material.

**4.1.7. Description of the equipment used for:**

**-) teaching purposes**

**-) clinical services**

Details of equipment used for teaching purposes and clinical services are in Appendix 4d.

**4.1.8. Description of the strategy and programme for maintaining and upgrading the current facilities and equipment and/or acquiring new ones**

*Facilities*

Decisions to perform maintenance work in the Faculty are taken by the Vice Rector of Financial Planning and Development, after a proposal by the Technical Infrastructure Directorate of the central University administration, where all requests by the Faculty are placed. Staff of the Technical Infrastructure Directorate pay visits to the Faculty at regular intervals to assess and prioritise and to supervise course of work carried out.

Within the Faculty, there is an academic staff authorised by the General Assembly to process and monitor all requests for maintenance (details in 1.1.5.). Final decisions may take as long as 4 months after placing the request with the Technical Infrastructure Directorate; if the request is approved, costs of maintenance are borne by the University maintenance budget. The Faculty can expedite necessary

repairs by calling in a local maintenance person, who would accept to receive payment after payment will have been approved (that may take some time, occasionally up to 6-8 months).

Recently, a maintenance and refurbishment grant (approx. 150,000 Euros) has been allocated by the Senate to the Faculty and, possibly, will be available in September 2017 to start work in November 2017 for conclusion in 2018 (details in 2.1.6.). Funds will be sourced from the 'Public investment' budget of the University as allocated by the Ministry. Heads of departments have sent requests for maintenance to the nominated member of staff, who collated everything and forwarded to the Technical Infrastructure Directorate. A call for tender is now being prepared for interested parties to perform various works at the Faculty. The allocation of the grant has been decided, as there has been a significant period during which no large scale maintenance works have been performed at the Faculty.

For small scale maintenance works, departmental funds from research or services can be used at the discretion of the grant holder. The process is more flexible and takes a shorter period, but still requires a tender for selecting the person that perform the works.

*Equipment*

The previous time that a grant for purchase of equipment had been allocated to the Faculty, was in 2009; items purchased through that grant were delivered in 2011 and up to mid-2012. No further allocations have become available thereafter. The grant for purchase of new radiology equipment has been prioritised in 2014 by decision of the General Assembly, which has been accepted by the Senate, due to the nature of the equipment; new equipment has not yet been delivered (details in 2.1.6.).

The maintenance and refurbishment grant mentioned above will also provide necessary repairs to equipment of the Faculty.

Equipment purchased through research grant or service income are decided upon specific needs described at the grant proposal or for fulfillment of needs for furthering and improving services provided. The process is more flexible and takes a shorter period, but still requires a tender for purchasing the equipment.

**4.1.9. Description of how and by who changes in facilities, equipment and biosecurity procedures are decided, communicated to staff, students and stakeholders, implemented, assessed and revised**

*Facilities*

Changes in the use of premises within the Faculty (i.e., re-allocation of an area from one department to another) are discussed in the General Assembly and a proposal is formulated, which is submitted to the Head of the School of Health Sciences. Final decision is taken by the Deans' Committee of the School, based on the proposal of the Faculty.

*Equipment*

By law, all equipment purchased by the University, independently of the source of funding (i.e, budget of Ministry, research grant, service income, donation etc.) belong to the University. Equipment are allocated to Faculties and departments only for use. Their allocation to a unit of the University can be changed by decision of the Rector.

*Biosecurity procedures*

All changes in biosecurity procedures and regulations regarding health and safety management are decided at national level, by laws or ministerial decisions of relevant ministries (Ministry of Employment and Social Security, Ministry of Health, Ministry of Rural Development and Food). The University has also taken actions, which do not require legal endorsement, e.g., recycling bins and points for collection of redundant electrical material have been placed in all the Faculties, which further contribute in environment-friendly waste management. Within the Faculty, departments handling biohazard material use polypropylene autoclavable bags for sterilisation of contaminated material before discarding.

Application of health regulations are assessed by a physician specialised in occupational medicine, commissioned by the University. The physician visits the Faculty at regular intervals and discusses potential problems with staff and students of the Faculty.

### 4.2. Comments

The University of Thessaly includes six Schools and 18 faculties among five cities in the area, with distances over 100 km between them in some cases. In the past decade, the University had considered its infrastructure inadequate for the previewed development and has started a long-term program of new buildings in some academic units, among them the Faculty of Veterinary Science.

The Faculty of Veterinary Science had been included in the development plan of the University set out during the previous decade. As a result, the New building, with two teaching rooms, staff offices and a dormitory area has been built and inaugurated two years ago. This provided further facilities for teaching and accommodation of staff members, which was of particular help for the Faculty, as numbers of students started to increase.

Currently, the University has to prioritise future needs, in order to allocate the limited funds for development of facilities, at the same time taking into account faculties in the city of Volos with no own premises available, but housed within facilities of other faculties. The University also recognises that lack of student accommodation in all cities where Faculties are located, is a disadvantage, for students, as well as for the University, which has to pay increased amounts of housing benefits.

The University has also recognised that upgrading of existing facilities is also important. As the result, a grant has been allocated to the Faculty to maintain premises and upgrade facilities, which have not been properly serviced for some time. Nevertheless, in the past, several department heads had submitted repeatedly requests and recommendations regarding changes in buildings, which would have allowed better accommodation of teaching and clinical needs. Unfortunately, these had not been taken into account always, due to a variety of reasons, e.g., construction problems, need to maintain safety regulations, financial issues.

The Faculty has requested purchase of a new 50-seater bus, which would be able to transport more students, in view of the increasing number of students. Nevertheless, this is unlikely to materialize, as,

according to Greek legal frame for public purchases, only brand new equipment can be acquired by public institutions. Given the prices for new buses in Greece (>350,000 Euros), it becomes evident the difficulty in purchasing a new vehicle. Good quality, used buses can be found with approx. 70,000 Euros (a sum within the means of the University in the long-term planning), but, unfortunately, such a purchase would be rejected the Court of Audit.

### 4.3 Suggestions for improvement

Within the next ten years, there will be needs for further expansion of the Faculty, as more students will be registered and, hopefully, more staff will be appointed. Hence, there is a need to think regarding building development into neighbouring land. The idea of renting spaces outside the main campus has been discussed briefly in the past, but had not been favoured. Development of building plans with an approximate budget is always a prerequisite in the Greek administration, in order to approve construction of buildings and allocate funding. Hence, the Faculty needs to start preparing for an expansion.

Further, the Faculty is now discussing with the local authority of Karditsa the possibility of setting up a teaching farm in an area to be donated the Faculty. There are also some preliminary discussions with the Ministry of Rural Development and Food regarding the possibility for potentially funding the development of a teaching farm. Development of an own teaching farm will facilitate the Faculty, although needs are covered to a large extent by the teaching farm currently used.

For purchases of equipment, research grants will be necessary in order to purchase new equipment, which, apart from research purposes, will also be used for improving teaching activities.

## 5. Animal resources and teaching material of animal origin

### 5.1. Factual information

#### 5.1.1. Description of the global strategy of the Establishment about the use of animals and material of animal origin for the acquisition by each student of Day One Competences

The clinical departments function for first-opinion and referral consultations and farm visits and aim to attracting patients/farms from all parts of Greece. Some departments maintain a number of animals (sheep, dogs, cats, fish) in the premises, which are used extensively in student training.

Exposure of students to animals and animal material starts from year 1. During years 4 and 5, students attend daily clinical practice in small groups, thus maximising exposure to animals.

#### 5.1.2. Description of the specific strategy of the Establishment in order to ensure that each student receives the relevant core clinical training before graduation, e.g. numbers of patients examined/treated by each student, balance between species, balance between clinical disciplines, balance between first opinion and referral cases, balance between acute and chronic cases, balance between consultations (one-day clinic) and hospitalisations, balance between individual medicine and population medicine

The Faculty has established a system of rotations among clinical departments and other disciplines with an impact in clinical training. The rotation system takes place during the 4th and 5th year of study, that way maximising exposure of students to patients and practical conditions. The system also allows exposure to various disciplines. Further, within each department, students follow a structured program, which allows them to attend various areas and specilities offered by each department, as well as to spend time in training in companion animals and in farm animals. Some departments maintain an individual record for each student, where specific tasks (e.g., blood sampling) performed by students are recorded; in those cases, a student is not allowed to sit the final examinations, unless all tasks have been successfully performed during the clinical years.

#### 5.1.3. Description of the organisation and management of the teaching farm(s) and the involvement of students in its running

*Tanks and aquaria at Department of Aquaculture and Fish Diseases*

The DAFD operates tanks and aquaria with aquatic organisms (fish, invertebrates). These are located in the basement of the hospital and are supported by departmental funds. The tanks and aquaria are supervised by an animal technician, who is responsible for daily tasks and animal care. Veterinary support is provided by members of the Department.

During training, students have the opportunity to understand the operation of the recirculation systems of the containers and the husbandry techniques and requirements of the aquatic animals maintained therein. Moreover, they perform clinical manipulations (blood sampling, vaccination,

anaesthesia, application of treatments) and familiarise themselves with taxonomical and other morphometric characteristics of fish and other invertebrate aquatic organisms.

*Sheep flock at Department of Obstetrics and Reproduction*

The DOR maintains a sheep flock officially approved by the local veterinary authority (identification no. EL41301497) with 30 to 40 animals. The flock is housed in the premises of the department and is supported by departmental funds. The flock is supervised by an animal technician, who is responsible for daily tasks and animal care. Veterinary support is provided by members of the Department.

During clinical training, students are involved in evaluation of behaviour, in handling techniques, in discussions regarding feeding and welfare, in reproductive techniques (e.g., control of reproduction), in animal management procedures (e.g., pregnancy diagnosis), in evaluation of body condition and in care of peri-parturient and newborn animals.

*Dog and cat colonies at Department of Surgery*

The DS operates a colony of purpose-bred laboratory Beagle dogs and a colony of purpose-bred laboratory DSH cats with 23 and 20 animals, respectively, licenced by the regional veterinary authority for maintenance and breeding of animals for experimental purposes. The colonies are located in the premises of the department and are supported by departmental funds. The colonies are supervised by an animal technician, who is responsible for daily tasks and animal care. Veterinary support is provided by members of the Department, as well as an academic staff of DOR (in relation to matters relevant to reproduction and obstetrics).

During training, students are involved in clinical examination of the animals, they perform clinical manipulations (e.g., blood sampling, vaccinations, administration of treatments), they attend and participate in demonstration techniques within the remit of the department (e.g., application of anaesthesia, ultrasonographic examination) and they participate in the reproductive management of animals (e.g., semen collection and evaluation, artificial inseminations, pregnancy diagnosis, obstetrical manipulations) (under the supervision of a staff of DOR).

*Chicken flock at Department of Poultry Diseases*

The Faculty has recently approved the establishment of a flock of chickens by the DPD. It is expected that the flock will be developed by end of academic year 2017-18 and will be supported by departmental funds.

*Teaching farm of the Faculty of Animal Production of the Technological Educational Institution (TEI) Thessaly*

The teaching farm of TEI Thessaly is used for training purposes by Faculty staff, by virtue of the provisions of a memorandum of understanding signed between the two academic institutions, which has initiated collaboration for everybody's benefit. Both institutions are within the remit of the Regional Council for Higher Education of Thessaly, a recent legal provision that is being implemented by legal provisions, to promote collaboration between higher education establishments in the same administrative region of the country and to supervise common activities for the benefit of all. The farm is established within the premises of TEI Thessaly, in the city of Larissa, 65 km from the Faculty.

The farm is supervised by animal technicians who are members of staff of TEI Thessaly; these are responsible for daily tasks and animal care. Veterinary support is provided by veterinarians, members of the TEI Thessaly.

The farm includes 22 dairy cattle, 130 sheep, 22 sows, 1 horse and a small flock of poultry. The farm also produces feeds for in-house use. Students visit the farm and receive hands-on training (by the Faculty's staff) in animal examination, sample collection, animal health management procedures (e.g., vaccination, administration of anthelmintic drugs), as well as in the treatment and care of patients (e.g., administration of treatments).

### 5.1.4. Description of the organisation and management of the VTH and ambulatory clinics

The work schedule of clinical departments and diagnostic services is shown in Table 5i.

Table 5i. Details of work schedule of clinical departments and diagnostic services.

| Clinical department | Service | Speciality | Days/week | Opening hours | Weeks/year |
|---|---|---|---|---|---|
| Medicine | Farm animals | Cattle | Mon-Tue | 09.30-13.00 | 48 |
| | | Small ruminants | Mon-Tue | 09.30-13.00 | |
| | | Pigs | Mon-Tue | 09.30-13.00 | |
| | Equine | | Mon-Tue | 09.30-13.00 | |
| | Companion animals | All | Mon-Fri | 09.00-14.00 | |
| | Exotic animals | All | Mon-Fri | 09.00-14.00 | |
| | Clinical pathology | | Mon-Fri | 09.00-14.00 | |
| | Hospitalisation, IC and ER | | Mon-Sun | 00.00-24.00 | |
| Surgery | Farm animals | Cattle | Tue-Thu | 09.00-16.00 | 42* |
| | | Small ruminants | Tue-Thu | 09.00-16.00 | |
| | Equine | | By appointment | | |
| | Companion animals | Ophthalmology | Tue-Thu | 09.00-16.00 | |
| | | Oncology | Tue-Thu | 09.00-16.00 | |
| | | Dentistry | Tue-Thu | 09.00-16.00 | |
| | | Neurosurgery | Tue-Thu | 09.00-16.00 | |
| | | General surgery | Tue-Thu | 09.00-16.00 | |
| | | Orthopaedics | Tue-Thu | 09.00-16.00 | |
| | Exotic animals | | Tue-Thu | 09.00-16.00 | |
| | Operating rooms | | Tue-Thu | according to needs | |
| | Anaesthesia | | Tue-Thu | according to needs | |
| | Diagnostic imaging | | Mon-Fri | 09.00-16.00 | |
| | ER | | Mon-Fri | 08.00-22.00 | |
| | Hospitalisation | | Mon-Sun | 00.00-24.00 | |
| Obstetrics and Reproduction | Farm animals | Cattle | Mon-Sun | 00.00-24.00 | 48 |
| | | ER | Mon-Sun | 00.00-24.00 | |
| | | Small ruminants | Mon-Sun | 00.00-24.00 | |
| | | Hospitalisation, ER | Mon-Sun | 00.00-24.00 | |
| | Companion animals | Obstetrics | Wed-Thu | 09.00-13.00 | 42* |
| | | | other days | By appointment | |
| | | Reproduction | Wed-Thu | 09.00-13.00 | |
| | | | other days | By appointment | |
| | | Hospitalisation | Mon-Sun | 00.00-24.00 | |

Table 5i (continued).

| Clinical department | Service | Speciality | Days/week | Opening hours | Weeks/year |
|---|---|---|---|---|---|
| Poultry Diseases | Backyard and commercial poultry | Poultry Diseases | Mon-Fri | By appointment and emergencies | 42 |
| | Companion birds and wildlife | | Mon-Fri | | |
| Pathology | Post-mortem room | | Tue.-Wed. | 09.00-13.00 | 42 |
| | Cytology, histopathology, immunohisto-chemistry | | Tue.-Wed. | 09.00-15.00 | |
| Microbiology and Parasitology | | | Mon.-Fri. | 08.30-14.00 | 48 |

ER: emergency service

*: for two weeks only second-opinion cases that cannot be handled by private clinics, are accepted; such cases can be accepted even after 22.00 during the remaining period.

### 5.1.5. Description of how the cadavers and material of animal origin for training in anatomy and pathology are obtained, stored and destroyed

*Department of Anatomy*

Teaching material from disease-free animals is obtained from (a) local abattoirs, (b) purchases (for poultry and rabbits), (c) animals from the sheep flock at DOR (animals that are culled) and (d) animals from the clinical departments which had died as the result of injury or euthanasia (i.e., with no lesions and needs for limited gross pathological examination). The anatomy building has a cold room where all material are stored. Material examined in the Faculty is disposed as follows: (a) for ruminants, a private service financed by the local authority is used, which picks up and cremates all material and (b) for all other animal species, the material is cremated at the Faculty incinerator.

*Department of Pathology*

Teaching material is obtained from (a) the clinical departments of the Faculty, (b) veterinary practices in the region, (c) animal owners contacting the department directly and (d) other institutions requesting specific advice, e.g., animal welfare organisations in Greece and police / judicial system requesting scientific input in animal forensic cases. The pathology building has a cold room where all material are stored. Material examined in the Faculty is disposed as follows: (a) for ruminants, a private service financed by the local authority is used, which picks up and cremates all material and (b) for all other animal species, the material is cremated at the Faculty incinerator. Material examined outside the Faculty (e.g., post-examination in the field) are disposed at the responsibility of the owner of the material.

### 5.1.6. Description of the group size for the different types of clinical training (both intra-murally and extra-murally)

During the 4th and 5th years, students are allocated into one of five groups, in order to attend clinical training; each group is allocated for training to a different department for a period of three week. The system allows for rotation among departments throughout the academic year. That way, each group includes approx. 25 students.

On some occasions, within each department, groups are further subdivided to achieve smaller number of students per subgroup, according to departmental policies. For example, in DM, students are always allocated into one of three to five (farm animal) or five (companion animals) groups with different staff (details in Appendix 3c); in DOR, students once weekly are subdivided into 4th year / 5th year subgroup, each attending different type of training by same staff; in DPD, students are always allocated into two subgroups, both however attending the same type of training by different staff; in DS, students are always subdivided into four subgroups (one in reception of patients, history taking, clinical examination, one in anaesthesia and intensive care, one in operating theatres and in diagnostic imaging) with different staff.

**5.1.7. Description of the hands-on involvement of students in clinical procedures in the different species, i.e. clinical examination, diagnostic tests, blood sampling, treatment, nursing and critical care, anaesthesia, routine surgery, euthanasia, necropsy, report writing, client communication, biosecurity procedures (both intra-murally and extra-murally)**

In general and across the clinical departments, students are responsible for receiving patients, taking history and performing the initial clinical examination under the supervision of staff; also, they collect necessary samples (e.g., blood, urine, milk, semen) necessary for a definite diagnosis. During farm visits, they evaluate farm facilities, e.g., penning areas, milking parlour, farrowing area, feed mill, as well as examining apparently healthy animals in the farm, e.g., assessment of body condition score, detection of lame animals, observation of abnormal behaviours.

All students participate in performing ancillary examinations; e.g., they assist in radiographic positioning of the patients and help in radiographic evaluation, they attend ultrasonographic examination and use transducers to perform an examination, they are assigned at the clinical pathology laboratory and actively participate in processing of samples received by using the haematological and biochemical analysers, as well as discussing interpretation of results.

In DPa, students receive training in performing post-mortem examinations and then perform these themselves under the supervision of teaching staff. Further, students participate in subsequent handling of cases, i.e., they collect samples for cytological or histopathological examination and are trained in evaluation of cytology or histopathology slides from these samples for associating findings with lesions observed in gross pathological examination.

In DM, students perform clinical (general or specific system) examination of animals, take temperature measurements, collect samples (e.g., blood, skin scrapings, urine by catheterisation or cystocentesis, faeces), carry out lymph node paracentesis, attend electrocardiographic examination and audiometric examination, perform vaccinations, administer anthelmintic drugs (details in Appendix 3c).

In DPD, students examine live birds, collect samples for ancillary examination and perform post-mortem examinations. During farm visits, they participate in discussions with farmers regarding management schemes and preventive measures.

In DOR, all students perform techniques required for reproductive management of animals, e.g., *per rectum* examination of the genital tract of cows for pregnancy diagnosis or *post-partum* evaluation of uterine involution, ultrasonographic examination of genital tract of ewes for pregnancy diagnosis, udder examination with milk sample collection and evaluation, intravaginal insertion of progestogen sponges for reproductive control, semen collection from dogs. During farm visits, they participate in discussions with farmers regarding management schemes and preventive measures.

In DS, fifth-year students (apart from examination of animals and hands-on involvement in the diagnostic process), are actively involved in administration of anaesthesia and peri-operative monitoring of patients (supervised by an intern or a postgraduate student), as well as scrubbing-in (fifth year only) and participating in various surgical procedures under the supervision of teaching staff.

**5.1.8. Description of the procedures used to allow the students to spend extended periods in discussion, thinking and reading to deepen their understanding of the case and its management**

During clinical training (e.g., attendance to clinical cases, hospitalisation, tutorials) students discuss differential diagnosis and approaches for definite diagnosis, as well as management of the case (farm, individual patient) with an academic staff clinician. Cases are discussed during clinical rounds; students who have been assigned the case, along with other students in the rotation group, participate in these discussions under academic supervision. Further, teaching staff can ask questions relevant to cases under investigation and allow time (even up to 24 h, to allow for thorough literature study) to students to think and deepen understanding of cases. Moreover, students may also be assigned homework in small groups (2-4 persons) for presentation within the following 2 to 4 days. For homework assignments, students are encouraged to use library resources and become familiar with literature search and self-learning activities, as well as with setting up a brief presentation.

**5.1.9. Description of the patient record system and how it is used to efficiently support the teaching, research, and service programmes of the Establishment**

Each department maintains own records of patients seen intra- or extra-murally, as well as of farm visits. Records are updated by staff attending a patient or visiting a farm.

**5.1.10. Description of the procedures developed to ensure the welfare of animals used for educational and research activities**

All handling and use of animals in experimental / teaching procedures is performed based on scientific and legal provisions regarding animal welfare.

A committee chaired by a senior member of academic staff has been established and is responsible for examining protocols for research work and procedures for teaching to be carried out in the Faculty. The committee meets frequently, in order to respond efficiently to needs of researchers, as well as to evaluate the general situation in the Faculty regarding use of animals.

Further, for work that is within the scope of Presidential Decree 56/2013, through which Directive 2010/63/EU has been incorporated into the Greek national legislation, relevant licencing is always sought by the competent authority. In this case, the competent authority is the Veterinary Department of the Regional Administration Service of the region of Thessaly, based in Larissa. All applications are submitted to that authority, are scrutinised and appropriate decision-licence for experimental procedures is issued. As per Decree 56/2013, in each licence for experimental procedures a veterinarian is always appointed for monitoring experimental procedures of the proposed study. The veterinarian would be ensuring that welfare of animals is maintained at high standards throughout the study.

**5.1.11. Description of how and by who the number and variety of animals and material of animal origin for pre-clinical and clinical training, and the clinical services provided by the Establishment are decided, communicated to staff, students and stakeholders, implemented, assessed and revised**

Animals and animal material used for teaching are decided on departmental basis, according to specific training program of each department and curriculum module. Usually, the head of department has discussed with members of the department and jointly have formulated a policy regarding the matter. Moreover, patients arriving at the hospital or available in farms are also of importance, as these constitute the material used in teaching and clinical services, whilst calls by farmers are taken into account in prioritising visits.

**Table 5.1.1. Cadavers and material of animal origin used in practical anatomical training**

| Species | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Cattle | 2 | 2 | 2 | 2 |
| Small ruminants | 10 | 10 | 10 | 10 |
| Pigs | 4 | 4 | 4 | 4 |
| Companion animals | 6 | 6 | 6 | 6 |
| Equine | 1 | 1 | 1 | 1 |
| Poultry and rabbits | 30 | 30 | 30 | 30 |
| Exotic pets | 3 | 3 | 3 | 3 |

**Table 5.1.2. Healthy live animals used for pre-clinical training**

| Species | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Cattle | 4 | 51 | 51 | 35.3 |
| Small ruminants | 35 | 69 | 67 | 57 |
| Pigs | 15 | 15 | 15 | 15 |
| Companion animals | 14 | 15 | 14 | 14,3 |
| Equine | 1 | 1 | 1 | 1 |
| Poultry and rabbits | 14 | 12 | 10 | 11.3 |
| Exotic pets | 0 | 0 | 0 | 0 |
| Game and wildlife bird | 20 | 25 | 22 | 22.3 |

**Table 5.1.3. Number of patients seen intra-murally**

| Species | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Cattle | 4 | 4 | 4 | 4 |
| Small ruminants | 92 | 93 | 115 | 100 |
| Pigs | 7 | 6 | 8 | 7 |
| Companion animals | 315 | 393 | 342 | 350 |
| Equine | 3 | 3 | 3 | 3 |
| Poultry and rabbits | 2 | 6 | 2 | 3.3 |
| Exotic pets | 1 | 1 | 3 | 1.7 |

**Table 5.1.4. Number of patients seen extra-murally**

| Species | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Cattle | 549 | 484 | 537 | 523,3 |
| Small ruminants | 223 | 95 | 138 | 152 |
| Pigs | 159 | 166 | 168 | 164.3 |
| Companion animals | 0 | 0 | 0 | 0 |
| Equine | 4 | 3 | 4 | 3.7 |
| Poultry and rabbits | 0 | 0 | 0 | 0 |
| Exotic pets | 0 | 0 | 0 | 0 |

**Table 5.1.5. Percentage (%) of first opinion patients used for clinical training**

| Species | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Cattle | 99.1 | 98.2 | 98.5 | 98.6 |
| Small ruminants | 90.2 | 77.1 | 70.0 | 79.1 |
| Pigs | 63.3 | 73.8 | 65.3 | 67.5 |
| Companion animals | 75.6 | 81.7 | 71.3 | 76.2 |
| Equine | 100 | 100 | 100 | 100 |
| Poultry and rabbits | 100 | 100 | 100 | 100 |
| Exotic pets | 100 | 100 | 100 | 100 |

**Table 5.1.6. Cadavers used in necropsy**

| Species | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Cattle | 5 | 7 | 5 | 5.7 |
| Small ruminants | 52 | 66 | 39 | 52.3 |
| Pigs | 9 | 7 | 1 | 5.7 |
| Companion animals | 25 | 23 | 22 | 23.3 |
| Equine | 0 | 0 | 0 | 0 |
| Poultry and rabbits | 269 | 244 | 236 | 249.7 |
| Exotic pets | 0 | 0 | 0 | 0 |
| Game and wildlife bird | 58 | 52 | 55 | 55 |

**Table 5.1.7. Number of visits in herds/flocks/units for training in Animal Production and Herd Health Management**

| Species | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Cattle | 26 | 26 | 29 | 27 |
| Small ruminants | 17 | 14 | 14 | 15 |
| Pigs | 8 | 8 | 8 | 8 |
| Poultry | 2 | 2 | 2 | 2 |
| Rabbits | 0 | 0 | 0 | 0 |
| Fish | 1 | 1 | 1 | 1 |
| Game bird | 1 | 1 | 1 | 1 |

**Table 5.1.8. Number of visits in slaughterhouses and related premises for training in FSQ**

| Premises | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Ruminant's slaughterhouses | 52 | 52 | 52 | 52 |
| Pig's slaughterhouses | 52 | 52 | 52 | 52 |
| Poultry slaughterhouses | 0 | 0 | 0 | 0 |
| Related premises | 4 | 4 | 4 | 4 |

*Samples for diagnostic tests*

Numbers of samples processed for various diagnostic tests are in Table 5ii. The various tests performed refer to bacteriological, biochemical, cytological, endocrinological, haematological, histological, immunohistochemical, immunological, molecular diagnostics, seminological, virological, etc. procedures. Many of these are used in student training, either for hands-on work by students, e.g., performing immunological tests in blood samples, culturing milk samples, or for enhancing discussion of cases with students, e.g., in depth discussion of the cases by use of histopathological preparations from cadavers already seen during post-mortem examination.

Table 5ii. Number of samples processed for various diagnostic tests.

| Species | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Cattle | 6614 | 7057 | 8527 | 7399.3 |
| Small ruminants | 3334 | 4054 | 679 | 2689.0 |
| Pigs | 100 | 108 | 87 | 98.3 |
| Companion animals | 1539 | 2190 | 2925 | 2218.0 |
| Equine | 7 | 13 | 9 | 9.7 |
| Poultry and rabbits | 10 | 5 | 14 | 9.7 |
| Exotic pets | 0 | 0 | 10 | 3.3 |
| Hare | 48 | 36 | 44 | 42.7 |
| Wild pig | 16 | 22 | 20 | 19.3 |
| Wildlife birds | 64 | 58 | 64 | 62.0 |
| **Sample** | **2016-17** | **2015-16** | **2014-15** | **Mean** |
| Blood | 8305 | 8934 | 10535 | 9258.0 |
| Milk | 2832 | 3808 | 961 | 2533.7 |
| Tissue | 151 | 201 | 304 | 218.7 |
| Faeces | 82 | 127 | 205 | 138.0 |
| Skin cytology smear | 96 | 95 | 76 | 89.0 |
| Skin scrapings | 39 | 60 | 62 | 53.7 |
| Ear discharge | 38 | 58 | 63 | 53.0 |
| Semen | 49 | 55 | 52 | 52.0 |

Table 5ii (continued).

| Sample | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Urine | 54 | 57 | 33 | 48.0 |
| Mass fine needle aspirate | 33 | 79 | 22 | 44.7 |
| Smear | 35 | 29 | 25 | 29.7 |
| Lymph node fine needle aspirate | 16 | 18 | 24 | 19.3 |
| Synovial fluid | 0 | 9 | 10 | 6.3 |
| Bone marrow | 1 | 7 | 2 | 3.3 |
| Effusions | 1 | 3 | 3 | 2.3 |
| Cerebrospinal fluid | 0 | 3 | 2 | 1.7 |

## 5.2. Comments

*Own animal resources*

In the past, attempts to set up and organise an animal farm for training purposes have been unsuccessful. Development of small scale units under departmental initiative and care has proved more successful; these units have been financed by departmental funds, cared for by departmental personnel and, although developed more to suit departmental needs and planning, have been very useful in providing material for teaching and research since their set up. Use of the teaching farm of TEI Thessaly has become possible, as the result of the necessity for regional collaboration and sharing of resources in the current situation in Greece. Use of departmental animal units and visits to the teaching farm of TEI Thessaly have balanced lack of own teaching farm and have contributed extensively to student training by providing valuable material.

*Outside animal material and clinical cases*

The small number of companion animal patients seen at the clinical departments is the consequence, primarily, of lack of a large population of companion animals in the area and the region, where the Faculty is based. This, in turn, reflects social pattern of human population in the region, which is an area with mainly agricultural activities. That limits the number of first opinion patients that may visit the Faculty. Referral work could have provided further cases, but it is also noteworthy that (a) there is a veterinary Faculty in the city of Thessaloniki, which, of course, acts as referral centre for the northern part of the country, (b) it is more convenient and cheaper for an animal owner in Athens to travel to Thessaloniki (than to Karditsa) for a referral, (c) there are good veterinary practices in all towns of the region (with personnel trained in the Faculty), which attract many animal owners, due to personal relations with local population and convenience (avoidance to travel to Karditsa). Further, the following factors may be contributing and account for the small number of companion animal patients: (a) in general, companion animal units are not fully staffed, (b) there are only two European veterinary specialists among academic clinical personnel (to note that in Greece, only veterinary specialists working in companion animal fields are in [i] anaesthesia and analgesia and [ii] dermatology), (c) facilities lack adequate space, have not been updated and properly maintained, (d) available equipment is not up-to-date and occasionally out of service for rather long periods of time, (e) the Faculty lacks

state-of-the art equipment (e.g., computed tomography scanner, magnetic resonance imaging, endoscopy equipment) is not available, (f) consequently to the understaffing, companion animal units cannot provide a full 24 h / 7 d service, potentially leading to missing emergency cases that might have, otherwise, been received and attended to.

In contrast, large numbers of livestock farms in the region provide ample material for training and has supported visits to farms. Number of patients and of farm visits could have been greater, but limited availability of resources outside the Faculty's remit, e.g., funds for vehicle fuel, impose restrictions in visits. Further, Faculty staff need to take care and balance activities to minimise potential competition with local veterinary practitioners.

One may also think that, to some extent, lack of a centralised record system within the Faculty is an issue similar to lack of a central teaching farm of the Faculty. Whilst clinical departments do maintain own records of patients and of farm visits, a system incorporating all the Faculty's clinical work has not become possible.

### 5.3. Suggestions for improvement

Regarding the limited numbers of companion animal and, especially, equine patients, the Faculty has recognised the problem and has recently given particular emphasis in staffing related posts (one academic staff post, three teaching posts). It is noteworthy that for the first time since foundation of the Faculty, a teaching post (part-time) in equine veterinary science has been set-up and filled starting in September 2017; the veterinarian who took up this new post will use premises of a local stud farm (Queensway Ltd) with approx. 70 horses for teaching; hence, it is expected that flow of equine patients will increase greatly. The Faculty also expects that these new posts will contribute to increasing number of companion animal patients by covering hitherto missing subjects.

Regarding development and running of a teaching farm, the University is in contact with the local authority of Karditsa (details in 4.3.).

Regarding the recording system, the Faculty has also started, in contact with the Information Technology Directorate of the central University administration, to design and develop a modern electronic recording system for patients, farm visits and cadavers.

The recent appointment of two persons responsible for professional, ethical and academic affairs at the veterinary hospital (one for companion animal matters, one for farm animal matters) will hopefully contribute to a closer collaboration between the departments involved and will ensure more efficient handling of patients, harmonisation of farm visits, sharing of services (e.g., emergency service, vehicles) and teaching material between departments. The above can ultimately lead in improving financial and time matters within the hospital.

## 6. Learning resources

### 6.1. Factual information

**6.1.1. Description of the main library of the Establishment:**

**-) staff (FTE) and qualifications**

**-) opening hours and days**

**-) annual budget**

**-) facilities: location in the campus, global space, number of rooms, number of seats**

**-) equipment: number of computers, number of electrical connections for portable PC, available software's for bibliographical search**

**-) number of veterinary books and periodicals**

**-) number of veterinary e-books and e-periodicals**

**-) number of other (e)books and (e)periodicals**

*Overview of the Library and Information Centre of University of Thessaly*

The Library and Information Centre (LIC) of the University is available and provides learning resources for the University community, as well as for interested outside researchers and scholars and for members of the public. LIC includes the central library (in the city of Volos) and subsidiary libraries in all cities where Faculties of the University are located (including the Faculty library in Karditsa). LIC operates as a separate administrative department of the University, which coordinates and supervises the library system and the learning resources of the University. It is a member of the Hellenic Academic Libraries Link, the national body of academic libraries, through which subscriptions to electronic databases, catalogues and libraries is achieved.

*Staff*

LIC is headed by the director (qualifications: BSc, PhD). Personnel working in LIC amounts to 28 persons (all full-time). The staff includes librarians, information scientists, computer scientists, archivists, conservation scientists and administration personnel. Occasionally, under- or post-graduate students may also be employed by the library to assist in the work.

*Operating periods of the central library in Volos*

Opening hours during term time and examination periods are: Monday to Friday from 08:15 to 20:00. Opening hours during student holidays are: Monday to Friday from 08:15 to 15:30.

*Budget*

Total operating budget of LIC for year 2016 amounted to 117,000 Euros for development of collections and e-services and 87,500 Euros for operating expenses (personnel salaries not included in those figures).

*Facilities*

The base of the LIC is in a purpose-built five-store building in the city of Volos. Total surface of the building is 4,520 sq.m. The central library of the University is also located in that building.

The building includes 21 reading spaces and rooms, with 220 seats. Further, there are rooms for group work, a computer room and a teleconference room. Additional computer terminals are available in the various collection rooms to support bibliographical searches; in total, 35 computers are available for readers. Sockets are available throughout the reading rooms and spaces.

LIC uses bibliographical software Sierra, as do all respective services of Greek Universities, for search and reference purposes.

*Collections*

In total, the print collection of the LIC includes over 80,000 volumes (corresponding to over 50,000 titles) and approx. 24,000 journal volumes. The collection includes a full series of Greek geographical and geological maps and various audiovisual items (e.g., CD-roms, DVDs, tapes, videotapes, slides). Further, there is an extensive online digital collection, providing access to 21,000 e-journal titles, 60,000 e-book titles, and over 16,000 institutional depository digital documents (e.g., dissertations, theses, policy documents). Through electronic subscriptions, access is provided to 15 bibliographic and full-text databases and e-services; these include Web of Science (Citation Indexes), Scopus, InCites Journal Citation Reports, InCites Essential Science Indicators, EconLit, SportDiscus with full-text, PsycINFO, and EBSCO's Academic Search Complete and Discovery Service EDS.

*Use by Faculty members*

The library facilities in Volos are rarely used by Faculty members. Collections at that site do not reflect interests and Faculty members and distance is prohibitive to visit the site. Nevertheless, the subsidiary library in the Faculty is part of that network and decisions regarding the Faculty library are based on the central administration of the centre. Further, the staff of the central site is often contacted regarding specific matters, which can only be covered by staff at that site.

### 6.1.2. Description of the subsidiary libraries

*Overview of the Faculty library*

The Faculty Library is a subsidiary of LIC. It is located in the first floor of the Auditoria complex. Total surface of the library is about 150 sq. m. The library also includes the reading room at the ground floor of the complex, which has a capacity for 15 visitors in 8 tables, whilst the reading room in the library area has a capacity for 8 visitors in 3 tables. Sockets are also available for use by visitors: 7 in the ground floor and 4 in the first floor. Multi-sockets are available in the Faculty for use by students, if needed, to accommodate more users. The library has one computer available for users.

*Staff*

There are two full-time members in the Faculty Library. Both staff are permanent and are employed as librarians. They are responsible for administrative tasks in the subsidiary library in Karditsa, for traditional reference and loan library services and for organising training and information literacy seminars in cooperation with Centre staff for local users.

*Operating periods*

Opening hours during term time and examination periods are: Monday to Friday from 08:15 to 20:00. Opening hours during student holidays are: Monday to Friday from 08:15 to 15:30. The reading rooms are open and available to students on same times as library opening times.

*Budget*

The Faculty Library does not have an independent budget. Operating budget is included in budget of LIC.

*Collections*

The print collection includes over 2,670 volumes (corresponding to over 1,685 titles) and approx. 820 journal volumes. Online digital collections, with access to electronic material, and access to bibliographic and full-text databases and e-services is available through the Centre.

*Use by Faculty members*

The Faculty library has a total of 570 registered members, of which most (90%) are Faculty staff and students. In 2016, 1,400 loans of various items had been made.

*Departmental libraries*

Small size libraries with books specific to respective disciplines are located in some departments of the Faculty. These reflect the particular interests of members of the respective departments and have been set up for use, mainly, by staff and postgraduate students.

### 6.1.3. Description of the IT facilities and of the e-learning platform

Besides traditional reference and loan library services, LIC also operates the University's e-learning platform (http://eclass.uth.gr) and the institutional repository (http://ir.lib.uth.gr), the Integrated Library System as a Service ILSaS (http://opac.seab.gr/search~S11*gre), an information literacy web service for both end-users and librarians (http://ilseab.lib.uth.gr) and various online services accessible via its website (http://www.lib.uth.gr). Special support services are provided to disabled users, while numerous user training and information literacy seminars are offered all year round.

### 6.1.4. Description of the available electronic information and e-learning courses, and their role in supporting student learning and teaching in the core curriculum

The Faculty fully participates in the initiative the development of open courses within the University. The e-Class platform (http://eclass.uth.gr/eclass/) is a complete course management system that supports asynchronous e-learning. Currently, the Faculty is offering 85 undergraduate e-courses. The facility is an invaluable learning tool which, though not fully exploited or explored sofar, offers an environment for the constructive use of internet technologies in the teaching and learning process. It is a convenient and interactive way of offering course materials regardless of location and time barriers. The facility provides to students the time to reflect on what they have been learning before answering questions or joining online discussions while at the same time respects their varying learning pace. It also constitutes a formal, yet friendly, way of tutor-student communication and interaction. Among its unique features

is a user friendly way to design and conduct online anonymous surveys that allows tutors to have quick and immediate feedback/opinion from their students for a series of matters the most important being teaching evaluation.

E-class platforms supported by the School of Continuing Education of the University have received a national accreditation and can be used for distance learning courses.

**6.1.5. Description of the accessibility for staff and students to electronic learning resources both on and off campus**

On campus, internet connection to desktops is provided by local area network. Further, there is Wi-Fi coverage throughout the campus, by means of six access points in the various buildings. Further, the University operates a VPN system, through which access to resources can be effected off campus.

**6.1.6. Description of how the procedures for access to and use of learning resources are taught to students**

All first-year students, during their initial two weeks at the Faculty, receive a compulsory training course regarding use of University learning resources and of internet services. The course is organised by the administration unit of the Faculty and run by the staff members of the Faculty library and the IT staff of the Faculty. During the course, students are explained the procedures for using the library services and for using online learning resources. Further to that, the Faculty library staff is always available to explain to individual students, whilst LIC also runs an information web service for users of libraries (http://ilseab.lib.uth.gr).

**6.1.7. Description of how and by who the learning resources provided by the Establishment are decided, communicated to staff, students and stakeholders, implemented, assessed and revised**

The supervisory board of LIC is chaired by the Vice Rector of Financial Development and Planning and includes the director of LIC and 18 academic staff members, one representative from each Faculty of the University. The supervisory board is responsible in formulating the general strategy of LIC. Daily management is carried out by the director, who is supervised by the Vice Rector. Decisions of the supervisory board are communicated to members of the General Assembly of the Faculty by the representative in the board, who is a senior member of staff. Further, the director of LIC frequently informs by e-mail all the University community regarding matters of the function and services of the LIC (e.g., new subscriptions to journals, new services offered etc.).

**6.2. Comments**

The LIC provides a variety of services (beyond those of a traditional library) and extensive support to members of the University. The University supports use of new technologies for learning and urges its members to make extensive use.

In the recent (October 2014) self-evaluation report of the University, there is the following statement "*Opinion of students regarding available structures for learning support is particularly positive. Students appear to understand that University of Thessaly is a relatively new establishment with modern facilities and is open to use of new technologies in teaching activities, as well as for the general academic support of students. Students appear to be satisfied from the innovative platforms used, such as e-class, where content of lectures is uploaded at the start of a term, with literature references, thus allowing further investigations by students. Further, students also seem interested in digitalised learning material, as they are familiar with alternative learning means. Finally, another significant issue pointed out by students, regarding available resources, is the library of the institution, in relation to facilities and technological possibilities. The opinion of students regarding the available structures for learning support in the University is particularly positive*".

### 6.3. Suggestions for improvement

The system of the Learning and Information Centre of the University works well and supports the teaching and research functions in the Faculty effectively. Problems arising from time to time (e.g., delayed subscriptions to international journals) are due to factors outside the University (e.g., delayed release of funds by Ministry of Finance to pay subscriptions).

The local resources, reading room and library room, need refurbishment, which will be carried out as part of the forthcoming maintenance and repair grant allocated to the Faculty. Further, as the new curriculum unfolds progressively, further courses should be developed by academic staff and uploaded into the e-class facility, which may thus become of significant support to students.

## 7. Student admission, progression and welfare

### 7.1. Factual information

#### 7.1.1. Description of how the educational programme proposed by the Establishment is advertised to prospective students

The University of Thessaly implements central actions to promote studies in the University. As part of that, every year, an 'open door' week is organised, during which secondary education schools from the region of Thessaly visit the Faculty. During the visits, the pupils are shown around the facilities of the Faculty and are explained about veterinary education and the veterinary profession. Further, the University is present in events which are addressed to secondary education pupils and take place in the large cities of the country, e.g., 'Spoudase 2017', which took place in Athens recently (25-26 June 2017). In these events, studies at the University are presented by means of promotional material and presentations.

#### 7.1.2. Description of the admission procedures for standard students:

**-) selection criteria**

**-) policy for disable and ill students**

**-) composition and training of the selection committee**

**-) appeal process**

**-) advertisement of the criteria and transparency of the procedures**

For admission into the Faculty, pupils need to have completed the secondary education (6 years) and have received the Lyceum degree (*Apolytirion Lykiou*). After receiving the degree, pupils are entitled to admission to higher education faculties. Establishments are only fractionally involved in the selection and admission process, which, in the very most cases, is carried out entirely under the supervision of the Ministry.

*Mainstream admission*

Mainstream admission into the Faculty is based on results of a national examination for Lyceum graduates, which takes place every June. Number of students to be admitted into the Faculty is announced every February (Table 7i).

Table 7i. Allocated by Ministry number of students for mainstream admission into Greek veterinary Faculties.

| Veterinary Faculty of | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| University of Thessaly | 90 | 85 | 100 | 91.7 |
| Aristotle University of Thessaloniki | 85 | 85 | 100 | 90 |

The two veterinary Faculties are classified into scientific field 3 ('health and life sciences'). For admission into faculties of that field, students are examined in following topics: (a) Greek language, (b) biology, (c) physics and (d) chemistry. The examinations take place throughout the country and all

candidates are examined in the same questions. Results of examinations are announced at beginning of July.

Table 7ii indicates preference of pupils for the Faculty in the national examinations that took place in June 2016 (admission for academic year 2016-17).

Table 7ii. Preferences of students that had applied for admission into Greek veterinary Faculties during the nationwide examination (academic year 2016-17).

| | Number of pupils | | |
|---|---|---|---|
| | 1st preference | 2nd preference | Total applicants |
| University of Thessaly | 53 | 401 | 3,221 |
| Aristotle University of Thessaloniki | 444 | 119 | 3,742 |

After announcement of results, candidates may apply for mainstream admission into faculties of their choice; candidates can apply to as many faculties as they wish within scientific field 3. Minimum marks for admission into the two veterinary Faculties in Greece are in Table 7iii.

Table 7iii. Minimum marks required for admission of students into Greek veterinary Faculties during the nationwide examination (maximum possible: 20,000).

| Veterinary Faculty of | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| University of Thessaly | 18,198 | 17,360 | 17,906 | 17,821 |
| Aristotle University of Thessaloniki | 18,388 | 17,670 | 18,239 | 18,099 |

For academic year 2017-18, the recently announced minimum mark for admission into the Faculty was 18,200.

*People involved in the system of national examination for mainstream admission to higher education*

The process of mainstream admission to higher education establishments is supervised by a national examination committee, which is appointed by decision of the Minister of Education, Research and Religious Affairs, after taking into account proposals by Universities and the secondary education service nationwide. Members of that committee are nominated one week before start of the annual examination procedures (i.e., every May) and their names are not disclosed until final results are announced; members of the committee also are not allowed to disclose their appointment; term of appointment of members is for one year, but re-appointment is possible; members with possible conflict of interest must not accept an appointment.

Examination papers are marked by secondary education teachers under guidelines issued by the national examination committee. Details of candidates on examination papers cannot be seen by people marking the papers; details are revealed at the end and results are uploaded into a platform by a local examination committee consisting of secondary education teachers, who were not involved in marking of papers.

All subsequent processing of marks and allocation of candidates to Faculties are carried out by Ministry staff. Results of admissions into faculties are announced at the end of August every year.

*Additional streams admission*

Additional streams admission is allowed to some pupils, with the objective to attempting to compensate pupils considered disadvantaged compared to those following mainstream admission. These additional streams are summarised in Table 7iv. All these streams are regulated through various legal provisions or (in the cases of foreign nationals) bilateral agreements.

Table 7iv. Summary of additional streams available for admission into Greek universities.

| Group of pupils | Proportion of students admitted through mainstream admission | Procedures |
|---|---|---|
| Distinguished athletes[1] | 4.5% | Selection procedure carried out by the Ministry[2] |
| Foreign nationals of foreign descent with a Lyceum degree (or equivalent) from a school abroad[2] | 5%-7% | Nominations by the foreign state (through procedures regulated by that state) |
| Foreign nationals of Greek descent with a Lyceum degree (or equivalent) from a school abroad[3] | 5%-7% | Selection procedure carried out by the Ministry |
| Graduates of higher education establishments[4] | 12% | Examinations held within the Faculty in following topics: (a) Anatomy, (b) Biochemistry, (c) Physiology by a committee of academic staff of the Faculty, complimented by further staff from other Faculties of the School of Health Sciences |
| Greek nationals, whose at least one parent works in a Greek mission abroad[5] | 3% | Selection procedure carried out by the Ministry |
| Highly distinguished athletes[6] | Unlimited | Submission of proof of achievement to Ministry for selection |
| Seriously ill children from Greek secondary education[7] | 5% | Selection based on final mark of Lyceum degree |

1. Achievement of up to 8th place in Olympic Games, World, European or national championships in any sport (notwithstanding provisions regarding highly distinguished athletes).
2. Mainly reference to citizens of the Republic of Cyprus; in the past, there have been also admissions of citizens of the Republic of Lebanon.
3. Aiming to support children of people of the Greek diaspora, who would wish to study in Greek universities.
4. For holders of degree of a higher education establishment wishing to read for a second degree.
5. Aiming to support children of Greek civil servants or military personnel working abroad, who would wish to study in Greek universities.
6. Achievement of 1st-6th place in Olympic Games or World Championships, 1st-3rd place in European Championships or 1st place in national championships in any sport.
7. Aiming to support pupils with serious acute or chronic diseases, diagnosed in a public hospital and confirmed by a medical committee of the Ministry of Health; list of the various diseases for the remit of this arrangement clearly defined in legislation.

*Regulations for mainstream admission*

The system of mainstream admission has been in place in Greece since 1964. Changes (smaller or greater) have been enforced often (1980, 1983, 1997, 2000, 2005, 2010, 2016), in line with government agenda. Nevertheless, the background and the principles or the system have been maintained; in all above occasions, only changes of technical nature have been effected.

In all cases, the various changes in mainstream admission regulations have been legalised through the Parliament, after wide consultations (e.g., parents unions, student unions, university, secondary education authorities). After approval, a period of two to three years is allowed before each change would be officially implemented.

There is a legal possibility to appeal results of the mainstream admission process in front of the Council of State (the supreme court for administrative affairs). Sporadic appeals by people who had failed in the examination have never met with success.

*Regulations for additional stream admission*

The various provisions of the additional stream change often by allowing access to higher education to more groups of people and by increasing proportions (i.e., numbers of people) to be admitted into universities. In all cases, changes have been legalised through the Parliament. After approval, implementation of changes is immediate or even (in some cases) with retrospective effect.

### 7.1.3. Description of the admission procedures for full fee students

There are no fee-paying undergraduate students in the Greek higher education system (details in 2.1.3).

### 7.1.4. Description of how the Establishment adapts the number of admitted students to the available educational resources and the biosecurity and welfare requirements

Only in theory, the Faculty has a say in number of students through mainstream admission. Every year, the Ministry officially requests a proposal by all faculties and universities for first year students in the following academic year. The General Assembly of the Faculty takes into account the possibilities for training students and makes a relevant proposal, which is forwarded to the Rector of the University. Proposals of all Faculties are collated and forwarded by the University to the Ministry. Sofar, the Ministry has never accepted the Faculty's proposal. Table 7v presents the numbers of first year students proposed by the Faculty for admission through the mainstream procedure and the numbers finally allocated by the Ministry.

Table 7v. Numbers of first-year students for mainstream admission proposed by Faculty and allocated by Ministry.

| | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Proposed by Faculty | 50 | 50 | 50 | 50.0 |
| Allocated by Ministry | 90 | 85 | 100 | 91.7 |

Student welfare benefits are not dependent on number of students. Some benefits apply to all students in higher education, e.g., discounts in the public transport system in Greece, free textbooks, social security, subsidised broadband internet connection. Other benefits are related to financial situation of students' families, therefore, independently of number of students in a Faculty, all students from families with reduced financial means would receive the respective benefits, e.g., free meals, housing support etc.

**7.1.5. Description of:**

**-) the progression criteria and procedures for all students;**

**-) the remediation and support for students who do not perform adequately;**

**-) the rate and main causes of attrition;**

**-) the exclusion and appeal procedures;**

**-) the advertisement to students and transparency of these criteria/procedures**

All students are allowed to progress to the following year independently of success in examinations. Progression is only dependent upon a student registering to attend the respective term.

The Committee for student affairs is available to discuss with students, in confidence, matters of academic performance by students. Most often, the following actions would be recommended: (a) re-attendance of lectures and clinical tutorial, (b) personalised tutorials and (c) organising a long-term plan for sitting examinations.

The greatest rate of attrition is noted in the first two years of studies and can be as high as 25%. Reasons for that are transfers to the Faculty of Veterinary Medicine of University of Thessaloniki and admission to a different Faculty (in >90% of cases, in other faculties of the health science field). Thereafter, attrition rates decrease substantially (<10%) and are mainly the result of financial difficulties of families to support students or by personal issues of students. As per current legal provisions, students in Greek universities remain registered indefinitely; students may take as long as they would need to graduate.

Information regarding all student benefits are available at the website of the University. Further information can be provided anytime by members of the administration section of the Faculty. For appeals against receipt of welfare benefits, students stage the appeal with the Directorate for student welfare of the central University administration. Further, at the start of each academic year, staff from the central administration visit the Faculty and make presentations to first-year students, to inform them about all facilities and benefits for students, available by means of national legislation or though initiatives of the University.

**7.1.6. Description of the services available for students (i.e. registration, teaching administration, mentoring and tutoring, careers advice, listening and counselling, assistance in case of illness, impairment and disability, clubs and organisations)**

There is a Directorate for student welfare at the central administration of the University, which oversees and handles all matters related to student affairs.

At Faculty level, the administration unit is responsible for receiving various requests by students. The section is available to students daily from 13.00 to 15.00 and responds to the various requests as soon as possible; for example, study certificates are issued on the day following the request.

The University has set up a service for the support of students, which is overseen by the Department of Psychology and Applications in Pedagogical Sciences of the School of Humanities and Social Sciences. Staff of the Department are available to discuss issues in academic performance, issues

of personal matter or any other problem; the service is also organised with psychologists and social workers in all towns of Thessaly, so that it can provide a service to students of the Faculty in Karditsa. Also, at Faculty level, there is the Committee for student affairs, which can discuss with students, in confidence, any matter that is of concern to them.

The University includes a Unit for Employment and Career, which organises career seminars for students and is responsible for liaising with private sector organisations and entities.

*Student welfare benefits*

Legal provisions in Greece provide a wide array of student benefits, as below.

- Free textbooks (one textbook per module) for all students.
- Subsidised broadband internet connection for most students.
- Reduced fare in transportation means within the country for students through mainstream admission.
- Free medical insurance (basic level) for all students.
- Free meals during term time and examination periods for students with reduced family income.
- Housing facilities (not extensively available at the University) or housing allowance for students with reduced family income.

*Care for chronically ill or disabled students*

The University has established a service for chronically ill or disabled students, which aims to facilitate their everyday life in the University (e.g., access to teaching areas, particular care during examinations). A member of academic staff of the Faculty is responsible for functions of the service at the Faculty. The service also provides support to students during examination period, in order to make sure that a potential handicap would not adversely affect student performance during examinations.

*Student societies*

The Student Union is incorporated in the city of Karditsa and is the society of all students of the Faculty. It is governed by a 7-member council, elected yearly by all members of the union. Representatives of the union participate in the General Assembly and have regular meetings with the Faculty's Dean and Secretary regarding student matters.

There is a branch of the International Veterinary Students Association in the Faculty (IVSA Thessaly), which operates within the remit of IVSA. The branch actively and frequently participates in international events and also organises events for students of the Faculty. Further, the branch is co-organiser (in collaboration with the IVSA Thessaloniki) of the annual veterinary student conference.

Further, there are many special interest social groups (e.g., music group, various sports groups), which are addressed to students with relevant interests.

### 7.1.7. Prospected number of new students admitted by the Establishment for the next three academic years

Numbers of students allocated to the Faculty are mostly dependent on the general government policy for admissions into universities. In any case, it is expected that number of students for the next three

years will be approx. similar to those allocated during recent years, i.e., between 80 and 100 students through the mainstream procedure.

Given, the number of students admitted through the additional streams and the usual attrition, it is expected that number of students attending the first year in forthcoming years will be between 70 and 85.

### 7.1.8. Description of how and by who the admission procedures, the admission criteria, the number of admitted students and the services to students are decided, communicated to staff, students and stakeholders, implemented, assessed and revised

All matters related to admission of students into the higher education in Greece are regulated by the Ministry. Many of the provisions are passed through the Parliament, whilst for others Presidential decrees or Ministerial decisions are issued. Welfare benefits for students are also regulated by the Ministry.

For all the above, countrywide publicity is given by national and local media. Further, detailed information about student benefits is available electronically and repeatedly provided to students by University personnel.

**Table 7.1.1. Number of new veterinary students admitted by the Establishment**

| Type of students | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Standard students | 115 | 105 | 118 | 112.7 |
| Full fee students | 0 | 0 | 0 | 0 |
| Total | 115 | 105 | 118 | 112.7 |

**Table 7.1.2. Number of veterinary undergraduate students registered at the Establishment**

| Type of students | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| First year | 93 | 91 | 111 | 98.5 |
| Second year | 81 | 86 | 71 | 79.5 |
| Third year | 86 | 67 | 56 | 69.5 |
| Fourth year | 68 | 54 | 63 | 61.5 |
| Fifth year | 56 | 55 | 39 | 50.0 |
| Total | 384 | 353 | 340 | 359 |

**Table 7.1.3. Number of veterinary students graduating annually**

| Type of students | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Standard students | 19[1] | 27 | 36 | 27.3 |
| Full fee students | 0 | 0 | 0 | 0 |
| Total | 19 | 27 | 36 | 27.3 |

1. Based in only two of the three examination slots taking place every academic year; graduation results after third examination slot of academic year 2016-17 will be available in early October, at which time an update will be provided.

**Table 7.1.4. Average duration of veterinary studies**

| Years over normal duration of studies | Duration % of the students who graduated on 2016-17[1] |
|---|---|
| +0 | 5.3% |
| +1 | 68.4% |
| +2 | 5.3% |
| +3 or more | 21.1% |

1. Based in only two of the three examination slots taking place every academic year; graduation results after third examination slot of academic year 2016-17 will be available in early October, at which time an update will be provided.

**Table 7.1.5. Number of postgraduate students registered at the Establishment**

| Type of students | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Postgraduate trainees | 15 | 22 | 20 | 19.0 |
| European Veterinary College residents | 4 | 3 | 3 | 3.3 |
| MSc students | 10 | 21 | 30 | 20.3 |
| PhD students | 42 | 35 | 47 | 41.3 |
| Total | 70 | 80 | 100 | 83.3 |

## 7.2. Comments

Admission of students into the higher education institutions is carried out by nationwide procedures. The process is generally viewed by Greek people as a trustworthy and transparent process; it has been in place for over 50 years and is widely accepted as a fair procedure. Political personnel have often put forward the idea of free admission to faculties around the country based only on interest of pupils, but this has not thusfar materialised.

Student allocation by the Ministry does not take into account the capability of the Faculty to train students; further, an additional, up to 35%, number of students may also be allocated through the additional streams for admission, further increasing the already large number of students into the Faculty. Ultimately, nevertheless, actual number of students attending the studies is reduced, as the result of transfers to Aristotle University of Thessaloniki or to other faculties around the country.

Increased welfare benefits are provided to students through relevant legislation by means of funding provided directly from the Ministry to covering them. Further, the University also provides increased support to students in need by having set up services, which act for and support less privileged members of the community (e.g., by caring to offer specific assistance during examinations in handicapped students).

The Faculty promotes student exchanges through the ERASMUS program. In recent years, over 40 students have spent time in other European veterinary faculties. Students that had spent time abroad during their studies, would find it easier to work abroad after graduation, that way increasing opportunities for improved work and life in general.

### 7.3. Suggestions for improvement

The Faculty will continue to oppose to admission to larger number of students than those that can be trained by resources available. The Faculty will also continue to support students by setting their welfare as of prime importance. The Committee for Student affairs will continue to be always available to students and committed to discuss issues (academic or otherwise) of concern to students. The Faculty will provide an amount of money out of the sum allocated for operating expenses to support function of Student Union.

# 8. Student assessments

## 8.1. Factual information

### 8.1.1. Description of the global student's assessment strategy of the Establishment

*Frequency of examinations*

Students must be successfully examined in all modules of the teaching curriculum before award of the veterinary degree. Examinations are held at the end of every teaching term, i.e., in January-February and in June, on which occasions only modules taught during the winter or spring term, respectively, can be examined. A repeat examination is provided in September, where modules taught during any term (winter or spring) are examined. Each examination period lasts 4 weeks (details in 1.1.3.).

Exemptions to above are as below.

- Fifth-year students can be examined in any module (i.e., taught in any term) in the June examination period of that year (this has been decided by the General Assembly for the years 2015-16 and 2016-17 and will be re-considered at yearly basis).
- After completion of the fifth year, students can be examined in any module (whether taught in winter or spring term) on any examination occasion (January-February, June, September) (this has been provided legally).
- Students not having attended at least 80% to 90% (depending on module) of practical teaching of each module cannot sit an examination and should attend supplementary training.
- In clinical modules, students should have been successfully examined in all relevant modules, before being allowed to sit and be examined in the final clinical and oral examinations.

*Standards*

Academic staff may examine students by written, practical, clinical or oral examinations or their combination, as they consider more appropriate for evaluation. There is no uniform policy for methodology of examinations across the modules of the curriculum. In some modules, results of practical, clinical or oral examinations are taken into account for the final mark, whilst in some others a pass is necessary in these examinations, in order to proceed to written examination (but their result is not taken account for final mark). In some modules, there is a requirement that students write a short dissertation in a topic and make a presentation as a requirement to sit the examination, whilst in others the dissertation and presentation are taken into account for the final result in the module. In some modules, evaluation of performance of students during the term is also taken into account for the final mark.

Marking scale is from 0 to 10; no decimal marks can be awarded. Passing threshold is 5 (equal to 50%).

*Results*

Table 8i summarises outcome of examinations for all modules taught and examined at the Faculty. When results of academic years 2015-16 and 2016-17 were compared between them, there was little variation

between overall success rates and success rates in individual modules (results for academic year 2016-17 do not include results of the repeat examination period, scheduled for September 2017).

Table 8i. Success rates for modules taught and examined.

| | 2016-17[1] | 2015-16 | 2014-15 |
|---|---|---|---|
| Overall rate of all modules | 63.1% | 78.7% | 77.9% |
| Median rate among modules (min-max) | 76.0% (6.3%-100.0%) | 84.4% (30.6%-100.0%) | 85.3% (32.6%-100.0%) |

1 Results for academic year 2016-17 do not include results of the repeat examination period (September 2017).

**8.1.2. Description of the specific methodologies for assessing:**

**-) theoretical knowledge;**

**-) pre-clinical practical skills;**

**-) clinical practical skills**

Theoretical knowledge is assessed by means of written examinations. There is no uniform policy for methodology of examination papers across the modules of the curriculum. Written examination can be based in multiple-choice questions, in essay questions or in both. In final examinations, theoretical knowledge is assessed through relevant questions during the oral examination.

Practical skills are assessed by means of practical examinations appropriate to the relevant module and department. Indicative examples are as below.

- In anatomy, students are assessed in recognition and identification of various organs and organ parts of various domestic animal species and in identification and description of histological sections.
- In nutrition, students are examined in identification of various feedstuffs and in formulation of rations for domestic animals.
-In parasitology, students are examined in identification of parasites and parasitic elements.
- In pathology, students are assessed in recognition, description and interpretation of lesions and findings in post-mortem examination (all students are examined in performing a post-mortem examination [necropsy and necrotomy] and in recognising and interpreting lesions to reach a diagnosis), in histolopathological preparations and in cytological slides.
- In food safety, students are examined in abattoirs in recognising lesions in slaughtered animals and in reaching the correct decision regarding disposition of the carcass, as well as in identification of various foods (e.g., cheese, fish, meat products), recognition of abnormal features ('lesions') and in reaching the correct decision regarding disposition of the food.

In clinical departments, students are evaluated for correct application of various clinical tasks, depending on each discipline. Indicative examples are as below.

- Students are asked to clinically examine patients (cattle and small ruminants and pigs and companion animals) and propose ideas regarding diagnostic management of each patient.
- Students are asked to perform diagnostic laboratory examinations (e.g., haematological examination or cytological examination of vaginal samples or milk samples) and to interpret the results.
- Students are asked to interpret and discuss X-rays and ultrasonographic images.

- Students are asked to evaluate the facilities in farms (e.g., farrowing pens, milking parlour).
- Students are asked to estimate anaesthetic risk and propose an appropriate anaesthetic protocol for each anaesthetic case, as well as to interpret data gathered during monitoring of animals under anaesthesia.
- Students are asked to describe surgical equipment and material.
- Students are asked to perform a pregnancy diagnosis and evaluation of the genital track of cows.
- Students are asked to evaluate health management programs in farms.
- Students are asked to discuss therapeutic management of individual patients or animal populations and to write appropriate prescriptions.

**8.1.3. Description of the assessment methodology to ensure that every graduate has achieved the minimum level of competence, as prescribed in the ESEVT Day One Competences**

The Faculty follows a teaching curriculum that aims to provide compliance with Day One Competences approach, in order to ensure that all graduates achieve the required level of competence at the end of the studies. Further, in DOR, each student is issued a personal logbook, where specific activities are clearly described, in order to confirm acquisition of the specific skills included in the ESEVT Day One Competences; no student is allowed to sit final examination, if that logbook has not been completed appropriately.

**8.1.4. Description of the processes for:**

**-) ensuring the advertising and transparency of the assessment criteria/procedures;**

**-) awarding grades, including explicit requirements for barrier assessments;**

**-) providing to students a feedback post-assessment and a guidance for requested improvement;**

**-) appealing**

The criteria for award of marks during examination and assessment have been established for a long time at national level. All students are informed during the induction period at the beginning of the first year of studies.

All academic staff, especially Heads of Departments, explain to students the examination procedures and the arrangements for award of marks in advance of the examinations. These can be repeated during the examination. Marking scale is from 0 to 10; no decimal marks can be awarded in marking a module. Passing threshold is 5 (equal to 50%). Scaling is as follows: failing mark >5.0, 'Good' passing mark 5.00-6.49, 'Very good' mark 6.50-8.49 and 'Excellence' mark 8.50-10. Overall mark of the degree is the average of marks obtained in all modules of the teaching curriculum.

For appeals against results of examinations, the University has established the below steps.

1. The student can discuss the matter directly with the academic staff.
2. The student can approach the Committee for student affairs and discuss the matter in confidence.
3. The student can appeal to the Dean.
4. The student, through the Student Union and the representatives, can appeal to the General Assembly.
5. The student can appeal to the central administration of the University.

Moreover, there is a legal provision that students who have failed at least three times in a module, may apply to the Head of School for examination by a committee, in which staff teaching the module cannot participate.

### 8.1.5. Description of how and by who the student's assessment strategy is decided, communicated to staff, students and stakeholders, implemented, assessed and revised

Many details of the examination procedures are regulated by long-standing legal provisions; these include requirement for successful examination in all teaching modules before award of the degree, pass threshold and opportunities for students to be examined. Further, the permission to students after completion of the fifth year to be examined in any module (whether taught in winter or spring term) on any examination occasion (January-February, June, September) has also been provided legally.

Other details are regulated by decisions of the University or the Faculty; these include the precise dates for the examination periods and their duration (set at four weeks). Policies regarding procedures for examinations, questions and material for use in examinations and marking schemes are arranged and decided at departmental level. Responsibility for those lies with Heads of Departments.

## 8.2. Comments

Student assessment is always a thorny issue in universities and the Faculty is no exception. Students are frequently unsatisfied with results of examinations and do make relevant comments about teaching staff. This, to a large extent, is understandable. The difficulties of final year examination, where students need to be assessed in a variety of topics and a large amount of knowledge before award of the degree lend support to dissatisfaction. However, on the other hand, it should be mentioned that issues and complains regarding potential assessment problems have never been officially submitted for discussion in the General Assembly.

Another issue of dissatisfaction for students is the delay in publicising results of examinations, as, occasionally, this may take up to three months post-examination. This hinders student planning for subsequent examination period and is thus considered to be a fair complain.

The results of success rates indicate differences between different modules. These are well understandable, as there are differences in amount of theoretical knowledge and in practical/clinical skills requirements between modules and between animal species.

Despite above, most students graduate within 12 months after finishing their formal course of training (Table 7.1.4.). Further, the legally available appeal for examination by external examiners has only been exercised twice in the 23 years of function of the Faculty. The above indicate that, ultimately, in majority of cases, assessment is reasonable and depends to a large degree on student preparation for examinations. Nevertheless, the Faculty aims to guarantee fair evaluation of potential student complains regarding assessment results.

### 8.3. Suggestions for improvement

Any issues regarding assessment should be brought immediately to attention. Leadership of the University and high-rank staff are particularly sensitive to matters of inappropriate assessment. Students should discuss matters arising with the Committee for Student affairs and staff with the Dean, as soon as these arise for potential investigation. That way rumours and dissatisfaction will be limited. Continuation of pedagogical training of staff will contribute to them understanding intricacies of student assessment and leading in smoothening (but eliminating) differences between modules and teaching staff.

Starting in 2017-18, the Faculty will set as target to decrease time for publisicing issue results of assessments to an average of 10 days, with a maximum allowed period 20 days after examination.

# 9. Academic and support staff

## 9.1. Factual information

### 9.1.1. Description of the global strategy in order to ensure that all requested competences for the veterinary programme are covered and that staff are properly qualified and prepared for their roles

All permanent academic staff are recruited based on holding a PhD degree in a subject related to the post and department to be appointed. Further qualifications and scientific work, which include, but are not limited to, veterinary specialisation titles, refereed publications, attendance of and presentations in CPD courses and scientific meetings, teaching or research work subsequently to PhD work, post-graduate experience, supervision of PhD theses, holding of research grants, international recognition of work (citations of published work, invitations for lecturing in conferences etc.), are also necessary and are taken into account for selection and promotion. Moreover, all veterinarians are members of the Geotechnical Chamber of Greece, the licencing body for veterinarians in the country; many veterinarians employed as permanent academic staff are also EBVS veterinary specialists.

As per relevant legislation, all permanent academic staff have to be assessed internally every year and externally every five years, through the quality assurance unit of the University and the Hellenic Agency for Quality Assurance and Accreditation in Higher Education, respectively. All promotions are open to outside candidates and competitive; external members constitute the majority of selection boards.

The School of Humanities and Social Science of the University provides training for teaching in higher education. The Information Technology Directorate provides training regarding information systems and technology at the University, as well as up to date information and support. The Library and Information Centre provides training regarding learning resources at the University, as well as up to date information and support. The Department of Microbiology and Parasitology and the Department of Pathology of the Faculty provide information and updates regarding biosecurity.

Moreover, staff are encouraged to take up sabbatical leave, which would support updating of knowledge, presence in a different work environment and establishment of collaborations with other institutions. Further, short visits under the auspices of ERASMUS program also provide the possibility for receiving updates on specific topics and also setting up ties for future, longer collaborations.

### 9.1.2. Description of the formal programme for the selection, recruitment and training to teach and assess students (including continuing education) of the academic staff

*Permanent academic staff*

When the Ministry receives funding for new posts of permanent academic staff, it allocates these to higher education establishments by decision of the Minister. Posts allocated to the University are further

allocated to Faculties by decision of the Senate. Posts allocated to the Faculty are allocated to departments by decision of the General Assembly.

By following the above procedure, one new post of permanent academic staff has been allocated to the Faculty in mid-2016 (assistant professor in DMP) and another one in late 2016 (assistant professor in DS). These posts were the first new posts allocated to the Faculty since 2008.

The General Assembly's decision is submitted to the Rector, who issues a call for the post. The post is advertised in the government gazette, in the national and local press and in the University's website; it remains open for two months. Applications are submitted through an electronic platform.

The General Assembly appoints a selection committee of 11 members (5 internal and 6 external). The selection committee meets and appoints three rapporteurs, to submit a review with an appraisal of qualifications of candidates and a proposal for the most suitable person for the post within 40 days; the report is sent to members of the selection committee and the candidates, who may submit, in writing, a response or rebuttal to the report. Then, the selection committee meets and after taking into account (a) *curricula vitae* of candidates, (b) the report of rapporteurs, (c) the student evaluation of teaching abilities of candidates in a demonstration lecture, (d) any formal response or rebuttal of candidates to the report of rapporteurs, decides by absolute majority (i.e., at least 6 votes) on the person to fill the post.

The dossier of the entire selection process is forwarded to the central administration of the University for detailed examination of procedural matters. If no procedural faults are found, the Rector officially appoints the new member of staff and submits the appointment to the Ministry to instigate funding of the post. New staff start work when appointments are published in the government gazette. Duration of appointments depends on rank; salary is not negotiable.

*Temporary teaching staff*

After confirmation of availability of funding, the General Assembly decides on posts to be advertised. Posts are advertised in the Faculty's website and remain open for up to one month. Head of Departments make a report to the General Assembly; decision is taken based on: (a) *curricula vitae* of candidates and (b) reports of Heads of Departments. Posts are not tenured, with a term of one year maximum.

### 9.1.3. Description of the formal programme for the selection, recruitment and training to perform their specific duties (including continuing education) of the support staff

When the Ministry receives funding for new posts of permanent support staff, it allocates these to the various services, institutions and establishments that it oversees. Then, the responsibility is transferred to the Supreme Council for Civil Personnel Selection, an independent authority, which handles the entire procedure (e.g., call, receipt of applications, selection, appeals) under its supervision (as does for most posts of the public sector and related institutions in Greece). New staff can start work when appointments are published in the government gazette. When staff start work, the University decides on the internal appointment based on specific needs of the various Faculties or units.

### 9.1.4. Description of the formal programme for the appraisal, development, promotion criteria and procedures, supporting and mentoring of both academic and support staff

*Periodic assessment and promotion of permanent academic staff*

All members of academic staff are assessed internally every year; they have to submit a report of activities, which is submitted to the Faculty's quality assurance unit. The collated reports are submitted to the University's quality assurance unit for detailed evaluation. Further, a general assessment of the academic staff of the Faculty is performed every five years by the Hellenic Agency for Quality Assurance and Accreditation in Higher Education through a visitation by a committee of experts.

Assistant professors after three years of service are entitled to apply for (a) a new three-year term, (b) tenure or (c) promotion to associate professorship; in case of no success, they are entitled to another application after one year; if that would not be successful also, their appointment would be terminated. Associate professors after three years of service are entitled to apply for full professorship; in case of no success, they are entitled to another application after three years; if that would not be successful also, they are not entitled to apply for promotion anymore. Promotion procedures are fully open and competitive (i.e., external candidates are allowed). Full professors are assessed every five years by a committee of three external members for evaluation of continuing to perform quality teaching, research and administration duties.

In all cases of staff evaluation, research, teaching, publications, professional development, etc. are scrutinised and the opportunity arises to discuss with the member of staff under evaluation possible weak points, also providing suggestions for improvements by senior colleagues. During evaluations, external rapporteurs are always appointed, that way minimising bias through close contact with staff under evaluation.

*Periodic assessment and promotion of permanent support staff*

All members of support staff are assessed internally every year; they submit a self-evaluation report, which is counter-signed or objected to by the head of the section. The collated reports are submitted to the University's central administration for detailed evaluation. Promotion of support staff is carried out at periodic intervals, as per relevant legal provisions. Promotions are based on time of services and qualifications (e.g., postgraduate degree).

The Secretary of the Faculty is selected by the Vice Rector of Student and Administrative Affairs among support personnel of the Faculty.

### 9.1.5. Description of the formal rules governing outside work, including consultation and private practice, by staff working at the Establishment

*Permanent academic staff*

Legal provisions regulating work of permanent academic staff outside the University are: (a) approval of outside work by the Head of School, (b) outside work for up to two days weekly and (c) payment of 15% of outside work income to the University.

*Other permanent staff*

Other permanent staff of the University are not allowed to work outside the University.

*Temporary staff*

There are no legal restrictions for temporary staff regarding work outside the University.

### 9.1.6. Description of the formal programme of the Establishment for the assessment of teachers by students and its outcome

Assessment of teaching staff takes place at the end of each academic term through an electronic platform. Students answer a preset questionnaire, which has been devised by the Quality Assurance Unit of the University. During evaluation, no teaching staff is present and the procedure is overseen by informatics staff, in order to resolve potential technical problems.

Students complete an assessment form (Appendix 9a), which requires marking in 35 questions across five sections. Marking is carried out on a 0 to 5 scale. Results of these questionnaires are confidential and are reported solely to the Dean of the Faculty and staff members involved, who may discuss matters and possible improvements, aiming to improve teaching procedures with staff member concerned.

During evaluation of academic staff (tenure, promotion) a formal report by the Student Union can be submitted to the Dean of the Faculty for forwarding to members of the selection committee and a brief outline of periodic assessments by students can also be presented to members of the committee by the Dean.

### 9.1.7. Prospected number of FTE academic and support staff of the veterinary programme for the next 3 academic years

*Academic year 2017-18*

Details of estimated actual staff of the Faculty for academic year 2017-18 are in Appendices 9b and 9c. These are summarised in table 9i.

Table 9i. Summary of estimated actual staff of the veterinary programme for year 2017-18.

| Type of contract | 2017-18 |
|---|---|
| Academic staff | |
| Permanent (FTE) | 32.3 |
| Temporary | |
| Adjunct lectures (FTE) | 1.0 |
| Post-doctoral teachers (FTE) | 2.0 |
| University scholars (FTE) | 7.4 |
| Total (FTE) | 42.7 |
| Percentage of veterinarians in academic staff | |
| Permanent | 84.5% |
| Temporary | 67.3% |
| Total | 80.3% |

Table 9i (continued).

| Type of contract | 2017-18 |
|---|---|
| Support staff | |
| Permanent (FTE) | 14.0 |
| Temporary (FTE) | 2.5 |
| Total (FTE) | 16.5 |

*Academic year 2018-19*

During academic year 2018-19, another permanent academic staff will be appointed, further increasing the number of academic staff.

*Academic year 2019-20*

No further academic staff is expected for academic year 2019-20; no retirement of existing staff is due.

### 9.1.8. Description of how and by who the strategy for allocating, recruiting, promoting, supporting and assessing academic and support staff is decided, communicated to staff, students and stakeholders, implemented, assessed and revised

As posts of permanent academic and support staff are funded directly from the Ministry, they are decided and allocated by the Ministry. Since 2008 and until late 2016, due to the general financial situation of the country, no new posts had been allocated in higher education establishments nationwide; further, all posts that had been vacated (e.g., retirements), had not been readvertised. Allocation of new academic posts to universities is officially communicated by a ministerial decision and widely disseminated through the national press.

After allocation of posts to universities, the Senate, as the highest body within a University, decides on subsequent allocation of posts to Faculties, after taking into account requirements of Faculties in academic staff. The decision of the Senate and the allocation of posts to Faculties is communicated to members of the University directly from the Rector's office and via Deans of Faculties.

Posts allocated to the Faculty are subsequently allocated to departments by decision of the General Assembly. During the meeting, Heads of departments outline profile of the post, indicate teaching and research needs that would be covered and confirm availability of suitable candidates. A vote takes place among members of the General Assembly to finally decide on the post. As all members of academic staff, as well as representatives of other staff members and representatives of students are members of the General Assembly, they are informed during the meetings. Non-academic staff members are informed of decisions through their representatives. Students are informed of decisions through their society.

The above strategy is defined by law. Allocation of posts by Senate and by General Assembly is considered an important function of these bodies and the respective procedure has been clearly outlined in all laws governing higher education.

For posts of support staff, the Ministry only allocates these to the various services, institutions and establishments that it oversees. Allocation of new support posts to universities is officially communicated by a ministerial decision and widely disseminated through the national press. Filling of

the posts is handled through an independent authority, which takes care of all procedural matters (including advertisement). That has been the legal framework of all such posts since the mid-1990s.

**Table 9.1.1. Academic and teaching staff of the veterinary programme**

| Type of contract | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Permanent (FTE) | 32.0 | 33.8 | 33.0 | 32.9 |
| Temporary | | | | |
| Adjunct lectures (FTE) | 1.0 | 1.0 | 1.0 | 1.0 |
| Post-doctoral teachers (FTE) | 1.0 | 0.0 | 0.0 | 0.3 |
| University scholars (FTE) | 4.2 | 3.1 | 2.5 | 3.3 |
| Total (FTE) | 38.2 | 37.9 | 36.5 | 37.5 |

Details of all staff involved in teaching are in Appendices 9b and 9c.

**Table 9.1.2. Percentage (%) of veterinarians in academic staff**

| Type of contract | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Permanent (FTE) | 84.4% | 82.2% | 84.8% | 83.8% |
| Temporary (FTE) | 77.4% | 78.0% | 74.3% | 76.6% |
| Total (FTE) | 83.2% | 82.0% | 83.8% | 83.0% |

**Table 9.1.3. Support staff of the veterinary programme**

| Type of contract | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Permanent (FTE) | 13.3 | 13.0 | 14.8 | 13.7 |
| Temporary (FTE) | 2.5 | 2.5 | 2.8 | 2.6 |
| Total (FTE) | 15.8 | 15.5 | 17.6 | 16.3 |

**Table 9.1.4. Research staff of the establishment**

| Type of contract | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Permanent (FTE) | 0.0 | 0.0 | 0.0 | 0.0 |
| Temporary (FTE) | 0.0 | 0.0 | 0.0 | 0.0 |
| Total (FTE) | 0.0 | 0.0 | 0.0 | 0.0 |

### 9.2. Comments

Throughout the history of the Faculty, academic staff posts have been filled, in total, 46 times (the figure includes posts which had been re-advertised); of these, members of staff have taken up the post in which they had been selected and started working at the Faculty, in total, in 39 occasions (87% - one post currently filled, but staff not yet been appointed). Subsequently to taking up work at the Faculty, 10 academic staff have left for various reasons; most common reason was to take up work in the Faculty of Veterinary Medicine of Aristotle University of Thessaloniki (5 of the 10 staff). No retirements have occurred thusfar and no retirements are scheduled until 2022.

Until end of 2008, yearly allocation of new posts of academic personnel has contributed in continuous increase of posts of academic staff. Posts that had been vacated, had been re-advertised and

filled again. From 2008 to 2010, only re-advertisements of vacated posts were possible. That has allowed the Faculty to reach 33 posts of academic staff in 2011, the highest ever.

Subsequently to 2011, as per national policy throughout the public sector in Greece, no new recruitments had been allowed (even in posts that had been vacated). During that period, four members of staff have left for various reasons, reducing number of academic staff to 29. Only recently, in mid- and in late 2016, two new posts have been allocated to the Faculty. One has already been filled, the other is expected to be filled in early 2018.

At the same time (i.e., before 2010), the Faculty was also receiving funding for a significant number of temporary posts of adjunct lectures (up to 6 FTE posts in 2009). Again, that funding had been reduced, resulting in decrease of teaching personnel (currently, funding for only 1 FTE available).

Nevertheless, change in relevant legislation has allowed to recruit teaching staff through departmental or university funding ('university scholars'). Such personnel is highly qualified (with a PhD degree or extensive relevant experience), but is paid with reduced salaries (compared to academic staff and adjunct lectures) and can work on part-time basis. Every year, a grant is allocated from the University to all the faculties to recruit University scholars to support teaching. A further grant has been allocated specifically to the Faculty to recruit further teaching staff starting in 2017-18.

This grant, along with allocation of departmental funds to teaching staff and a government program for employing post-doctoral scientists for teaching in universities, have contributed in the increase of staff available for teaching purposes.

As part of staff training program, the Faculty, in conjunction with the School of Humanities and Social Science, has initiated a program for specific training of academic and teaching staff in pedagogical science. Staff of the Faculty have undergone a relevant course carried by academic staff of that School.

### 9.3. Suggestions for improvement

The Faculty should continue to allocate resources to staff for training students. Departments that have the possibility to divert funds to support teaching staff, should do so, thus allowing outside funding for disciplines that could not support such staff by own funds. The University can support the Faculty by extending grants for staff, although some issues will be raised by other faculties, also hampered by lack of personnel.

Apart from academic staff, the well-apparent need for support staff needs to be addressed. This will contribute significantly to improvement of student training, as well as of services provided by the Faculty. Support staff should include nursing staff for the clinical staff, specialised laboratory staff (e.g., a specialised laboratory technician and a full time animal technician, which would lead in improvement of numbers of histopathology and immunocytopathology samples that would be processed). This should be addressed as a long-term strategy and objective of the Faculty, given the restrictions on employing new personnel, currently enforced in the public sector in Greece.

The training program in pedagogical science should continue and extended. In the future, all new staff should receive training through resources that the School of Humanities and Social Science has developed and are available.

The Dean of the Faculty should apply continuous pressure in the Senate to allocate greater number of new posts of academic staff among those that will be allocated to the University.

## 10. Research programmes, continuing and prostgraduate education

### 10.1. Factual information

*Introduction*

The Faculty offers the following postgraduate courses.

- Studies leading to Doctoral degree (equivalent to Doctor of Philosophy), which are regulated by national Greek legislation.
- Formal course leading to 'Postgraduate Diploma of Specialisation' (equivalent to Master of Science) in the field of 'Aquaculture - Diseases of aquatic organisms', which is regulated by national Greek legislation.
- Postgraduate clinical or laboratory training, for varying duration (3-24 months).

The Faculty also stages two training centres: one of the European College of Small Ruminant Health Management and one of the European College of Veterinary Dermatology, which regulated by provisions of respective Colleges.

#### 10.1.1. Description of how the research activities of the Establishment and the implication of most academic staff in it contribute to research-based undergraduate veterinary education

Involvement of undergraduate students in scientific research is a part of activities in the Faculty through various components, as below.

- Students participate in small-scale projects under the supervision of memberσ of staff. Often, these projects result in student presentations during the annual veterinary student conference that is organised by IVSA Thessaly and IVSA Thessaloniki (Table 10i).

Table 10i. Number of presentations by students in annual veterinary students conferences, with results of projects perfomed by undergraduate students.

| 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|
| 26 | 20 | 10 | 18.7 |

- Undergraduate students discuss issues regarding postgraduate life with postgraduate students of the Faculty during social meetings.
- Some students choose to spend the EPT period in a research establishments of the Ministry of Ministry of Rural Development and Food.

#### 10.1.2. Description of how the postgraduate clinical trainings of the Establishment contribute to undergraduate veterinary education and how potential conflicts in relation to case management between post- and undergraduate students are avoided

Postgraduate students in the Faculty have a supporting role in the training of undergraduate students; for example, they can provide some initial guidance in the handling of patients or in the interpretation of

diagnostic examinations or in the therapeutic management of cases. However, in all cases, final responsibility lays with members of teaching staff overseeing respective cases.

Postgraduate students can also assist in laboratory-based practical training of undergraduate students, by demonstrating practical work and supervising students during the practical. In those cases, again, overall responsibility for performing the practical coursework and for monitoring students and outcome of practical coursework lays with overseeing members of teaching staff.

Finally, as per provisions of national legislation, former postgraduate students of the Faculty (who had been awarded the degree of PhD) or even current well-trained and experienced PhD students can be appointed as part-time teaching staff (according to availability of appropriate funding) for carrying out teaching duties to undergraduate students. Appointment of former or current postgraduate students as teaching staff contributes to smoothing procedures, as they familiar with policies followed at the Faculty.

**10.1.3. Description of how undergraduate students:**

**-) are made aware of the importance of evidence-based medicine, scientific research and lifelong learning;**

**-) are initiated to bibliographic search, scientific methods and research techniques, and writing of scientific papers;**

**-) are offered to participate to research programmes on a non-compulsory basis**

Significance of scientific research is discussed to students by teaching staff through direct contact within lectures or practical coursework. Further, undergraduate students participating in small-scale projects for the IVSA annual conference receive more detailed training in the topic, as part of their participation in the project. Faculty members also encourage students to attend the various scientific veterinary events taking place in Greece; the Faculty allows students a designated leave for the days when national veterinary conferences are organised.

Further, as part of undergraduate teaching, students are often assigned homework, for which study of the literature is necessary. Library staff and teaching staff explain to students procedures and methodologies for literature search and inform them about the possibilities that the facilities of the University may offer.

As mentioned above, the Faculty allows students to participate in research activities. The possibilities are disseminated and promoted in lectures or practical sessions, as well as by public advertisements, information displays and social networking.

**10.1.4. Description of how the continuing education programmes provided by the Establishment are matched to the needs of the profession and the community**

Many of the PhD study programmes followed in the Faculty have been funded through national or EU research grants. The respective calls were based on extensive deliberations among stakeholders regarding societal needs and priorities for agricultural research, hence, work carried out as part of these grants is well within the frame set by authorities and stakeholders.

The course leading to degree of Postgraduate Diploma of Specialisation in 'Aquaculture - Diseases of aquatic organisms' is the only formal postgraduate course in Greece and one of the few in Europe in that particular field. Training in the course covers demand for in depth training in that area.

The various postgraduate clinical or laboratory training courses aim to cover specific needs in advanced level postgraduate training for future veterinary practitioners. They are popular with graduates, who look to gain advanced training and expertise in one area of veterinary science. All students who followed these courses, have been well sought after by practices and employers around the country and abroad to cover specific needs of the profession or have been successful in setting up own practices.

**10.1.5. Prospected number of students registered at post-graduate programmes for the next 3 academic years**

Prospected number of postgraduate students for next years will likely reduced. Primary reason for that will be the termination of the formal course in 'Aquaculture-Diseases of aquatic organisms', which will not be accepting any more students. Number of students in postgraduate clinical or laboratory training will remain stable, but reduced compared to previous years; most likely cause for that is the continuous reduction of income of families, which could not support further studies to their children. Finally, number of PhD students will depend upon research grants that will be awarded to members of staff, as results of applications will become available by end of current year (details in 2.1.7.).

**10.1.6. Description of how and by who research, continuing and postgraduate education programmes organised by the Establishment are decided, communicated to staff, students and stakeholders, implemented, assessed and revised**

The possibility for faculties and universities to award the degree of PhD, is granted during their foundation, similarly to the award to a degree at the end of an undergraduate academic program.

Establishment of formal postgraduate courses in Greek Universities is regulated by national legislation. Subsequently to an initial decision of the General Assembly of the Faculty and ratification by the Senate, the dossier for establishment of a postgraduate course is submitted to the Ministry for detailed evaluation. The final decision is taken by the Minister (who has the power to overrule decisions of academic establishments and to reject foundation of a postgraduate course) and the establishment of the course is published in the government gazette. All postgraduate courses are periodically assessed, not only as part of the periodic assessment of faculties hosting them, but also on individual basis, by the Committee for Postgraduates studies of the hosting university and the Hellenic Agency for Quality Assurance and Accreditation in Higher Education. Revision of postgraduate courses follow a similar course of action.

The postgraduate clinical or laboratory training has been an initiative of the Faculty and is regulated by the Faculty's relevant regulations. These have been discussed in detail in the General Assembly, which also ratifies all decisions regarding admission of postgraduate students in these courses and award of degrees.

**Table 10.1.1. Number of students registered at postgraduate clinical training**

| Programmes | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Postgraduate trainees | 15 | 22 | 20 | 19.0 |
| Clinical training in companion animals | 11 | 17 | 16 | 14.7 |
| Clinical training in equine | 0 | 0 | 0 | 0.0 |
| Clinical training in farm animals | 1 | 3 | 2 | 2.0 |
| Training in biochemistry | 1 | 1 | 1 | 1.0 |
| Training in epidemiology | 0 | 0 | 1 | 0.3 |
| Training in food microbiology | 1 | 1 | 0 | 0.7 |
| Training in microbiology | 1 | 0 | 0 | 0.3 |
| EBVS residents | 4 | 3 | 3 | 3.3 |
| Dermatology | 1 | 1 | 0 | 0.7 |
| Small ruminant health management | 3 | 2 | 3 | 2.7 |
| Master of science | 10 | 21 | 30 | 20.3 |
| Aquaculture-Diseases of aquatic organisms | 10 | 21 | 30 | 20.3 |
| Total | 29 | 46 | 53 | 42.7 |

**Table 10.1.2. Number of students registered at postgraduate research training**

| Degrees | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| PhD | 42 | 35 | 47 | 41.3 |
| Total | 42 | 35 | 47 | 41.3 |

**Table 10.1.3. Number of students registered at other postgraduate programmes (including any external/distance learning courses)**

There are no other postgraduate students in the Faculty than those listed above (Tables 10.1.1, 10.1.2).

**Table 10.1.4. Number of attendees to continuing education courses provided by the Establishment**

| Course | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| Animal abuse and unlawful killing: veterinary forensics, the social dimension of the phenomenon and veterinarian's role | 145 | | | 48.3 |
| Clinical applications in ovine reproduction | | | 32 | 10.7 |
| Future threats for the Greek livestock industries (jointly with the Hellenic Veterinary Association) | 85 | | | 28.3 |
| Total | 230 | 0 | 32 | 87.3 |

**Table 10.1.5. List of the major funded research programmes in the Establishment which were on-going during the last full academic year prior the Visitation**

| Scientific topic | Funding per year (€) | Duration (years) |
|---|---|---|
| Conservation of bird fauna in Greece | 2,000 | 3.5 |
| Development and evaluation of veterinary drugs | 14,500 | 11.0 |
| Development and evaluation of veterinary drugs | 6,500 | 3.5 |
| Efficacy of fipronil-permethrin and deltamethrin against flea infestation in sheep and dogs | 2,500 | 2.5 |
| Evaluation of feeding supplements for sows | 3,000 | 2.5 |
| Evaluation of production of high-quality pork | 6,000 | 1.0 |
| Field evaluation of porcine vaccines | 5,500 | 1.5 |
| Field study of prevalence of subclinical mastitis in Greece | 2,500 | 2.0 |
| Food allergy-associated atopic dermatitis | 1,500 | 4.0 |
| Improvement of pregnancy rates in cows by earlye diagnosis of pregnancy | 4,500 | 2.5 |
| Inhibitors of B-raf through the dimerisations interface | 10,000 | 2.5 |
| Monitoring of circulation of pathogens in Greece | 45,000 | 1.5 |
| Protein research and design of drugs | 2,500 | 8.5 |
| Risk assessment for infection by *Campylobacter* spp. in poultry production | 3,500 | 7 |

## 10.2. Comments

The Faculty supports postgraduate studies, as the necessity for further, specialised training, is now well-understood by students and young graduates.

In the recent past, through the EU and Greek government-funded project on Agreement for Framework of Development ('*ΕΣΠΑ*') 2007-2013, many members of staff have been awarded large grants in various areas. In the Faculty, academic staff members have led five consortia including various Greek institutions and covering various research topics related to farm animal work; these included three grants of over 1,000,000 Euros (specifically: 1.75 M, 1.25 M, 1.15 M) and two grants of 650 K each. These grants run during the period from 2011 to end of 2015 (completion of auditing and payout by end of 2016) and nine PhD theses have been financed through these (details in Table 2.1.2.). Smaller grants (50 K to 125 K) have also been awarded through the '*ΕΣΠΑ*' project. Moreover, EU-funded Research Framework-7 projects (10 K to 850 K) have also been awarded to members of the Faculty and have run during the period 2011-2016. These also helped to support further PhD programmes.

The increased funding that members of the Faculty have been awarded, is reflected in the significant publication output during that period; in total, 151 publications are listed in Web of Science during academic years 2014-15 to 2016-17 (Appendix 10a), i.e. 1.7 publications per member of academic staff per academic year. Moreover, many of the PhD degrees awarded in recent years (Table 10ii) have been among those supported through these grants.

Table 10ii. Number of PhD degrees awarded.

| Department where thesis work had been carried out | 2016-17 | 2015-16 | 2014-15 | Mean |
|---|---|---|---|---|
| DB | | | 1 | 0.3 |
| DEBAHE | | | 1 | 0.3 |
| DAFD | 1 | | 1 | 0.7 |
| DMP | 0 | 2 | 3 | 1.7 |
| DOR | 1 | 2 | | 1.0 |
| DS | | | 1 | 0.3 |
| | 2 | 4 | 7 | 4.3 |

Recruitment of new PhD students will highly depend on outcome of grant applications that members of the Faculty have recently submitted through the current Agreement for Framework of Development ('*ΕΣΠΑ*') 2014-2020.

The Faculty also provides clinical training, which, as it is run according to own regulations, retains significant flexibility. This training has been favoured by young veterinary graduates, who wished to follow a career in companion animal practice; in total, >80% of all students registered for that course have been enrolled in clinical disciplines (medicine, surgery, obstetrics and reproduction) related to companion animal work. The students follow theoretical training, participate in clinical work, staff emergency units and hospitalisation wards, in general, receiving advanced training in the discipline.

### 10.3. Suggestions for improvement

The Faculty will continue to promote its postgraduate studies to the veterinary profession. Improvements in the PhD programmes should aim to involve all members of academic staff. Senior staff members must support and guide junior colleagues to take up supervisory duties in postgraduate training, especially of PhD degrees. The Faculty should aim that, by 2020, all members of academic staff will be supervising or co-supervising at least one PhD student. This will enhance postgraduate studies and training of new veterinary scientists. Further, all staff members should aim to reducing total time needed for award of the degree to less than five years; this needs to also be achieved by 2020.

## 11. Outcome assessment and quality assurance

### 11.1. Factual information

**11.1.1. Description of the global strategy of the Establishment for outcome assessment and Quality Assurance (QA), in order to demonstrate that the Establishment:**

**-) has a culture of QA and continued enhancement of quality;**

**-) operates *ad hoc*, cyclical, sustainable and transparent outcome assessment, QA and quality enhancement mechanisms;**

**-) collect, analyse and use relevant information from internal and external sources for the effective management of their programmes and activities;**

**-) informs regularly staff, students and stakeholders and involves them in the QA processes;**

**-) closes the loop of the QA Plan-Do-Check-Act (PDCA) cycle;**

**-) is compliant with ESG Standards.**

A Quality assurance committee within the Faculty has been set up 10 years ago, with the aim to recording, analysing and continuously improving training provided. Each member of academic staff submits their personal data regarding teaching of the courses and relevant difficulties encountered, as well as scientific and research activity. Submission is carried out through an electronic platform.

The Quality assurance committee collects all data from the platform and processes that, as some of data submitted would be similar for some staff (e.g., joint publications). The committee also receives student-related data (e.g., number of registered undergraduate students, number of registered postgraduate students, number of students who graduate) from the Faculty's administration unit. Information are also collected from the Research Committee in relation to research grants held by academic staff. All above details are included into an annual report which presents the activities of all academic staff and other relevant data of Faculty matters.

At the end of each academic year, students complete anonymously online questionnaires regarding teaching and learning activities and express their opinion about the course (including teaching staff involved in the module). Results of these questionnaires are confidential and are reported solely to the Dean of the Faculty and staff members involved, who may discuss matters and possible improvements, aiming to improve teaching procedures with staff member concerned. The Dean may also, with the consent of staff member(s) involved, to discuss matters with the Education Committee of the Faculty, in order to implement more general actions, which may affect the teaching curriculum. It is noteworthy that, when the current teaching curriculum was being designed, feedback obtained during the above procedures were taken into account by the committee, in order to make appropriate changes in the curriculum (details in 3.1.10).

**11.1.2. Description of the form by which the strategy, policy and procedures are made formal and are publicly available**

By the end of each academic year, a report on activities of academic staff is completed, which requires (a) detailed information regarding training provided to students, (b) scientific and research activity (publications, presentations in conferences etc.), (c) details of work reference (citations etc.), (d) recognition of work (invitations to conferences, to editorial boards etc.) and (e) research grants (objective, funding body, amount etc.). Further, comments of staff members regarding any issue can be presented in the form.

**11.1.3. Description of the regular publication of up to date, impartial and objective information, both quantitative and qualitative, about the educational programmes and awards the Establishment is offering.**

Announcements regarding new programmes offered by the University (e.g., continuing education courses, formal postgraduate courses) are made to all members of the academic community of the University through e-mail information and by publishing details at websites of Faculties organising such courses.

**11.1.4. Description of the QA processes not yet described in the other 10 Standards**

The Faculty has recently initiated a survey among members of academic and support staff, as well as among students regarding services offered by the administration unit of the Faculty.

**11.1.5. Description of how and by who the QA strategy of the Establishment is decided, communicated to staff, students and stakeholders, implemented, assessed and revised**

The general frame for quality assurance in Greek universities is set by the Hellenic Agency for Quality Assurance and Accreditation in Higher Education (an independent authority). Within the University, there is a central Quality assurance committee, which is chaired by a Head of School and overseen by the Rector. The Quality assurance committee of the Faculty includes six members and is chaired by a senior academic staff. The Committee works independently to produce the necessary documents and informs the General Assembly regarding findings.

**11.2. Comments**

The University has been evaluated and accredited regarding quality assurance procedures under the supervision of the Hellenic Agency for Quality Assurance and Accreditation in Higher Education in December 2015. The University pays particular emphasis in quality assurance procedures. Many internal units run quality assurance procedures and timely submission of annual quality assurance reports by Faculties is a requirement for them to continue receiving allocation of funding from internal sources.

The Faculty submits regularly all necessary reports and documents and fully complies with relevant procedures as necessary.

### 11.3. Suggestions for improvement

Invitation of ESEVT visitation by the Faculty is itself a recognition of the importance of the procedure and the Faculty will take into account all comments to be made regarding all standards. The Faculty will aim to comply with all standards in the future, within its own means and available resources.

# 12. ESEVT indicators

## 12.1. Factual information

ESEVT indicators, produced as per regulations, are shown in Table 12i. Details of the computations to produce these indicators are in Table 12ii.

Table 12i. ESEVT indicators, derived from data for academic years 2014-15 to 2016-17.

| No. | Description of indicator | Establi-shment values | Median values | Minimal values | Balance |
|---|---|---|---|---|---|
| I1 | n° of FTE academic staff involved in veterinary training / n° of undergraduate students | 0.105 | 0.16 | 0.13 | -0.021 |
| I2 | n° of FTE veterinarians involved in veterinary training / n° of students graduating annually | 1.022 | 0.87 | 0.59 | 0.432 |
| I3 | n° of FTE support staff involved in veterinary training / n° of students graduating annually | 0.534 | 0.94 | 0.57 | -0.032 |
| I4 | n° of hours of practical (non-clinical) training | 1208.00 | 905.67 | 595.00 | 613.00 |
| I5 | n° of hours of clinical training | 712.00 | 932.92 | 670.00 | 42.00 |
| I6 | n° of hours of FSQ & VPH training | 263.00 | 287.00 | 174.40 | 88.60 |
| I7 | n° of hours of extra-mural practical training in FSQ & VPH | 75.00 | 68.00 | 28.80 | 46.20 |
| I8 | n° of companion animal patients seen intra-murally / n° of students graduating annually | 11.475 | 70.48 | 42.01 | -30.534 |
| I9 | n° of ruminant and pig patients seen intra-murally / n° of students graduating annually | 3.639 | 2.69 | 0.46 | 3.176 |
| I10 | n° of equine patients seen intra-murally / n° of students graduating annually | 0.098 | 5.05 | 1.30 | -1.200 |
| I11 | n° of rabbit, rodent, bird and exotic seen intra-murally / n° of students graduating annually | 0.164 | 3.35 | 1.55 | -1.381 |
| I12 | n° of companion animal patients seen extra-murally / n° of students graduating annually | 0.000 | 6.80 | 0.22 | -0.223 |
| I13 | n° of individual ruminants and pig patients seen extra-murally / n° of students graduating annually | 27.530 | 15.95 | 6.29 | 21.235 |
| I14 | n° of equine patients seen extra-murally / n° of students graduating annually | 0.120 | 2.11 | 0.60 | -0.475 |
| I15 | n° of visits to ruminant and pig herds / n° of students graduating annually | 1.639 | 1.33 | 0.55 | 1.092 |
| I16 | n° of visits of poultry and farmed rabbit units / n° of students graduating annually | 0.066 | 0.12 | 0.04 | 0.021 |
| I17 | n° of companion animal necropsies / n° of students graduating annually | 0.765 | 2.07 | 1.40 | -0.635 |
| I18 | n° of ruminant and pig necropsies / n° of students graduating annually | 2.087 | 2.32 | 0.97 | 1.117 |
| I19 | n° of equine necropsies / n° of students graduating annually[1] | 0.000 | 0.30 | 0.09 | -0.093 |
| I20 | n° of rabbit, rodent, bird and exotic pet necropsies / n° of students graduating annually | 9.989 | 2.05 | 0.69 | 9.296 |
| I21 | n° of FTE specialised veterinarians involved in veterinary training / n° of students graduating annually | 0.295 | 0.20 | 0.06 | 0.232 |
| I22 | n° of PhD graduating annually / n° of students graduating annually | 0.142 | 0.15 | 0.09 | 0.054 |

Table 12ii. Data for academic years 2014-15 to 2016-17 for calculation of ESEVT indicators.

| Indicator | Raw data from the last 3 full academic years | Year -1 | Year -2 | Year -3 | Mean |
|---|---|---|---|---|---|
| **1** | n° of FTE academic staff involved in veterinary training | 38.2 | 37.9 | 36.5 | 37.53 |
| **2** | n° of undergraduate students | 384 | 353 | 340 | 359.0 |
| **3** | n° of FTE veterinarians involved in veterinary training | 31.8 | 31.1 | 30.6 | 31.17 |
| **4** | n° of students graduating annually[1] | 28.5 | 27 | 36 | 30.5 |
| **5** | n° of FTE support staff involved in veterinary training | 15.8 | 15.5 | 17.6 | 16.3 |
| **6** | n° of hours of practical (non-clinical) training | 1252 | 1186 | 1186 | 1208.0 |
| **7** | n° of hours of clinical training | 712 | 712 | 712 | 712.0 |
| **8** | n° of hours of FSQ & VPH training | 263 | 263 | 263 | 263.0 |
| **9** | n° of hours of extra-mural practical training in FSQ & VPH | 75 | 75 | 75 | 75.0 |
| **10** | n° of companion animal patients seen intra-murally | 315 | 393 | 342 | 350 |
| **11** | n° of ruminant and pig patients seen intra-murally | 103 | 103 | 127 | 111 |
| **12** | n° of equine patients seen intra-murally | 3 | 3 | 3 | 3 |
| **13** | n° of rabbit, rodent, bird and exotic patients seen intra-murally | 3 | 7 | 5 | 5.0 |
| **14** | n° of companion animal patients seen extra-murally | 0 | 0 | 0 | 0.0 |
| **15** | n° of individual ruminants and pig patients seen extra-murally | 931 | 745 | 843 | 839.7 |
| **16** | n° of equine patients seen extra-murally | 4 | 3 | 4 | 3.7 |
| **17** | n° of visits to ruminant and pig herds | 51 | 48 | 51 | 50.0 |
| **18** | n° of visits of poultry and farmed rabbit units | 2 | 2 | 2 | 2.0 |
| **19** | n° of companion animal necropsies | 25 | 23 | 22 | 23.3 |
| **20** | n° of ruminant and pig necropsies | 66 | 80 | 45 | 63.7 |
| **21** | n° of equine necropsies | 0 | 0 | 0 | 0.0 |
| **22** | n° of rabbit, rodent, bird and exotic pet necropsies | 327 | 296 | 291 | 304.7 |

Table 12ii (continued).

| Indicator | Raw data from the last 3 full academic years | Year -1 | Year -2 | Year -3 | Mean |
|---|---|---|---|---|---|
| **23** | n° of FTE specialised veterinarians involved in veterinary training | 9 | 9 | 9 | 9.0 |
| **24** | n° of PhD graduating annually | 2 | 4 | 7 | 4.3 |

1. For academic year 2016-17, number 28.5 has been inserted; this corresponds to a 50% increase of the students who have graduated thusfar (n=19, Table 7.1.3.), as results of repeat examination period (September 2017) are not yet available.

### 12.2. Comments

The results of indicators reflect, to a large degree, the general situation in the Faculty. The adverse findings can be summarised as below.

- Some deficiency in personnel, particularly compared to the larger number of students recently admitted into the Faculty, despite the significant efforts by the University authorities and staff of the Faculty to divert resources to cover needs.
- Deficiency of patient cases in companion animals and equine (details in 5.2.).

### 12.3. Suggestions for improvement

Continuation of efforts already undergone and implementation of changes suggested in the previous standards will ultimately result in improvement of most indicators. Some of the necessary changes are well within the means of the Faculty and the Faculty will continue efforts to make appropriate improvements. Changes necessary to improve some other indicators are principally regulated by factors outside the remit of the University of Thessaly, e.g., by overseeing authorities (number of students admitted into the Faculty, new posts of staff) or by factors in the environment of the Faculty (number of companion animal patients seen at the Faculty).

# Appendices

**List of appendices**

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## Appendix 1a.

### Schools and faculties of the University of Thessaly

School of Engineering (location: Volos)
- Faculty of Mechanical Engineering
- Faculty of Planning and Regional Development
- Faculty of Civil Engineering
- Faculty of Architecture Engineering
- Faculty of Electrical and Computer Engineering

School of Humanities and Social Sciences (location: Volos)
- Faculty of Primary Education
- Faculty of Early Childhood Education
- Faculty of Special Education
- Faculty of History, Archaeology and Social Anthropology
- Faculty of Economics

School of Agricultural Sciences (location: Volos)
- Faculty of Agriculture Crop Production and Rural Environment
- Faculty of Ichthyology and Aquatic Environment

School of Health Sciences (location: Larissa)
- Faculty of Medicine (location: Larissa)
- Faculty of Veterinary Science (location: Karditsa)
- Faculty of Biochemistry and Biotechnology (location: Larissa)

School of Sciences (location: Lamia)
- Faculty of Computer Science
- Faculty of Computer Science and Biomedical Informatics

School of Physical Education and Sport Science (location: Trikala)
- Faculty of Physical Education and Sport Science

School of Continuing Education (location: Volos)

## Appendix 1b.

### Specific objectives of University of Thessaly

- Improvement of theoretical background of students in all Faculties and disciplines.
- Improvement of practical training of students and development of their abilities to attend and adopt technological developments.
- Increase of number of disciplines within the University with international recognition.
- Development of a culture that promotes excellence in all academic units of the University.
- Development of high-quality postgraduate studies, in order to attract and train a widely varying body of high quality students.
- Wide dissemination of achievements and contribution of the University and its Faculties (e.g., for Veterinary Science, in the field public health or in the field of rural development) by publicising quality of research and clinical work and their results for the wider society at national and international level.
- Development of collaborations in teaching and research with other internationally recognised Universities.
- Confirmation of the University in substantially benefiting the wider society.
- Recruitment of new scientists, who will contribute to further development of the University.
- Support of the regional development model in the Thessaly.

<u>Lines of action for development of University of Thessaly</u>

- Governance.
- Personnel.
- Finance.
- Infrastructure.
- Students.
- Alumni.
- Teaching.
- Research.
- Sustainability.
- Extroversion.

**Appendix 3a.**

**Previous teaching curriculum (last academic year of implementation: 2015-16)**

| | Lecture (hours per week) | Practice (hours per week) | ECTS | | Lecture (hours per week) | Practice (hours per week) | ECTS |
|---|---|---|---|---|---|---|---|
| **1st year** | | | | | | | |
| *Winter term (1st)* | | | | *Spring term (2nd)* | | | |
| English veterinary terminology I | 4 | 0 | 1 | Biochemistry | 3 | 2 | 6 |
| Genetics | 3 | 2 | 4 | Ecology | 2 | 0 | 3 |
| Informatics | 1 | 2 | 4 | English veterinary terminology II | 4 | 0 | 1 |
| Introduction to veterinary science | 2 | 0 | 3 | Introduction to biostatistics | 2 | 2 | 5 |
| Macroscopic anatomy I | 3 | 5 | 8 | Macroscopic anatomy II | 3 | 5 | 7 |
| Principles of chemistry for veterinary science | 2 | 1 | 4 | Microscopic anatomy I | 3 | 2 | 7 |
| Principles of physics for veterinary science | 2 | 1 | 4 | | | | |
| Zoology | 2 | 1 | 3 | | | | |
| Total | 19 | 12 | 31 | Total | 17 | 11 | 29 |
| **2nd year** | | | | | | | |
| *Winter term (3rd)* | | | | *Spring term (4th)* | | | |
| Animal husbandry I | 2 | 1 | 4 | Animal health economics | 2 | 1 | 4 |
| Diagnostic microbiology | 1 | 1 | 2 | Animal husbandry II | 3 | 2 | 6 |
| Microbiology I | 2 | 2 | 4 | Immunology | 2 | 1 | 4 |
| Microscopic anatomy II | 2 | 2 | 4 | Microbiology II | 2 | 2 | 4 |
| Nutrition | 4 | 2 | 7 | Parasitology | 2 | 2 | 4 |
| Physiology I | 5 | 3 | 9 | Physiology II | 4 | 3 | 8 |
| Total | 16 | 11 | 30 | Total | 15 | 11 | 30 |

| | Lecture (hours per week) | Practice (hours per week) | ECTS | | Lecture (hours per week) | Practice (hours per week) | ECTS |
|---|---|---|---|---|---|---|---|
| **3rd year** | | | | | | | |
| *Winter term (5th)* | | | | *Spring term (6th)* | | | |
| Animal husbandry III | 3 | 2 | 5 | Apiculture - Bee medicine | 1 | 1 | 2 |
| Dairy hygiene and technology | 2 | 1 | 3 | Ichthyology - Biology of aquatic organisms - Aquaculture | 3 | 1 | 5 |
| General medicine | 2 | 2 | 3 | Infectious diseases II | 2 | 2 | 4 |
| General pathology | 3 | 2 | 5 | Medicine I | 2 | 2 | 4 |
| Infectious diseases I | 2 | 2 | 4 | System pathology | 5 | 0 | 6 |
| Pharmacology | 4 | 3 | 6 | Technology of foods of animal origin | 3 | 1 | 5 |
| Veterinary epidemiology | 2 | 2 | 4 | Toxicology | 2 | 2 | 4 |
| Total | 18 | 14 | 30 | Total | 18 | 9 | 30 |
| **4th year** | | | | | | | |
| *Winter term (7h)* | | | | *Spring term (8th)* | | | |
| Fish diseases and health management of aquatic organisms | 2 | 2 | 3 | Diagnostic cytology – Diagnostic pathology I | 2 | 2 | 3 |
| Medicine II | 6 | 5 | 8 | Hygiene of foods of animal origin I | 4 | 2 | 4 |
| Obstetrics-Reproduction I | 3 | 5 | 6 | Medicine III | 4 | 5 | 6 |
| Parasitic diseases | 3 | 1 | 4 | Obstetrics-Reproduction II | 4 | 5 | 6 |
| Poultry Diseases I | 3 | 1 | 3 | Poultry Diseases II | 3 | 1 | 3 |
| Surgery I-Anaesthesiology | 4 | 3 | 6 | Surgery II | 4 | 5 | 6 |
| | | | | Radiology | 2 | 1 | 2 |
| Total | 21 | 17 | 30 | Total | 23 | 21 | 30 |

| | Lecture (hours per week) | Practice (hours per week) | ECTS | | Lecture (hours per week) | Practice (hours per week) | ECTS |
|---|---|---|---|---|---|---|---|
| **5th year** | | | | | | | |
| *Winter term (9h)* | | | | *Spring term (10th)* | | | |
| Andrology-Artificial insemination | 1 | 1 | 2 | Diagnostic pathology III | 0 | 2 | 2 |
| Diagnostic pathology II | 2 | 2 | 3 | Hygiene of foods of animal origin III | 2 | 2 | 4 |
| Hygiene of foods of animal origin II | 3 | 2 | 4 | Medicine V | 4 | 5 | 9 |
| Medicine IV | 4 | 5 | 6 | Obstetrics-Reproduction IV | 2 | 5 | 6 |
| Obstetrics-Reproduction III | 3 | 5 | 6 | Surgery IV | 4 | 5 | 9 |
| Poultry Diseases III | 0 | 1 | 2 | | | | |
| Surgery III | 4 | 5 | 7 | | | | |
| Total | 17 | 21 | 30 | Total | 12 | 19 | 30 |

**Appendix 3b.**

**Current teaching curriculum (first academic year of implementation: 2016-17)**

| | Lecture (hours per term) | Practice (hours per term) | ECTS | | Lecture (hours per term) | Practice (hours per term) | ECTS |
|---|---|---|---|---|---|---|---|
| **1st year** | | | | | | | |
| *Winter term (1st)* | | | | *Spring term (2nd)* | | | |
| Animal husbandry, ethology, welfare and relevant legislation I | 26 | 26 | 4 | Animal husbandry, ethology, welfare and relevant legislation II | 26 | 26 | 4 |
| Animal nutrition and principles of plant biology | 26 | 39 | 5 | Biochemistry of metabolism | 22 | 26 | 4 |
| English veterinary terminology I | 13 | 0 | 2 | English veterinary terminology II | 13 | 0 | 1 |
| Genetics | 26 | 26 | 4 | Macroscopic anatomy II | 39 | 39 | 6 |
| General principles of biochemistry | 22 | 26 | 4 | Microscopic anatomy II | 26 | 20 | 5 |
| Macroscopic anatomy I | 39 | 39 | 6 | Physiology I | 39 | 78 | 8 |
| Microscopic anatomy I | 26 | 20 | 5 | Elective modules: (1) Ecology, (2) Principles of physics and radioprotection in veterinary science, (3) Zoology | 13 | 13 | 2 |
| Total | 178 | 176 | 30 | Total | 178 | 202 | 29 |
| **2nd year** | | | | | | | |
| *Winter term (3rd)* | | | | *Spring term (4th)* | | | |
| Animal health economics | 20 | 26 | 3 | Diagnostic microbiology | 26 | 39 | 5 |
| Apiculture - Bee medicine | 13 | 13 | 1 | Immunology | 20 | 39 | 4 |
| Aquaculture, biology of aquatic organisms and fisheries | 26 | 26 | 5 | Fish diseases and health management of aquatic organisms | 13 | 52 | 5 |
| Biostatistics | 20 | 26 | 3 | General medicine | 26 | 52 | 7 |
| Dairy hygiene and technology and relevant legislation | 22 | 26 | 4 | Parasitology and parasitic diseases I | 20 | 26 | 4 |

| | Lecture (hours per term) | Practice (hours per term) | ECTS | | Lecture (hours per term) | Practice (hours per term) | ECTS |
|---|---|---|---|---|---|---|---|
| **2nd year** (continued) | | | | | | | |
| *Winter term (3rd)* | | | | *Spring term (4th)* | | | |
| General microbiology | 26 | 39 | 6 | Technology of foods of animal origin and relevant legislation | 26 | 26 | 4 |
| Physiology II | 39 | 78 | 8 | Elective modules: (1) Apiculture products, (2) Cellular and molecular biology, (3) Molecular microbiology and parasitology | 13 | 13 | 1 |
| Total | 166 | 234 | 30 | Total | 144 | 247 | 30 |
| **3rd year** | | | | | | | |
| *Winter term (5th)* | | | | *Spring term (6th)* | | | |
| Companion animal medicine I | 26 | 24 | 4 | Companion animal medicine II | 26 | 24 | 4 |
| Farm animal medicine I | 26 | 16 | 4 | Farm animal medicine II | 26 | 16 | 4 |
| General pathology | 26 | 26 | 4 | General surgery and ophthalmology | 39 | 13 | 5 |
| Infectious diseases and relevant legislation I | 20 | 26 | 4 | Infectious diseases and relevant legislation II | 20 | 26 | 3 |
| Obstetrics and reproduction I | 26 | 0 | 3 | Obstetrics and reproduction II | 39 | 0 | 4 |
| Parasitology and parasitic diseases II | 20 | 26 | 4 | System pathology | 26 | 26 | 4 |
| Pharmacology | 39 | 39 | 5 | Toxicology | 13 | 13 | 2 |
| Veterinary ethics and legislation | 13 | 13 | 1 | Veterinary epidemiology | 26 | 26 | 4 |
| Elective modules: (1) Clinical laboratory diagnostic medicine, (2) Diseases of wildlife, | 13 | 13 | 1 | | | | |
| Total | 209 | 183 | 30 | Total | 215 | 144 | 30 |
| **4th year** | | | | | | | |
| *Winter term (7h)* | | | | *Spring term (8th)* | | | |
| Anaesthesiology and intensive care | 39 | 13 | 4 | Clinical pharmacotherapy and pharmacy | 13 | 0 | 1 |
| Andrology and artificial insemination | 20 | 10 | 2 | Companion animal medicine IV | 20 | 23 | 3 |
| Companion animal medicine III | 26 | 23 | 4 | Diagnostic imaging | 13 | 39 | 3 |
| Diagnostic pathology I | 20 | 23 | 3 | Diagnostic pathology II | 20 | 23 | 3 |
| Farm animal medicine III | 26 | 16 | 4 | Farm animal medicine IV | 20 | 16 | 3 |

| | Lecture (hours per term) | Practice (hours per term) | ECTS | | Lecture (hours per term) | Practice (hours per term) | ECTS |
|---|---|---|---|---|---|---|---|
| **4th year** (continued) | | | | | | | |
| *Winter term (7h)* | | | | *Spring term (8th)* | | | |
| Food hygiene and relevant legislation I | 39 | 39 | 4 | Food hygiene and relevant legislation II, certification and report writing | 39 | 39 | 5 |
| Obstetrics and reproduction III | 20 | 29 | 3 | Obstetrics and reproduction IV | 26 | 39 | 4 |
| Orthopaedic surgery | 39 | 0 | 3 | Poultry diseases II | 26 | 16 | 3 |
| Poultry diseases I | 26 | 16 | 3 | Soft tissue surgery | 39 | 39 | 5 |
| Total | 255 | 169 | 30 | Total | 216 | 234 | 30 |
| **5th year** | | | | | | | |
| *Winter term (9h)* | | | | *Spring term (10th)* | | | |
| Practical training in anaesthesiology, in surgery and in diagnostic imaging I | 0 | 55 | 4 | Career planning, veterinary surgery management and relevant legislation | 13 | 13 | 1 |
| Practical training in companion animal medicine I | 0 | 55 | 4 | Health management of animal populations | 13 | 13 | 1 |
| Practical training in diagnostic pathology I | 0 | 39 | 3 | Practical training in anaesthesiology, in surgery and in diagnostic imaging II | 0 | 55 | 4 |
| Practical training in farm animal medicine I | 0 | 36 | 3 | Practical training in companion animal medicine II | 0 | 55 | 5 |
| Practical training in food hygiene I | 0 | 65 | 6 | Practical training in diagnostic pathology II | 0 | 39 | 3 |
| Practical training in obstetrics and reproduction of domestic mammals I | 0 | 65 | 6 | Practical training in farm animal medicine II | 0 | 36 | 3 |
| Practical training in poultry diseases I | 0 | 26 | 2 | Practical training in food hygiene II | 0 | 65 | 5 |
| | | | | Practical training in obstetrics and reproduction of domestic mammals II | 0 | 65 | 5 |
| | | | | Practical training in poultry diseases II | 0 | 26 | 2 |

| | Lecture (hours per term) | Practice (hours per term) | ECTS | | Lecture (hours per term) | Practice (hours per term) | ECTS |
|---|---|---|---|---|---|---|---|
| **5th year** (continued) | | | | | | | |
| *Winter term (9h)* | | | | *Spring term (10th)* | | | |
| Elective modules: (1) Advanced topics in bovine reproduction, (2) Advanced topics in companion animal dermatology, (3) Advanced topics in feline medicine, (4) Application of innovative ideas and technologies in swine farming and poultry farming | 13 | 13 | 2 | Elective modules: (1) Advanced topics in companion animal reproduction, (2) Advanced topics in small ruminant reproduction, (3) Companion animal physiotherapy, (4) Companion animal tumours, (5) Quality and evaluation of foods and relevant legislation | 13 | 13 | 1 |
| Total | 13 | 354 | 30 | Total | 39 | 380 | 30 |

## Appendix 3c.

### Detailed descriptions regarding training and clinical activities in Department of Medicine

*Group size for the different types of clinical training*

- Farm animals. Attendance of practical/clinical training sessions is obligatory for 'core' curriculum and elective courses. With regards to clinical training, during the 3rd, 4th, and 5th year of study, students are divided into groups as follows. During 6th term, students are divided into three groups. Overall, each student receives clinical training for one day per week, six hours per day (six hours total per week) in 6th term. In 7th term, students are being trained in farm animal medicine two days a week, divided into five groups. During the 8th term, students are trained in farm animal medicine two days a week, divided into 4 groups. In each of 7th and 8th terms training is provided for two days, 6 hours per day (12 hours). During the 5th year, 6 hours a day clinical training is provided for a 13-week period, two days per week for 13 weeks. Clinical training in farm animal medicine includes visits to farms and in-clinic training. Students are divided into four groups each. Students are trained either in the teaching farm of TEI Thessaly or in commercial farms, using Faculty vehicles and under the supervision of teaching staff of the Faculty.
- Companion animals. Each rotation group is divided into up to five equal subgroups and each of them is assigned to a different teaching staff. For example, if the group of students includes 40 students, it is then divided into up to five subgroups of eight students each, and each subgroup is trained separately by a teaching staff.

*Description of hands-on training of students in clinical procedures in different animal species, i.e. clinical examination, diagnostic tests, blood sampling, treatment, nursing and critical care, anaesthesia, routine surgery, euthanasia, necropsy, report writing, client communication, biosecurity procedures (both intra-murally and extra-murally)*

- Farm animals. (a) Clinical examination: a thorough physical examination is performed, independently, by two students who have been assigned to each patient, under supervision of teaching staff; if necessary, they can ask for advice; the staff member repeats clinical examination and discusses findings with the students. (b) Blood or other (e.g., faecal or nasal) sampling: this is the responsibility of the two students who have been assigned to a given patient or of more students in farm visits; staff members guide and, if needed, help students to collect samples. (c) Diagnosis and treatment: diagnosis, prognosis and treatment are initially discussed between the two students who have been assigned the patient, and the supervising staff member, before discussion with animal owner. (d) Hospitalisation: care for hospitalised patients is discussed and reviewed, at least once daily, between staff members in charge of the case and students on duty in hospitalisation ward; repeated clinical examination, treatment and nursing care is performed independently by students under staff supervision. (e) Report writing: students assigned to a patient, are responsible to thoroughly update patient records (under supervision of staff); for patients referred to the department, a report (including history, physical examination findings, laboratory test results, differential diagnosis, final diagnosis and suggested treatment plan) is mailed to referring veterinarians and the owner, with students responsible for drafting the report and staff member making necessary corrections and discussing with students; at farm level, staff inform the farmer regarding diagnosis, prognosis and treatment of clinical cases, after relevant discussion with students.
- Companion animals. (a) Clinical examination: a thorough physical examination is performed, independently, by two students who have been assigned to each patient, under supervision of teaching staff; if necessary, they can ask for advice; the staff member repeats clinical examination and discusses findings with the students. (b)

Diagnostic tests: the sub-group of students who have been assigned for training in the clinical diagnostic laboratory participate actively in sample handling, processing, analysis, storage and in recording of test results. (c) Blood sampling: this is the responsibility of the two students who have been assigned to a given patient to restrain the patient and obtain samples (if necessary for diagnostic purposes); staff members guide and, if needed, help students to collect samples. (d) Treatment: treatment of outpatients is initially discussed between the two students who have been assigned the patient, and the supervising staff member, before discussion with animal owner. (e) Hospitalisation: care for hospitalised patients is discussed and reviewed, at least once daily, between staff members in charge of the case and students on duty in hospitalisation ward; repeated clinical examination, treatment and nursing care is performed independently by students under staff supervision. (f) Critical care: during initial stabilization, students assigned to a critical care patient support staff and afterwards are responsible for repeated clinical examinations, treatment and care under constant supervision of staff. (g) Report writing: students assigned to a patient, are responsible to thoroughly update patient records (under supervision of staff); for patients referred to the department, a report (including history, physical examination findings, laboratory test results, differential diagnosis, final diagnosis and suggested treatment plan) is mailed to referring veterinarians and the owner, with students responsible for drafting the report and staff member making necessary corrections and discussing with students. (h) Client communication: students assigned to a patient are responsible for history taking (under supervision of staff) and to further explain to owner diagnosis, prognosis, treatment plan and correct treatment administration if necessary (under supervision of staff member).

*Description of the procedures used to allow the students to spend extended periods in discussion, thinking and reading to deepen their understanding of the case and its management*

Cases admitted are discussed during clinical rounds with participation of students assigned to each patient and other students in rotation group. All aspects of each case are thoroughly discussed. Teaching staff may ask relevant questions and allow a specific time (usually, until following working day) for students to think, discuss and study for answering.

*Description of the patient record system and how it is used to efficiently support the teaching, research, and service programmes of the Establishment*

- Farm animals. A detailed hand written record with a unique code number is kept for each patient in the department or farm cases from commercial farms; the written record contains only the code number, the details of the patient, the date of the initial examination and subsequent re-examinations and the laboratory test results. Written records are kept in boxes and it is easy to retrieve a specific record when necessary for teaching (i.e. clinical rounds) and service (i.e. re-examinations) purposes.
- Companion animals. A detailed hand written record with a unique code number is kept for each patient; the electronic database contains only the code number, the details of the patient, the date of the initial examination and subsequent re-examinations and the laboratory test results. Written records are kept in boxes and it is easy to retrieve a specific record when necessary for teaching (i.e., clinical rounds) or service (i.e., re-examinations) purposes.

**Appendix 3d.**

**Weekly schedule for student training in Department of Obstetrics and Reproduction**

| Day of week | Students | Activities |
|---|---|---|
| Monday | 5th year of the clinical rotation group | Clinical training in sheep/goats[1] |
| Tuesday | 4th year of the clinical rotation group | Clinical training in sheep/goats[1] |
| Wednesday | 4th and 5th years of the clinical rotation group | Clinical training in sheep/goats[2] |
| Wednesday | 4th and 5th years students of the clinical rotation group allocated in DS | Clinical training in companion animals[3] |
| Thursday | 4th and 5th years of the clinical rotation group | Clinical training in companion animals[4] |
| Friday | 4th and 5th years of the clinical rotation group | Clinical training in cattle[5] |

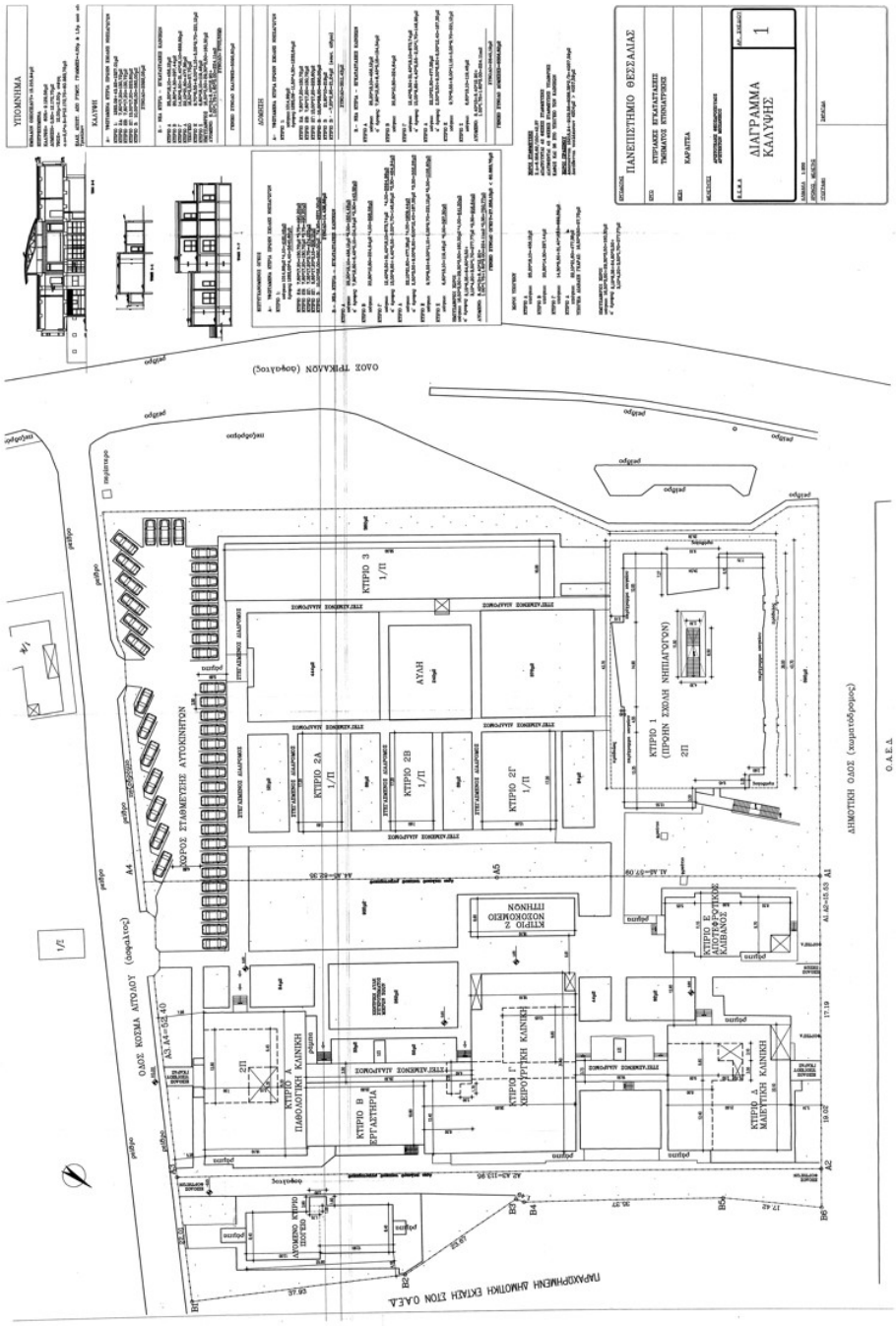
1. Clinical training in sheep/goats: use of departmental animals in activities related to obstetrics-reproduction, e.g., examination of reproductive system, application of intravaginal sponges, ultrasonographic examination of genital system, intramammary administration of drugs, demonstration of obstetrical equipment and manipulations. Training in laboratory procedures: e.g., processing of milk samples for diagnosis of mastitis, preparation and evaluation of cytological preparations (e.g., milk samples, uterine content samples). Training in prescription writing and correct use of drugs. Presentation of homework by students.
2. Clinical training in sheep/goats: (a) attendance to clinical cases brought-in for reproductive (e.g., abortion, pregnancy toxaemia, dystocia, mastitis, orchitis) or newborn (e.g., lamb hypothermia) disorders - (b) visits to sheep/goat farms for planned reproductive management work (e.g., examination of animals during pregnancy, performance of relevant point-of-care tests, vaccinations and administrations of planned treatments) or for attendance to clinical cases.
3. Clinical training in companion animals: reproductive system surgical work (e.g., ovariohysterectomy, uterine neoplasia, pyometra, vaginal prolapse, vaginal tumor, uterine prolapse, cesarean section etc.).
4. Clinical training in companion animals: (a) use of Faculty animals in activities related to obstetrics-reproduction, e.g., examination of reproductive system, radiological and ultrasonographic examination of genital system, semen collection – (b) attendance to healthy animals brought-in for planning reproductive management (e.g., planning for avoidance of mating, pregnancy diagnosis, semen collection and artificial insemination) or to clinical cases brought-in for reproductive disorders (e.g., subfertility). Training in laboratory procedures: e.g., preparation and evaluation of cytological preparations (e.g., vaginal epithelial cells, testicular cells collected by FNA) or semen samples.
5. Training in slaughterhouse material: e.g., insertion of uterine catheter through the cervix, foetotomy, incision gravid uteri, foetal removal, suturing of uteri. Training in laboratory procedures: e.g., preparation, examination and handling of semen. Clinical training in dairy cattle farms: (a) visits for planned reproductive management work in all groups of animals (calves, growing heifers, pregnant heifers, various groups of lactating and dry cows) (e.g., examination of the genital track per rectum for pregnancy diagnosis, evaluation of puerperal uterine involution, evaluation of ovarian functionality, diagnosis of uterine infections, intrauterine catheter insertion in selected animals [signed-off], colposcopy, retrieval and evaluation of vaginal contents [Metricheck]) and udder health management (including evaluation of milking parlour and milking system) or (b) attendance to clinical cases in dairy farms (e.g., subclinical ketosis, post-partum disorders, surgical cases of reproductive system).

**Appendix 4a.**

**Map of the administrative units of the region of Thessaly**

**Appendix 4b.**

**Map of the site of the Faculty of Veterinary Science of the University of Thessaly in Karditsa**




Legend.
KTIPIO I: Main building
KTIPIO III: Auditoria complex
KTIPIO 2A: Biochemistry building
KTIPIO 2B: Anatomy I building
KTIPIO 2Γ: Anatomy II building
KTIPIO E: Pathology building
KTIPIO Z: Poultry diseases building
Area between KTIPIO Z and car parking: New building (note: drawing dates back when the Faculty was being built, whilst that building has only been completed 3 year ago, hence not shown on drawing)
KTIPIO A: Clinical building-DM

ΚΤΙΡΙΟ Β: Clinical building-DS-diagnostic imaging area
ΚΤΙΡΙΟ Γ: Clinical building-DS
ΚΤΙΡΙΟ Δ: Clinical building-DOR
ΛΥΟΜΕΝΟ ΚΤΙΡΙΟ: Prefabricated building

**Appendix 4c.**

**Photographs of the site of the Faculty of Veterinary Science of the University of Thessaly in Karditsa**

Main entrance of Main building.

Clockwise from left side of photograph: Auditoria complex, Main building, Anatomy II building, Anatomy I building, Biochemistry building (view from the main parking area).

Clockwise from left side of photograph: New building, Hospital building-DS, Hospital building-DM (view from the main parking area).

Clockwise from left side of photograph: Pathology building, Hospital building-DOR.

**Appendix 4d.**

**Equipment used for teaching purposes and clinical services**

| Department | Equipment |
|---|---|
| DAHE | Optical microscopes |
| DEBAHE | Computers fully equipped with epidemiological/statistical software<br>Software: EpiInfo, Winepiscope, Stata, Statistix |
| DB | Cell homogeniser<br>Fast Performance Liquid Chromatography<br>Fluorometre<br>Isothermal titration calorimetre<br>Plate reader<br>Spectrophotometres<br>Stereoscopes |
| DAHN | Analytical electronic weight standard balances<br>Automatic distillation system of Kjeldahl digestion for nitrogen measurement in feeds<br>Crude fiber determination unit<br>Cryoscopic osmometre<br>Drying oven<br>Extraction unit (6 positions) for measurement of raw fiber content in feeds<br>Fume Hood<br>Grinder and blender<br>Keldahl digestion and titration unit (GERHARDT)<br>Laboratory chest freezer (-40 ºC)<br>Laboratory-type feed mill<br>Magnetic stirrers<br>Manual and digital burettes<br>Muffle furnace<br>Refrigerator<br>Ovens<br>pH metre<br>Soxhlet extractor system (4 positions) for extraction of lipid content in feeds<br>Soxhlet lipid determination unit<br>Precision precision balances |
| DAFD | Equipment for fish husbandry (e.g., buckets, nets)<br>Feed mixer<br>Optical microscopes<br>Portable multi-parametre sensor for water evaluation<br>Refractometre for salinity measurement<br>Stereoscope<br>Water cooling unit with compressor units |

| Department | Equipment |
|---|---|
| DMP | Bunsen burners |
| | Centrifuge |
| | Equipment for media preparation (autoclave, precision scales, water bath, centrifuge etc.) |
| | Full electrophoresis equipment |
| | Full ELISA assay equipment (reader, printer etc.) |
| | Gaspak chambers |
| | Global positioning systems |
| | Incubators (aerobic, $CO_2$) |
| | Labnet multi gene II PCR |
| | Laminar flow cabinets |
| | Light source for egg candling |
| | Optical microscopes |
| | Stereoscope |
| | Stomacher blenders |
| | Vortex minishaker |
| DPa | Histokinette |
| | Microtome system with necessary accompanying equipment |
| | Two post-mortem tables with necessary accompanying equipment (knifes, scissors etc.) |
| | Equipment for histopathological stains of tissue sections |
| DHFAO | Chromatograph |
| | Gerber device |
| | Incubators |
| | Laboratory and portable pH-meters |
| | Laminal flow cabinets |
| | Packaging machine for food preparation |
| | Spectrophotometre |
| | Stomacher blenders |
| | Water activity metre |
| | Water baths |
| DPT | Fluoroscope |
| | Full ELISA assay equipment (reader, printer etc.) |
| | Incubators (aerobic, $CO_2$) |
| | Laminar flow cabinets |
| | Optical microscopes |
| | PCR |
| | Reverse phase microscope |
| | Spectrophotometres |
| DPh | Centrifuges, microcentrifuge |
| | Optical microscopes |
| | Portable physiography |
| | Spectrophotometre |
| | Stereoscopes |
| | Water baths |

| Department | Equipment |
|---|---|
| DM | Biochemistry analyser<br>Blood gas-electrolyte analyser<br>Brainstem auditory evoked responses (BAER) electrodiagnostic system<br>Coagulometre<br>Companion animal examination suites<br>Electrocardiograph<br>Fully equipped companion animal intensive care and hospitalisation unit, including hospitalisation cages, oxygen cages, intensive care monitor, fluid infusion pumps etc.<br>Haematological analysers<br>Optical microscopes<br>Spectrophotometre |
| DOR | Companion animal examination tables<br>Full hormone ELISA assay equipment (reader, printer etc.)<br>Full laparoscopy system<br>*In vitro* and *in vivo* embryo production system<br>Inverse microscope<br>Microscope for semen evaluation (with heated table)<br>Obstetrical equipment and instruments and surgical equipment and instruments<br>Optical microscopes Stereoscopes<br>Two ultrasonographic equipment with appropriate transducers |
| DPD | Centrifuge<br>Optical microscopes<br>Sets of scissors (small, large) and forceps |
| DS | Autoclaves and other equipment for sterilisation of material and equipment<br>Companion animal examination suites<br>Fully equipped companion animal hospitalisation ward<br>Fully equipped ophthalmology suite<br>Fully equipped X-ray suite<br>Two fully equipped surgery suites (operating tables, anaesthetic equipment, monitoring equipment, resuscitation equipment etc.)<br>Veterinary dentistry equipment |

N.B. Above is not a full list of equipment in the various departments of the Faculty, but only a list of equipment used in teaching and clinical work.

**Appendix 9a.**

**Form used for assessment of teaching staff**

[translated into English]

UNIVERSITY OF THESSALY – FACULTY OF VETERINARY SCIENCE

RESULTS OF TEACHING ASSESSMENT

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Module: …….

Teaching staff: …….

Academic year: …….

Term: …….

| | **Questions** |
|---|---|
| **A. The module** | |
| 1. | Were teaching objectives of the module clear? |
| 2. | Has content of the module complied with teaching objectives? |
| 3. | Has teaching been well organised? |
| 4. | Has learning material used been helpful in understanding content of the module? |
| 5. | Has learning material (textbook, teaching notes) been distributed on time? |
| 6. | Has the primary textbook been helpful? |
| 7. | Has it been easy to find appropriate literature in the library? |
| 8. | Has content of the module been associated with contents of other modules? |
| 9. | Has the module been difficult to comprehend? |
| 10. | Has time allocated for teaching of the module been sufficient to cover content? |
| 11. | Do ECTS units allocated to the module reflect real effort required for the module? |
| 12. | Has marking been clear? |
| A1. Homework | |
| 13. | Has the topic of any homework been made available on time? |
| 14. | Has the period allowed to submit any homework been reasonable? |
| 15. | Has relevant material been available in the library? |
| 16. | Has any guidance been provided by teaching staff? |
| 17. | Have comments by teaching staff been clear and constructive? |
| 18. | Has a possibility to submit a revised homework been made available? |
| 19. | Has the homework been helpful in understanding the specific topic? |
| B. Teaching staff | |
| 20. | Has teaching staff organised well presentation of content of the module? |
| 21. | Has teaching staff succeeded in arising interest for content of the module? |
| 22. | Has teaching staff presented content of the module in clearly and understandably and has used examples? |
| 23. | Has teaching staff encouraged students to ask questions and develop critical approach to content of the module? |
| 24. | Has teaching staff been correct in duties related to the module (e.g., timely presence in lectures and practicals, timely correction of homework, availability to students)? |
| 25. | Has teaching staff been approachable by students? |
| C. Support staff | |
| 26. | Has support staff been helpful in comprehending content of the module? |
| D. Practical training | |
| 27. | Has practical training been within grasp of general level of knowledge for year and term? |
| 28. | Have teaching notes distributed for practical training been helpful? |
| 29. | Have principles of practical training been explained adequately? |
| 30. | Has equipment necessary for practical training been available? |

| E. Student | |
|---|---|
| 31. | Has been attending lectures of module regularly |
| 32. | Has been attending practicals of module regularly |
| 33. | Has been complying with carrying out assigned homework |
| 34. | Has been studying regularly |
| 35. | Has been giving weekly hours for the module |

**Appendix 9b.**

**Details of academic and teaching staff during years 2014-15 to 2017-18**

| Staff name | | Department | Rank | Veterinary degree | Postgraduate degree(s) | EBVS specialist title |
|---|---|---|---|---|---|---|
| Permanent academic and teaching staff | | | | | | |
| 1 | Athanasiou LV | DM | Assis. professor | Yes | MSc, PhD | |
| 2 | Athanassopoulou E | DAFD | Professor | Yes | MSc, PhD | Aquatic animal health |
| 3 | Amiridis GS | DOR | Professor | Yes | PhD | Animal reproduction |
| 4 | Billinis C | DMP | Professor | Yes | PhD | Wildlife population health |
| 5 | Burriel AR | DMP | Professor | Yes | MSc, PhD | |
| 6 | Christodoulopoulos G | DM | Professor | Yes | PhD | Bovine health management |
| 7 | Fthenakis GC | DOR | Professor | Yes | MSc, PhD | SR health management |
| 8 | Galatos AD | DS | Professor | Yes | PhD | Anaesthesia and analgesia |
| 9 | Giannakopoulos A | DMP | Teaching staff | | PhD | |
| 10 | Govaris A | DHFAO | Professor | Yes | PhD | |
| 11 | Gouletsou PG | DOR | Assoc. professor | Yes | PhD | |
| 12 | Kontopidis G | DB | Professor | | MPhil, PhD | |
| 13 | Koutoulis K | DPD | Assis. professor | Yes | MBA, PhD | |
| 14 | Kostoulas P | DEBAHE | Assis. professor | Yes | PhD | |
| 15 | Lefkaditis M | DMP | Assis. professor | Yes | PhD | |
| 16 | Leontides L | DEBAHE | Professor | Yes | MPVM, PhD | |
| 17 | Manolakou E | DAHN | Assis. professor | | PhD | |
| 18 | Mavrogianni VS | DOR | Assis. professor | Yes | PhD | SR health management |
| 19 | Pantazis P | DAHN | Assis. professor | | PhD | |
| 20 | Papatsiros V | DM | Assis. professor | Yes | PhD | |
| 21 | Pappas I | DPT | Assoc. professor | | PhD | |
| 22 | Pexara A | DHFAO | Assis. professor | Yes | PhD | |
| 23 | Pourlis A | DAHE | Assoc. professor | Yes | Cert.BA, PhD | |
| 24 | Saridomichelakis E | DM | Professor | Yes | PhD | Dermatology |
| 25 | Sideri A | DS | Assis. professor | Yes | PhD | |
| 26 | Sofia M | DMP | Teaching staff | Yes | PhD | |
| 27 | Solomakos N | DHFAO | Assis. professor | Yes | PhD | |
| 28 | Spyrou A | DOR | English language teacher | | MSc | |
| 29 | Theodosiadou E | DPh | Assis. professor | Yes | PhD | |
| 30 | Tontis D | DPa | Assoc. professor | Yes | PhD | |
| 31 | Tsioli V | DS | Assis. professor | Yes | PhD | |
| 32 | Tzivara A | DM | Teaching staff | Yes | PhD | |
| 33 | Valasi I | DPh | Assis. professor | Yes | PhD | SR health management |
| 34 | Valiakos G | DMP | Assis. professor | Yes | PhD | |
| 35 | Xenoulis P | DM | Assis. professor | Yes | PhD | |
| 36 | *to be selected* | DOR | English language teacher | | | |
| Temporary teaching staff | | | | | | |
| 37 | Barbagianni M | DOR | Univ. scholar | Yes | PhD | |
| 38 | Bekiari C | DAHE | Univ. scholar | Yes | PhD | |
| 39 | Chatzis E | DM | Univ. scholar | Yes | PhD | |
| 40 | Chatzopoulos D | DMP | Univ. scholar | Yes | | |
| 41 | Doukas D | DPa | Adjunct lecturer | Yes | PhD | |

| Staff name | | Department | Rank | Veterinary degree | Postgraduate degree(s) | EBVS specialist title |
|---|---|---|---|---|---|---|
| Temporary teaching staff | | | | | | |
| 42 | Dovolou E | DOR | Univ. scholar | Yes | PhD | |
| 43 | Evangelopoulou G | DMP | Univ. scholar | Yes | PhD | |
| 44 | Flouraki E | DS | Univ. scholar | Yes | PhD | |
| 45 | Gelasakis A | DAHN | Adjunct lecturer | Yes | Dip.PH, PhD | |
| 46 | Georgiou S | DS | Univ. scholar | Yes | | |
| 47 | Gougoulis DA | DM | Univ. scholar | Yes | MSc, PhD | |
| 48 | Gourzioti E | DAFD | Postdoc. teacher | Yes | MSc, PhD | |
| 49 | Karatzia M | DAHN | Adjunct lecturer | | PhD | |
| 50 | Katsoulis K | DAHN | Univ. scholar | Yes | PhD | |
| 51 | Koutsianos D | DPD | Univ. scholar | Yes | MSc | |
| 52 | Lampou I | DAFD | Univ. scholar | Yes | MSc, PhD | |
| 53 | Liakou Z | DPa | Univ. scholar | | PhD | |
| 54 | Mettou A | DB | Univ. scholar | | | |
| 55 | Natsos G | DPD | Univ. scholar | Yes | | |
| 56 | Nikolopoulos V | DB | Univ. scholar | | | |
| 57 | Okkas K | DM/DOR/ DS | Univ. scholar | Yes | | |
| 58 | Prentza Z | DPD | Univ. scholar | Yes | MSc | |
| 59 | Rovoli M | DB | Univ. scholar | | PhD | |
| 60 | Sarrou S | DMP | Postdoc. teacher | | PhD | |
| 61 | Soultani C | DS | Univ. scholar | Yes | PhD | |
| 62 | Topachtsidis T | DB | Postdoc. teacher | | PhD | |
| 63 | Tsokana K | DMP | Univ. scholar | Yes | | |
| 64 | Vasileiou NGC | DOR | Univ. scholar | Yes | | |
| 65 | Vasilopoulos I | DAHN | Univ. scholar | | PhD | |
| 66 | *to be selected* | DAHN | Univ. scholar | Yes | PhD | |

SR health management: small ruminant health management, Univ. scholar: University scholar, Postdoc. teacher: post-doctoral teacher

**Appendix 9c.**

**Details of work (FTE) for academic and teaching staff during years 2014-15 to 2017-18**

| Staff name | | Department | 2017-18 | 2016-17 | 2015-16 | 2014-15 |
|---|---|---|---|---|---|---|
| Permanent academic and teaching staff | | | | | | |
| 1 | Athanasiou LV | DM | 1 | 1 | 1 | 1 |
| 2 | Athanassopoulou E | DAFD | 1 | 1 | 1 | 1 |
| 3 | Amiridis GS | DOR | 1 | 1 | 1 | 1 |
| 4 | Billinis C | DMP | 1 | 1 | 1 | 1 |
| 5 | Burriel AR | DMP | 0 | 0 | 0.75 | 1 |
| 6 | Christodoulopoulos G | DM | 1 | 1 | 1 | 1 |
| 7 | Fthenakis GC | DOR | 1 | 1 | 1 | 1 |
| 8 | Galatos AD | DS | 1 | 1 | 1 | 1 |
| 9 | Giannakopoulos A | DMP | 1 | 1 | 1 | 1 |
| 10 | Govaris A | DHFAO | 1 | 1 | 1 | 1 |
| 11 | Gouletsou PG | DOR | 1 | 1 | 1 | 1 |
| 12 | Kontopidis G | DB | 1 | 1 | 1 | 1 |
| 13 | Koutoulis K | DPD | 1 | 1 | 1 | 1 |
| 14 | Kostoulas P | DEBAHE | 1 | 1 | 1 | 1 |
| 15 | Lefkaditis M | DMP | 1 | 1 | 1 | 1 |
| 16 | Leontides L | DEBAHE | 1 | 1 | 1 | 1 |
| 17 | Manolakou E | DAHN | 0 | 0 | 1 | 1 |
| 18 | Mavrogianni VS | DOR | 1 | 1 | 1 | 1 |
| 19 | Pantazis P | DAHN | 1 | 1 | 1 | 1 |
| 20 | Papatsiros V | DM | 1 | 1 | 1 | 1 |
| 21 | Pappas I | DPT | 1 | 1 | 1 | 1 |
| 22 | Pexara A | DHFAO | 1 | 1 | 1 | 1 |
| 23 | Pourlis A | DAHE | 1 | 1 | 1 | 1 |
| 24 | Saridomichelakis E | DM | 1 | 1 | 1 | 1 |
| 25 | Sideri A | DS | 1 | 1 | 1 | 1 |
| 26 | Sofia M | DMP | 1 | 1 | 1 | 1 |
| 27 | Solomakos N | DHFAO | 1 | 1 | 1 | 1 |
| 28 | Spyrou A | DOR | 0 | 1 | 1 | 0 |
| 29 | Theodosiadou E | DPh | 1 | 1 | 1 | 1 |
| 30 | Tontis D | DPa | 1 | 1 | 1 | 1 |
| 31 | Tsioli V | DS | 1 | 1 | 1 | 1 |
| 32 | Tzivara A | DM | 1 | 1 | 1 | 1 |
| 33 | Valasi I | DPh | 1 | 1 | 1 | 1 |
| 34 | Valiakos G | DMP | 0.25 | 0 | 0 | 0 |
| 35 | Xenoulis P | DM | 1 | 1 | 1 | 1 |
| 36 | *to be appointed* | DOR | 1 | 0 | 0 | 0 |
| | | Total FTEs | 32.25 | 32.0 | 33.75 | 33.0 |
| | | FTEs veterinarians | 27.25 | 27.0 | 27.75 | 28.0 |
| Temporary teaching staff | | | | | | |
| 37 | Barbagianni M | DOR | 0.2 | 0 | 0 | 0 |
| 38 | Bekiari C | DAHE | 0.2 | 0.2 | 0 | 0 |
| 39 | Chatzis M | DM | 1 | 1 | 1 | 1 |
| 40 | Chatzopoulos D | DMP | 0.2 | 0.2 | 0.1 | 0 |
| 41 | Doukas D | DPa | 0.5 | 0.5 | 0.5 | 0.5 |
| 42 | Dovolou E | DOR | 0.2 | 0 | 0 | 0 |
| 43 | Evangelopoulou G | DMP | 0 | 0 | 0.1 | 0 |
| 44 | Flouraki E | DS | 0.4 | 0 | 0 | 0 |

| Staff name | | Department | 2017-18 | 2016-17 | 2015-16 | 2014-15 |
|---|---|---|---|---|---|---|
| Temporary teaching staff | | | | | | |
| 45 | Gelasakis A | DAHN | 0.25 | 0.25 | 0 | 0 |
| 46 | Georgiou S | DS | 0.6 | 0.6 | 0 | 0 |
| 47 | Gougoulis DA | DM | 0.4 | 0.4 | 0.4 | 0.4 |
| 48 | Gourzioti E | DAFD | 0 | 0.5 | 0 | 0 |
| 49 | Karatzia M | DAHN | 0.25 | 0.25 | 0.5 | 0.5 |
| 50 | Katsoulis K | DAHN | 0.2 | 0.2 | 0.2 | 0.2 |
| 51 | Koutsianos D | DPD | 0.3 | 0.3 | 0.3 | 0.3 |
| 52 | Lampou I | DAFD | 0.9 | 0.4 | 0 | 0 |
| 53 | Liakou Z | DPa | 0.2 | 0.2 | 0.2 | 0.2 |
| 54 | Mettou A | DB | 0 | 0 | 0.1 | 0.1 |
| 55 | Natsos G | DPD | 0 | 0 | 0.2 | 0.2 |
| 56 | Nikolopoulos V | DB | 0 | 0 | 0.1 | 0.1 |
| 57 | Okkas K | DM/DOR/ DS | 0.4 | 0 | 0 | 0 |
| 58 | Prentza Z | DPD | 0.3 | 0 | 0 | 0 |
| 59 | Rovoli M | DB | 1 | 0 | 0 | 0 |
| 60 | Sarrou S | DMP | 0.5 | 0 | 0 | 0 |
| 61 | Soultani C | DS | 0.4 | 0 | 0 | 0 |
| 62 | Topachtsidis T | DB | 0.5 | 0.5 | 0 | 0 |
| 63 | Tsokana K | DMP | 0 | 0 | 0.2 | 0 |
| 64 | Vasileiou NGC | DOR | 0.4 | 0.2 | 0.2 | 0 |
| 65 | Vasilopoulos I | DAHN | 1 | 0.5 | 0 | 0 |
| 66 | *to be selected* | DAHN | 0.1 | 0 | 0 | 0 |
| | | Total FTEs | 10.4 | 6.2 | 4.1 | 3.5 |
| | | FTEs veterinarians | 6.95 | 4.75 | 3.2 | 2.6 |

**Appendix 10a.**

**List of publications from members of the Faculty for the academic years 2014-15 to 2016-17.**

Note. Printout out from a search in Web of Science is presented herebelow; in total, 151 publications are listed.

Close

**Web of Science**
**Page 1 (Records 1 -- 50)**

Print

[ 1 | 2 | 3 | 4 ]

**Record 1 of 151**
**Title:** Milk quality characteristics of Boutsiko, Frisarta and Karagouniko sheep breeds reared in the mountainous and semimountainous areas of Western and Central Greece
**Author(s):** Skoufos, I (Skoufos, Ioannis); Tzora, A (Tzora, Athina); Giannenas, I (Giannenas, Ilias); Karamoutsios, A (Karamoutsios, Achilleas); Tsangaris, G (Tsangaris, Georgios); Fthenakis, GC (Fthenakis, Georgios C.)
**Source:** INTERNATIONAL JOURNAL OF DAIRY TECHNOLOGY **Volume:** 70 **Issue:** 3 **Pages:** 345-353 **DOI:** 10.1111/1471-0307.12349 **Published:** AUG 2017

**Record 2 of 151**
**Title:** Ovine ultrasonography Use of ultrasonographic examination in sheep health management Preface
**Author(s):** Valasi, I (Valasi, I.); Petridis, IG (Petridis, I. G.); Barbagianni, MS (Barbagianni, M. S.); Fthenakis, GC (Fthenakis, G. C.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 152 **Special Issue:** SI **Pages:** 1-1 **DOI:** 10.1016/j.smallrumres.2016.12.001 **Published:** JUL 2017

**Record 3 of 151**
**Title:** Doppler ultrasonographic examination in sheep
**Author(s):** Petridis, IG (Petridis, I. G.); Barbagianni, MS (Barbagianni, M. S.); Ioannidi, KS (Ioannidi, K. S.); Samaras, E (Samaras, E.); Fthenakis, GC (Fthenakis, G. C.); Vloumidi, EI (Vloumidi, E. I.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 152 **Special Issue:** SI **Pages:** 22-32 **DOI:** 10.1016/j.smallrumres.2016.12.015 **Published:** JUL 2017

**Record 4 of 151**
**Title:** Ultrasonographic examination of pregnant ewes: From early diagnosis of pregnancy to early prediction of dystocia
**Author(s):** Barbagianni, MS (Barbagianni, M. S.); Ioannidi, KI (Ioannidi, K. I.); Vasileiou, NGC (Vasileiou, N. G. C.); Mavrogianni, VS (Mavrogianni, V. S.); Orfanou, DC (Orfanou, D. C.); Fthenakis, GC (Fthenakis, G. C.); Valasi, I (Valasi, I.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 152 **Special Issue:** SI **Pages:** 41-55 **DOI:** 10.1016/j.smallrumres.2016.12.008 **Published:** JUL 2017

**Record 5 of 151**
**Title:** Developmental anatomy of sheep embryos, as assessed by means of ultrasonographic evaluation
**Author(s):** Valasi, I (Valasi, I.); Barbagianni, MS (Barbagianni, M. S.); Ioannidi, KS (Ioannidi, K. S.); Vasileiou, NGC (Vasileiou, N. G. C.); Fthenakis, GC (Fthenakis, G. C.); Pourlis, A (Pourlis, A.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 152 **Special Issue:** SI **Pages:** 56-73 **DOI:** 10.1016/j.smallrumres.2016.12.016 **Published:** JUL 2017

**Record 6 of 151**
**Title:** Ultrasonographic examination of the uterus of ewes during the post-partum period
**Author(s):** Ioannidi, KS (Ioannidi, K. S.); Mavrogianni, VS (Mavrogianni, V. S.); Valasi, I (Valasi, I.); Barbagianni, MS (Barbagianni, M. S.); Vasileiou, NGC (Vasileiou, N. G. C.); Amiridis, GS (Amiridis, G. S.); Fthenakis, GC (Fthenakis, G. C.); Orfanou, DC (Orfanou, D. C.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 152 **Special Issue:** SI **Pages:** 74-85 **DOI:** 10.1016/j.smallrumres.2016.12.014 **Published:** JUL 2017

**Record 7 of 151**
**Title:** Ultrasonographic examination of the udder in sheep
**Author(s):** Barbagianni, MS (Barbagianni, M. S.); Mavrogianni, VS (Mavrogianni, V. S.); Vasileiou, NGC (Vasileiou, N. G. C.); Fthenakis, GC (Fthenakis, G. C.); Petridis, IG (Petridis, I. G.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 152 **Special Issue:** SI **Pages:** 86-99 **DOI:** 10.1016/j.smallrumres.2016.12.009 **Published:** JUL 2017

**Record 8 of 151**
**Title:** Ultrasonographic examination of the scrotal contents in rams
**Author(s):** Gouletsou, PG (Gouletsou, P. G.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 152 **Special Issue:** SI **Pages:** 100-106 **DOI:** 10.1016/j.smallrumres.2016.12.022 **Published:** JUL 2017

**Record 9 of 151**
**Title:** Ultrasonographic examination of the heart in sheep
**Author(s):** Vloumidi, EI (Vloumidi, E. I.); Fthenakis, GC (Fthenakis, G. C.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 152 **Special Issue:** SI **Pages:** 119-127 **DOI:** 10.1016/j.smallrumres.2016.12.019 **Published:** JUL 2017

**Record 10 of 151**
**Title:** Ultrasonographic examination of the musculoskeletal system in sheep
**Author(s):** Sideri, A (Sideri, A.); Tsioli, V (Tsioli, V.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 152 **Special Issue:** SI **Pages:** 158-161 **DOI:** 10.1016/j.smallrumres.2016.12.018 **Published:** JUL 2017

**Record 11 of 151**
**Title:** Sonoparasitology: An alternative approach to parasite detection in sheep
**Author(s):** Arsenopoulos, K (Arsenopoulos, K.); Fthenakis, GC (Fthenakis, G. C.); Papadopoulos, E (Papadopoulos, E.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 152 **Special Issue:** SI **Pages:** 162-165 **DOI:** 10.1016/j.smallrumres.2016.12.007 **Published:** JUL 2017

**Record 12 of 151**
**Title:** Use of ultrasonographic examination in sheep veterinary practice
**Author(s):** Crilly, JP (Crilly, J. P.); Politis, AP (Politis, A. P.); Hamer, K (Hamer, K.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 152 **Special Issue:** SI **Pages:** 166-173 **DOI:** 10.1016/j.smallrumres.2016.12.021 **Published:** JUL 2017

**Record 13 of 151**
**Title:** Canine pancytopoenia in a Mediterranean region: a retrospective study of 119 cases (2005 to 2013)
**Author(s):** Frezoulis, PS (Frezoulis, P. S.); Angelidou, E (Angelidou, E.); Karnezi, D (Karnezi, D.); Oikonomidis, IL (Oikonomidis, I. L.); Kritsepi-Konstantinou, M (Kritsepi-Konstantinou, M.); Kasabalis, D (Kasabalis, D.); Mylonakis, ME (Mylonakis, M. E.)
**Source:** JOURNAL OF SMALL ANIMAL PRACTICE **Volume:** 58 **Issue:** 7 **Pages:** 395-402 **DOI:** 10.1111/jsap.12647 **Published:** JUL 2017

**Record 14 of 151**
**Title:** A field trial of a fixed combination of permethrin and fipronil (Effitix (R)) for the treatment and prevention of flea infestation in dogs living with sheep
**Author(s):** Chatzis, MK (Chatzis, Manolis K.); Psemmas, D (Psemmas, Dimitris); Papadopoulos, E (Papadopoulos, Elias); Navarro, C (Navarro, Christelle); Saridomichelakis, MN (Saridomichelakis, Manolis N.)
**Source:** PARASITES & VECTORS **Volume:** 10 **Article Number:** 212 **DOI:** 10.1186/s13071-017-2145-1 **Published:** APR 28 2017

**Record 15 of 151**
**Title:** A randomized controlled study on the efficacy of a novel combination vaccine against enzootic pneumonia (Mycoplasma hyopneumoniae) and porcine Circovirus type 2 (PCV2) in the presence of strong maternally derived PCV2 immunity in pigs
**Author(s):** Tassis, PD (Tassis, Panagiotis D.); Tsakmakidis, I (Tsakmakidis, Ioannis); Papatsiros, VG (Papatsiros, Vassileios G.); Koulialis, D (Koulialis, Dimitrios); Nell, T (Nell, Tom); Brellou, G (Brellou, Georgia); Tzika, ED (Tzika, Eleni D.)
**Source:** BMC VETERINARY RESEARCH **Volume:** 13 **Article Number:** 91 **DOI:** 10.1186/s12917-017-1014-7 **Published:** APR 7 2017

**Record 16 of 151**
**Title:** Effects of ghrelin on activation of Akt1 and ERK1/2 pathways during in vitro maturation of bovine oocytes
**Author(s):** Chouzouris, TM (Chouzouris, Thomas-Markos); Dovolou, E (Dovolou, Eleni); Krania, F (Krania, Fotini); Pappas, IS (Pappas, Ioannis S.); Dafopoulos, K (Dafopoulos, Konstantinos); Messinis, IE (Messinis, Ioannis E.); Anifandis, G (Anifandis, George); Amiridis, GS (Amiridis, Georgios S.)
**Source:** ZYGOTE **Volume:** 25 **Issue:** 2 **Pages:** 183-189 **DOI:** 10.1017/S096719941700003X **Published:** APR 2017

**Record 17 of 151**
**Title:** STARD-BLCM: Standards for the Reporting of Diagnostic accuracy studies that use Bayesian Latent Class Models

**Author(s):** Kostoulas, P (Kostoulas, Polychronis); Nielsen, SS (Nielsen, Soren S.); Branscum, AJ (Branscum, Adam J.); Johnson, WO (Johnson, Wesley O.); Dendukuri, N (Dendukuri, Nandini); Dhand, NK (Dhand, Navneet K.); Toft, N (Toft, Nils); Gardner, IA (Gardner, Ian A.)
**Source:** PREVENTIVE VETERINARY MEDICINE **Volume:** 138 **Pages:** 37-47 **DOI:** 10.1016/j.prevetmed.2017.01.006 **Published:** MAR 1 2017

**Record 18 of 151**
**Title:** An early warning indicator for monitoring infectious animal diseases and its application in the case of a sheep pox epidemic
**Author(s):** Malesios, C (Malesios, C.); Kostoulas, P (Kostoulas, P.); Dadousis, K (Dadousis, K.); Demiris, N (Demiris, N.)
**Source:** STOCHASTIC ENVIRONMENTAL RESEARCH AND RISK ASSESSMENT **Volume:** 31 **Issue:** 2 **Pages:** 329-337 **DOI:** 10.1007/s00477-016-1316-5 **Published:** FEB 2017

**Record 19 of 151**
**Title:** Faecal shedding of Mycobacterium avium subspecies paratuberculosis reduces before parturition in sheep?
**Author(s):** Mataragka, A (Mataragka, Antonia); Leousi, E (Leousi, Elisavet); Liandris, E (Liandris, Emmanouil); Ntafis, V (Ntafis, Vasileios); Leontides, L (Leontides, Leonidas); Aggelidou, E (Aggelidou, Elisavet); Bossis, I (Bossis, Ioannis); Triantaphyllopoulos, KA (Triantaphyllopoulos, Kostas A.); Theodoropoulou, I (Theodoropoulou, Ioanna); Ikonomopoulos, J (Ikonomopoulos, John)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 147 **Pages:** 32-36 **DOI:** 10.1016/j.smallrumres.2016.11.017 **Published:** FEB 2017

**Record 20 of 151**
**Title:** Use of geographical information system and ecological niche model to analyse potential exposure of small ruminants to Coxiella burnetii infection in central Greece
**Author(s):** Valiakos, G (Valiakos, G.); Giannakopoulos, A (Giannakopoulos, A.); Spanos, SA (Spanos, S. A.); Korbou, F (Korbou, F.); Chatzopoulos, DC (Chatzopoulos, D. C.); Mavrogianni, VS (Mavrogianni, V. S.); Spyrou, V (Spyrou, V.); Fthenakis, GC (Fthenakis, G. C.); Billinis, C (Billinis, C.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 147 **Pages:** 77-82 **DOI:** 10.1016/j.smallrumres.2016.12.042 **Published:** FEB 2017

**Record 21 of 151**
**Title:** Evaluation of in-feed larch sawdust anti-inflammatory effect in sows
**Author(s):** Tzika, ED (Tzika, E. D.); Tassis, PD (Tassis, P. D.); Papatsiros, VG (Papatsiros, V. G.); Pferschy-Wenzig, EM (Pferschy-Wenzig, E. M.); Siochu, A (Siochu, A.); Bauer, R (Bauer, R.); Alexopoulos, C (Alexopoulos, C.); Kyriakis, SC (Kyriakis, S. C.); Franz, C (Franz, C.)
**Source:** POLISH JOURNAL OF VETERINARY SCIENCES **Volume:** 20 **Issue:** 2 **Pages:** 321-327 **DOI:** 10.1515/pjvs-2017-0039 **Published:** 2017

**Record 22 of 151**
**Title:** SNAP Tests for Pancreatitis in Dogs and Cats: SNAP Canine Pancreatic Lipase and SNAP Feline Pancreatic Lipase
**Author(s):** Xenoulis, PG (Xenoulis, Panagiotis G.); Steiner, JM (Steiner, Joerg M.)
**Source:** TOPICS IN COMPANION ANIMAL MEDICINE **Volume:** 31 **Issue:** 4 **Pages:** 134-139 **DOI:** 10.1053/j.tcam.2016.10.005 **Published:** DEC 2016

**Record 23 of 151**
**Title:** Hare harvest and EBHS virus prevalence in differently populated Mediterranean ecotopes
**Author(s):** Sokos, C (Sokos, Christos); Giannakopoulos, A (Giannakopoulos, Alexios); Papaspyropoulos, K (Papaspyropoulos, Konstantinos); Touloudi, A (Touloudi, Antonia); Birtsas, P (Birtsas, Periklis); Spyrou, V (Spyrou, Vassiliki); Valiakos, G (Valiakos, George); Tsokana, C (Tsokana, Constantina); Sfougaris, A (Sfougaris, Athanasios); Billinis, C (Billinis, Charalambos)
**Source:** EUROPEAN JOURNAL OF WILDLIFE RESEARCH **Volume:** 62 **Issue:** 6 **Pages:** 695-700 **DOI:** 10.1007/s10344-016-1047-4 **Published:** DEC 2016

**Record 24 of 151**
**Title:** Cerebral and non-cerebral coenurosis: on the genotypic and phenotypic diversity of Taenia multiceps
**Author(s):** Christodoulopoulos, G (Christodoulopoulos, Georgios); Dinkel, A (Dinkel, Anke); Romig, T (Romig, Thomas); Ebi, D (Ebi, Dennis); Mackenstedt, U (Mackenstedt, Ute); Loos-Frank, B (Loos-Frank, Brigitte)
**Source:** PARASITOLOGY RESEARCH **Volume:** 115 **Issue:** 12 **Pages:** 4543-4558 **DOI:** 10.1007/s00436-016-5246-4 **Published:** DEC 2016

**Record 25 of 151**
**Title:** Genetic Contribution of MHC Class II Genes in Susceptibility to West Nile Virus Infection
**Author(s):** Sarri, CA (Sarri, Constantina A.); Markantoni, M (Markantoni, Maria); Stamatis, C (Stamatis, Costas); Papa, A (Papa, Anna); Tsakris, A (Tsakris, Athanasios); Pervanidou, D (Pervanidou, Danai); Baka, A (Baka, Agoritsa); Politis, C (Politis, Constantina); Billinis, C (Billinis, Charalambos); Hadjichristodoulou, C (Hadjichristodoulou, Christos); Mamuris, Z (Mamuris, Zissis)
**Group Author(s):** MALWEST Project
**Source:** PLOS ONE **Volume:** 11 **Issue:** 11 **Article Number:** e0165952 **DOI:** 10.1371/journal.pone.0165952 **Published:** NOV 3 2016

**Record 26 of 151**
**Title:** Cardiac troponin I concentrations, electrocardiographic and echocardiographic variables remained unchanged in dogs experimentally infected with Ehrlichia canis
**Author(s):** Kalogianni, L (Kalogianni, Lamprini); Koutinas, CK (Koutinas, Christos K.); Theodorou, K (Theodorou, Konstantina); Xenoulis, PG (Xenoulis, Panagiotis G.); Suchodolski, JS (Suchodolski, Jan S.); Harrus, S (Harrus, Shimon); Steiner, JM (Steiner, Joerg M.); Siarkou, VI (Siarkou, Victoria I.); Mylonakis, ME (Mylonakis, Mathios E.)
**Source:** VETERINARY JOURNAL **Volume:** 217 **Pages:** 109-111 **DOI:** 10.1016/j.tvjl.2016.09.007 **Published:** NOV 2016

**Record 27 of 151**
**Title:** Follicular development during superovulation induced with p-FSH in Lesvos ewes
**Author(s):** Theodosiadou, E (Theodosiadou, E.); Grizelj, J (Grizelj, J.); Vince, S (Vince, S.); Valasi, I (Valasi, I.); Mastranestasis, I (Mastranestasis, I.); Saratsi, A (Saratsi, A.); Tsiligianni, T (Tsiligianni, T.); Samartzi, F (Samartzi, F.)
**Source:** REPRODUCTION IN DOMESTIC ANIMALS **Meeting Abstract:** P 251 **Volume:** 51 **Special Issue:** SI **Pages:** 147-147 **Supplement:** 2 **Published:** OCT 2016
**Conference Title:** Joint Meeting of the 20th Annual Conference of the European-Society-for-Domestic-Animal-Reproduction (ESDAR) / 13th Conference of the Spanish-Association-for-Animal-Reproduction (AERA)
**Conference Date:** OCT 27-29, 2016
**Conference Location:** Lisbon, PORTUGAL

**Record 28 of 151**
**Title:** Rabies outbreak in Greece during 2012-2014: use of Geographical Information System for analysis, risk assessment and control
**Author(s):** Giannakopoulos, A (Giannakopoulos, A.); Valiakos, G (Valiakos, G.); Papaspyropoulos, K (Papaspyropoulos, K.); Dougas, G (Dougas, G.); Korou, LM (Korou, L. M.); Tasioudi, KE (Tasioudi, K. E.); Fthenakis, GC (Fthenakis, G. C.); Hutchings, MR (Hutchings, M. R.); Kaimaras, D (Kaimaras, D.); Tsokana, CN (Tsokana, C. N.); Iliadou, P (Iliadou, P.); Spyrou, V (Spyrou, V.); Tzani, M (Tzani, M.); Birtsas, P (Birtsas, P.); Kostoglou, P (Kostoglou, P.); Sokos, C (Sokos, C.); Doudounakis, S (Doudounakis, S.); Yon, L (Yon, L.); Hannant, D (Hannant, D.); Artois, M (Artois, M.); Tsiodras, S (Tsiodras, S.); Hadjichristodoulou, C (Hadjichristodoulou, C.); Billinis, C (Billinis, C.)
**Source:** EPIDEMIOLOGY AND INFECTION **Volume:** 144 **Issue:** 14 **Pages:** 3068-3079 **DOI:** 10.1017/S0950268816001527 **Published:** OCT 2016

**Record 29 of 151**
**Title:** Association between three glycosidases activity [alpha-mannosidase (alpha-MAN), beta-N-acetyloglucosaminidase (NAGASE) and beta-galactosidase (beta-GAL)] and in vitro fertilization of bovine oocytes collected from different-sized follicles
**Author(s):** Cordova, A (Cordova, A.); Samartzi, F (Samartzi, F.); Dovolou, E (Dovolou, E.); Perreau, C (Perreau, C.); Rekkas, K (Rekkas, K.); Mermillod, P (Mermillod, P.); Tsiligianni, T (Tsiligianni, Th.)
**Source:** ANIMAL REPRODUCTION **Volume:** 13 **Issue:** 4 **Pages:** 772-778 **DOI:** 10.21451/1984-3143-AR796 **Published:** OCT-DEC 2016

**Record 30 of 151**
**Title:** Comparison of a non-contact infrared thermometer with a rectal digital thermometer for use in ewes
**Author(s):** Katsoulos, PD (Katsoulos, P. D.); Athanasiou, LV (Athanasiou, L. V.); Karatzia, MA (Karatzia, M. A.); Valasi, I (Valasi, I.); Boscos, C (Boscos, C.); Karatzias, H (Karatzias, H.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 143 **Pages:** 84-88 **DOI:** 10.1016/j.smallrumres.2016.09.004 **Published:** OCT 2016

**Record 31 of 151**

**Title:** Effects of Enterococcus faecium, mannan oligosaccharide, benzoic acid and their mixture on growth performance, intestinal microbiota, intestinal morphology and blood lymphocyte subpopulations of fattening pigs
**Author(s):** Giannenas, I (Giannenas, I.); Doukas, D (Doukas, D.); Karamoutsios, A (Karamoutsios, A.); Tzora, A (Tzora, A.); Bonos, E (Bonos, E.); Skoufos, I (Skoufos, I.); Tsinas, A (Tsinas, A.); Christaki, E (Christaki, E.); Tontis, D (Tontis, D.); Florou-Paneri, P (Florou-Paneri, P.)
**Source:** ANIMAL FEED SCIENCE AND TECHNOLOGY **Volume:** 220 **Pages:** 159-167 **DOI:** 10.1016/j.anifeedsci.2016.08.003 **Published:** OCT 2016

**Record 32 of 151**
**Title:** Mammals and habitat disturbance: the case of brown hare and wildfire
**Author(s):** Sokos, C (Sokos, Christos); Birtsas, P (Birtsas, Periklis); Papaspyropoulos, KG (Papaspyropoulos, Konstantinos G.); Tsachalidis, E (Tsachalidis, Efstathios); Giannakopoulos, A (Giannakopoulos, Alexios); Milis, C (Milis, Chrysostomos); Spyrou, V (Spyrou, Vassiliki); Manolakou, K (Manolakou, Katerina); Valiakos, G (Valiakos, George); Iakovakis, C (Iakovakis, Christos); Athanasiou, LV (Athanasiou, Labrini V.); Sfougaris, A (Sfougaris, Athanasios); Billinis, C (Billinis, Charalambos)
**Source:** CURRENT ZOOLOGY **Volume:** 62 **Issue:** 5 **Pages:** 421-430 **DOI:** 10.1093/cz/zow020 **Published:** OCT 2016

**Record 33 of 151**
**Title:** Ghrelin suppresses the GnRH-induced preovulatory gonadotropin surge in dairy heifers
**Author(s):** Chouzouris, TM (Chouzouris, T. M.); Dovolou, E (Dovolou, E.); Dafopoulos, K (Dafopoulos, K.); Georgoulias, P (Georgoulias, P.); Vasileiou, NG (Vasileiou, N. G.); Fthenakis, GC (Fthenakis, G. C.); Anifandis, G (Anifandis, G.); Amiridis, GS (Amiridis, G. S.)
**Source:** THERIOGENOLOGY **Volume:** 86 **Issue:** 6 **Pages:** 1615-1621 **DOI:** 10.1016/j.theriogenology.2016.05.022 **Published:** OCT 1 2016

**Record 34 of 151**
**Title:** Milk of Greek sheep and goat breeds; characterization by means of proteomics
**Author(s):** Anagnostopoulos, AK (Anagnostopoulos, Athanasios K.); Katsafadou, AI (Katsafadou, Angeliki I.); Pierros, V (Pierros, Vasileios); Kontopodis, E (Kontopodis, Evangelos); Fthenakis, GC (Fthenakis, George C.); Arsenos, G (Arsenos, George); Karkabounas, SC (Karkabounas, Spyridon Ch.); Tzora, A (Tzora, Athina); Skoufos, I (Skoufos, Ioannis); Tsangaris, GT (Tsangaris, George Th.)
**Source:** JOURNAL OF PROTEOMICS **Volume:** 147 **Special Issue:** SI **Pages:** 76-84 **DOI:** 10.1016/j.jprot.2016.04.008 **Published:** SEP 16 2016

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**Title:** Discovery of TNF small molecule inhibitors as potential drugs for rheumatoid arthritis therapy
**Author(s):** Mettou, A (Mettou, A.); Alexiou, P (Alexiou, P.); Liepouri, F (Liepouri, F.); Maranti, A (Maranti, A.); Strongilos, A (Strongilos, A.); Papakyriakou, A (Papakyriakou, A.); Papaneophytou, C (Papaneophytou, C.); Couladouros, E (Couladouros, E.); Eliopoulos, E (Eliopoulos, E.); Kontopidis, G (Kontopidis, G.)
**Source:** FEBS JOURNAL **Meeting Abstract:** P04044-003 **Volume:** 283 **Special Issue:** SI **Pages:** 353-353 **Supplement:** 1 **Published:** SEP 2016
**Conference Title:** 41st FEBS Congress on Molecular and Systems Biology for a Better Life
**Conference Date:** SEP 03-08, 2016
**Conference Location:** Kusadasi, TURKEY

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**Title:** Experiences from the 2014 outbreak of bluetongue in Greece
**Author(s):** Vasileiou, NGC (Vasileiou, N. G. C.); Fthenakis, GC (Fthenakis, G. C.); Amiridis, GS (Amiridis, G. S.); Athanasiou, LV (Athanasiou, L. V.); Birtsas, P (Birtsas, P.); Chatzopoulos, DC (Chatzopoulos, D. C.); Chouzouris, TM (Chouzouris, T. M.); Giannakopoulos, A (Giannakopoulos, A.); Ioannidi, KS (Ioannidi, K. S.); Kalonaki, SN (Kalonaki, S. N.); Katsafadou, AI (Katsafadou, A. I.); Kyriakis, CS (Kyriakis, C. S.); Mavrogianni, VS (Mavrogianni, V. S.); Papadopoulos, E (Papadopoulos, E.); Spyrou, V (Spyrou, V.); Valiakos, G (Valiakos, G.); Venianaki, AP (Venianaki, A. P.); Billinis, C (Billinis, C.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 142 **Special Issue:** SI **Pages:** 61-68 **DOI:** 10.1016/j.smallrumres.2016.02.010 **Published:** SEP 2016
**Conference Title:** 40th National Congress and 16th International Conference of the Spanish-Society-for-Sheep-and-Goat-Production (SEOC)
**Conference Date:** SEP 16-18, 2015
**Conference Location:** Castellon de la Plana, SPAIN

**Record 37 of 151**
**Title:** Spatio-temporal modelling of foot-and-mouth disease outbreaks
**Author(s):** Malesios, C (Malesios, C.); Demiris, N (Demiris, N.); Kostoulas, P (Kostoulas, P.); Dadousis, K (Dadousis, K.); Koutroumanidis, T (Koutroumanidis, T.); Abas, Z (Abas, Z.)
**Source:** EPIDEMIOLOGY AND INFECTION **Volume:** 144 **Issue:** 12 **Pages:** 2485-2493 **DOI:** 10.1017/S095026881600087X **Published:** SEP 2016

**Record 38 of 151**
**Title:** Dissemination of intestinal pathogens between lambs and puppies in sheep farms
**Author(s):** Chatzopoulos, DC (Chatzopoulos, D. C.); Sarrou, S (Sarrou, S.); Vasileiou, NGC (Vasileiou, N. G. C.); Ioannidi, KS (Ioannidi, K. S.); Peteinaki, E (Peteinaki, E.); Valiakos, G (Valiakos, G.); Tsokana, CN (Tsokana, C. N.); Papadopoulos, E (Papadopoulos, E.); Spyrou, V (Spyrou, V.); Mavrogianni, VS (Mavrogianni, V. S.); Giannakopoulos, A (Giannakopoulos, A.); Sbiraki, A (Sbiraki, A.); Lacasta, D (Lacasta, D.); Bueso, JP (Bueso, J. P.); Athanasiou, LV (Athanasiou, L. V.); Billinis, C (Billinis, C.); Fthenakis, GC (Fthenakis, G. C.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 141 **Pages:** 5-10 **DOI:** 10.1016/j.smallrumres.2016.06.006 **Published:** AUG 2016

**Record 39 of 151**
**Title:** Serological Evidence of Pandemic H1N1 Influenza Virus Infections in Greek Swine
**Author(s):** Kyriakis, CS (Kyriakis, C. S.); Papatsiros, VG (Papatsiros, V. G.); Athanasiou, LV (Athanasiou, L. V.); Valiakos, G (Valiakos, G.); Brown, IH (Brown, I. H.); Simon, G (Simon, G.); Van Reeth, K (Van Reeth, K.); Tsiodras, S (Tsiodras, S.); Spyrou, V (Spyrou, V.); Billinis, C (Billinis, C.)
**Source:** ZOONOSES AND PUBLIC HEALTH **Volume:** 63 **Issue:** 5 **Pages:** 370-373 **DOI:** 10.1111/zph.12235 **Published:** AUG 2016

**Record 40 of 151**
**Title:** Environmental parameters as risk factors for human and canine Leishmania infection in Thessaly, Central Greece
**Author(s):** Giannakopoulos, A (Giannakopoulos, Alexios); Tsokana, CN (Tsokana, Constantina N.); Pervanidou, D (Pervanidou, Danai); Papadopoulos, E (Papadopoulos, Elias); Papaspyropoulos, K (Papaspyropoulos, Konstantinos); Spyrou, V (Spyrou, Vassiliki); Burriel, AR (Burriel, Angeliki Rodi); Vakali, A (Vakali, Annita); Hadjichristodoulou, C (Hadjichristodoulou, Christos); Billinis, C (Billinis, Charalambos)
**Source:** PARASITOLOGY **Volume:** 143 **Issue:** 9 **Pages:** 1179-1186 **DOI:** 10.1017/S0031182016000378 **Published:** AUG 2016

**Record 41 of 151**
**Title:** The influence of rodenticides in dissemination of endoparasites of dogs and cats
**Author(s):** Lefkaditis, M (Lefkaditis, M.)
**Source:** Journal of the Hellenic Veterinary Medical Society **Volume:** 67 **Issue:** 3 **Pages:** 139-146 **Published:** JUL-SEP 2016

**Record 42 of 151**
**Title:** Using Combined Diagnostic Test Results to Hindcast Trends of Infection from Cross-Sectional Data
**Author(s):** Rydevik, G (Rydevik, Gustaf); Innocent, GT (Innocent, Giles T.); Marion, G (Marion, Glenn); Davidson, RS (Davidson, Ross S.); White, PCL (White, Piran C. L.); Billinis, C (Billinis, Charalambos); Barrow, P (Barrow, Paul); Mertens, PPC (Mertens, Peter P. C.); Gavier-Widen, D (Gavier-Widen, Dolores); Hutchings, MR (Hutchings, Michael R.)
**Source:** PLOS COMPUTATIONAL BIOLOGY **Volume:** 12 **Issue:** 7 **Article Number:** e1004901 **DOI:** 10.1371/journal.pcbi.1004901 **Published:** JUL 2016

**Record 43 of 151**
**Title:** Prevalence and Clinicopathological Features of Triaditis in a Prospective Case Series of Symptomatic and Asymptomatic Cats
**Author(s):** Fragkou, FC (Fragkou, F. C.); Adamama-Moraitou, KK (Adamama-Moraitou, K. K.); Poutahidis, T (Poutahidis, T.); Prassinos, NN (Prassinos, N. N.); Kritsepi-Konstantinou, M (Kritsepi-Konstantinou, M.); Xenoulis, PG (Xenoulis, P. G.); Steiner, JM (Steiner, J. M.); Lidbury, JA (Lidbury, J. A.); Suchodolski, JS (Suchodolski, J. S.); Rallis, TS (Rallis, T. S.)
**Source:** JOURNAL OF VETERINARY INTERNAL MEDICINE **Volume:** 30 **Issue:** 4 **Pages:** 1031-1045 **DOI:** 10.1111/jvim.14356 **Published:** JUL-AUG 2016

**Record 44 of 151**
**Title:** The microbiological quality of pasteurized milk sold by automatic vending machines
**Author(s):** Angelidis, AS (Angelidis, A. S.); Tsiota, S (Tsiota, S.); Pexara, A (Pexara, A.); Govaris, A (Govaris, A.)

**Source:** LETTERS IN APPLIED MICROBIOLOGY **Volume:** 62 **Issue:** 6 **Pages:** 472-479 **DOI:** 10.1111/lam.12572 **Published:** JUN 2016

**Record 45 of 151**
**Title:** Ectoparasite infestations of urban stray dogs in Greece and their zoonotic potential
**Author(s):** Lefkaditis, MA (Lefkaditis, M. A.); Athanasiou, LV (Athanasiou, L., V); Ionica, AM (Ionica, A. M.); Koukeri, SE (Koukeri, S. E.); Panorias, A (Panorias, A.); Eleftheriadis, TG (Eleftheriadis, T. G.); Boutsini, S (Boutsini, S.)
**Source:** TROPICAL BIOMEDICINE **Volume:** 33 **Issue:** 2 **Pages:** 226-230 **Published:** JUN 2016

**Record 46 of 151**
**Title:** The activity of three glycosidases (beta-N-acetyloglucosaminidase, alpha-mannosidase, and beta-galactosidase) in the follicular fluid and in the maturation medium affects bovine oocyte maturation
**Author(s):** Dovolou, E (Dovolou, E.); Samartzi, F (Samartzi, F.); Perreau, C (Perreau, C.); Krania, F (Krania, F.); Cordova, A (Cordova, A.); Vainas, E (Vainas, E.); Amiridis, GS (Amiridis, G. S.); Mermillod, P (Mermillod, P.); Tsiligianni, T (Tsiligianni, Th.)
**Source:** THERIOGENOLOGY **Volume:** 85 **Issue:** 8 **Pages:** 1468-1475 **DOI:** 10.1016/j.theriogenology.2016.01.003 **Published:** MAY 2016

**Record 47 of 151**
**Title:** Campylobacter spp. infection in humans and poultry
**Author(s):** Natsos, G (Natsos, G.); Koutoulis, KC (Koutoulis, K. C.); Sossidou, E (Sossidou, E.); Chemaly, M (Chemaly, M.); Mouttotou, NK (Mouttotou, N. K.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 67 **Issue:** 2 **Pages:** 65-82 **Published:** APR-JUN 2016

**Record 48 of 151**
**Title:** Update on insulin treatment of dogs and cats with non-complicated diabetes mellitus
**Author(s):** Saridomichelakis, MN (Saridomichelakis, M. N.); Chatzis, MK (Chatzis, M. K.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 67 **Issue:** 2 **Pages:** 83-98 **Published:** APR-JUN 2016

**Record 49 of 151**
**Title:** The bacterial flora of the udder of goats
**Author(s):** Tzora, A (Tzora, A.); Skoufos, J (Skoufos, J.); Tsinas, A (Tsinas, A.); Fotou, K (Fotou, K.); Karamoutsios, A (Karamoutsios, A.); Kalyva, Z (Kalyva, Z.); Nikolaou, K (Nikolaou, K.); Fthenakis, GC (Fthenakis, G. C.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 67 **Issue:** 2 **Pages:** 99-108 **Published:** APR-JUN 2016

**Record 50 of 151**
**Title:** Effect of sow diets supplementation with chelated trace minerals on their reproductive performance
**Author(s):** Skampardonis, V (Skampardonis, V); Lisgara, M (Lisgara, M.); Papatsiros, V (Papatsiros, V); Leontides, L (Leontides, L.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 67 **Issue:** 2 **Pages:** 123-128 **Published:** APR-JUN 2016

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**Title:** A comparison of statistical approaches used for the optimization of soluble protein expression in Escherichia coli
**Author(s):** Papaneophytou, C (Papaneophytou, Christos); Kontopidis, G (Kontopidis, George)
**Source:** PROTEIN EXPRESSION AND PURIFICATION **Volume:** 120 **Pages:** 126-137 **DOI:** 10.1016/j.pep.2015.12.014 **Published:** APR 2016

**Record 52 of 151**
**Title:** Occurrence and antibiotic resistance of enterotoxigenic Staphylococcus aureus in raw ovine and caprine milk in Greece
**Author(s):** Pexara, A (Pexara, Andreana); Solomakos, N (Solomakos, Nikolaos); Sergelidis, D (Sergelidis, Daniel); Angelidis, AS (Angelidis, Apostolos S.); Govaris, A (Govaris, Alexandros)
**Source:** DAIRY SCIENCE & TECHNOLOGY **Volume:** 96 **Issue:** 3 **Pages:** 345-357 **DOI:** 10.1007/s13594-015-0272-z **Published:** MAR 2016

**Record 53 of 151**
**Title:** Dam's infection progress and within-herd prevalence as predictors of Mycobacterium avium subsp paratuberculosis ELISA response in Danish Holstein cattle
**Author(s):** Nielsen, SS (Nielsen, Soren Saxmose); Hansen, KF (Hansen, Kira Frello); Kvist, L (Kvist, Louise); Kostoulas, P (Kostoulas, Polychronis)
**Source:** PREVENTIVE VETERINARY MEDICINE **Volume:** 125 **Pages:** 54-58 **DOI:** 10.1016/j.prevetmed.2016.01.010 **Published:** MAR 1 2016

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**Title:** Pathological evaluation of claw lesions in culled sows from a Greek herd
**Author(s):** Varagka, N (Varagka, Nikoleta); Lisgara, M (Lisgara, Marina); Skampardonis, V (Skampardonis, Vassilis); Psychas, V (Psychas, Vassilis); Leontides, L (Leontides, Leonidas)
**Source:** JOURNAL OF SWINE HEALTH AND PRODUCTION **Volume:** 24 **Issue:** 2 **Pages:** 72-80 **Published:** MAR-APR 2016

**Record 55 of 151**
**Title:** Acute phase protein and antioxidant responses in dogs with experimental acute monocytic ehrlichiosis treated with rifampicin
**Author(s):** Karnezi, D (Karnezi, Dimitra); Ceron, JJ (Ceron, Jose J.); Theodorou, K (Theodorou, Konstantina); Leontides, L (Leontides, Leonidas); Siarkou, VI (Siarkou, Victoria I.); Martinez, S (Martinez, Silvia); Tvarijonaviciute, A (Tvarijonaviciute, Asta); Harrus, S (Harrus, Shimon); Koutinas, CK (Koutinas, Christos K.); Pardali, D (Pardali, Dimitra); Mylonakis, ME (Mylonakis, Mathios E.)
**Source:** VETERINARY MICROBIOLOGY **Volume:** 184 **Pages:** 59-63 **DOI:** 10.1016/j.vetmic.2016.01.007 **Published:** FEB 29 2016

**Record 56 of 151**
**Title:** On-farm welfare monitoring of small ruminants
**Author(s):** Caroprese, M (Caroprese, M.); Napolitano, F (Napolitano, F.); Mattiello, S (Mattiello, S.); Fthenakis, GC (Fthenakis, G. C.); Ribo, O (Ribo, O.); Sevi, A (Sevi, A.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 135 **Special Issue:** SI **Pages:** 20-25 **DOI:** 10.1016/j.smallrumres.2015.12.010 **Published:** FEB 2016

**Record 57 of 151**
**Title:** Bayesian estimation of sensitivity and specificity of a commercial serum/milk ELISA against the Mycobacterium avium subsp Paratuberculosis (MAP) antibody response for each lactation stage in Greek dairy sheep
**Author(s):** Angelidou, E (Angelidou, Elisavet); Kostoulas, P (Kostoulas, Polychronis); Leontides, L (Leontides, Leonidas)
**Source:** PREVENTIVE VETERINARY MEDICINE **Volume:** 124 **Pages:** 102-105 **DOI:** 10.1016/j.prevetmed.2015.12.011 **Published:** FEB 1 2016

**Record 58 of 151**
**Title:** Hare demography, physiology and European Brown Hare Syndrome virus infection: is there an association?
**Author(s):** Sokos, C (Sokos, C.); Touloudi, A (Touloudi, A.); Iakovakis, C (Iakovakis, C.); Papaspyropoulos, K (Papaspyropoulos, K.); Giannakopoulos, A (Giannakopoulos, A.); Birtsas, P (Birtsas, P.); Spyrou, V (Spyrou, V.); Theodosiadou, E (Theodosiadou, E.); Valasi, I (Valasi, I.); Sfougaris, A (Sfougaris, A.); Billinis, C (Billinis, C.)
**Source:** JOURNAL OF ZOOLOGY **Volume:** 298 **Issue:** 2 **Pages:** 150-157 **DOI:** 10.1111/jzo.12299 **Published:** FEB 2016

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**Title:** Role of probiotics in nutrition and health of small ruminants
**Author(s):** Abd El-Tawab, MM (Abd El-Tawab, M. M.); Youssef, IMI (Youssef, I. M. I.); Bakr, HA (Bakr, H. A.); Fthenakis, GC (Fthenakis, G. C.); Giadinis, ND (Giadinis, N. D.)
**Source:** POLISH JOURNAL OF VETERINARY SCIENCES **Volume:** 19 **Issue:** 4 **Pages:** 893-906 **DOI:** 10.1515/pjvs-2016-0114 **Published:** 2016

**Record 60 of 151**
**Title:** Applied Proteomics in Companion Animal Medicine
**Author(s):** Katsafadou, AI (Katsafadou, Angeliki I.); Tsangaris, GT (Tsangaris, George T.); Billinis, C (Billinis, Charalambos); Fthenakis, GC (Fthenakis, George C.)
**Source:** Current Proteomics **Volume:** 13 **Issue:** 3 **Pages:** 165-171 **DOI:** 10.2174/1570164613666160531121855 **Published:** 2016

**Record 61 of 151**
**Title:** Management of distal limb skin defects in dogs and cats
**Author(s):** Tsioli, V (Tsioli, V); Dermisiadou, E (Dermisiadou, E.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 67 **Issue:** 1 **Pages:** 5-16 **Published:** JAN-MAR 2016

**Record 62 of 151**
**Title:** Ultrasonographic examination of the canine skin: a review
**Author(s):** Mantis, P (Mantis, P.); Saridomichelakis, MN (Saridomichelakis, M. N.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 67 **Issue:** 1 **Pages:** 17-20 **Published:** JAN-MAR 2016

**Record 63 of 151**
**Title:** Tenacibaculosis in aquaculture farmed marine fish
**Author(s):** Gourzioti, E (Gourzioti, E.); Kolygas, MN (Kolygas, M. N.); Athanassopoulou, F (Athanassopoulou, F.); Babili, V (Babili, V)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 67 **Issue:** 1 **Pages:** 21-32 **Published:** JAN-MAR 2016

**Record 64 of 151**
**Title:** Effect of increased dietary fiber on hoof lesions of loose housed sows
**Author(s):** Skampardonis, V (Skampardonis, V); Lisgara, M (Lisgara, M.); Tzika, ED (Tzika, E. D.); Leontides, L (Leontides, L.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 67 **Issue:** 1 **Pages:** 39-46 **Published:** JAN-MAR 2016

**Record 65 of 151**
**Title:** Effects of two occlusive, hydrocolloid dressings on healing of full-thickness skin wounds in cats
**Author(s):** Tsioli, V (Tsioli, Vassiliki); Gouletsou, PG (Gouletsou, Pagona G.); Galatos, AD (Galatos, Apostolos D.); Psalla, D (Psalla, Dimitra); Lymperis, A (Lymperis, Antonis); Papazoglou, LG (Papazoglou, Lyssimachos G.); Karayannopoulou, M (Karayannopoulou, Maria)
**Source:** VETERINARY AND COMPARATIVE ORTHOPAEDICS AND TRAUMATOLOGY **Volume:** 29 **Issue:** 4 **Pages:** 298-305 **DOI:** 10.3415/VCOT-15-04-0058 **Published:** 2016

**Record 66 of 151**
**Title:** Effects of oregano essential oil and attapulgite on growth performance, intestinal microbiota and morphometry in broilers
**Author(s):** Skoufos, I (Skoufos, I.); Giannenas, I (Giannenas, I.); Tontis, D (Tontis, D.); Bartzanas, T (Bartzanas, T.); Kittas, C (Kittas, C.); Panagakis, P (Panagakis, P.); Tzora, A (Tzora, A.)
**Source:** SOUTH AFRICAN JOURNAL OF ANIMAL SCIENCE **Volume:** 46 **Issue:** 1 **Pages:** 77-88 **DOI:** 10.4314/sajas.v46i1.10 **Published:** 2016

**Record 67 of 151**

**Title:** First evidence of Leishmania infection in European brown hare (Lepus europaeus) in Greece: GIS analysis and phylogenetic position within the Leishmania spp
**Author(s):** Tsokana, CN (Tsokana, C. N.); Sokos, C (Sokos, C.); Giannakopoulos, A (Giannakopoulos, A.); Mamuris, Z (Mamuris, Z.); Birtsas, P (Birtsas, P.); Papaspyropoulos, K (Papaspyropoulos, K.); Valiakos, G (Valiakos, G.); Spyrou, V (Spyrou, V.); Lefkaditis, M (Lefkaditis, M.); Chatzopoulos, DC (Chatzopoulos, D. C.); Kantere, M (Kantere, M.); Manolakou, K (Manolakou, K.); Touloudi, A (Touloudi, A.); Burriel, AR (Burriel, A. Rodi); Ferroglio, E (Ferroglio, E.); Hadjichristodoulou, C (Hadjichristodoulou, C.); Billinis, C (Billinis, C.)
**Source:** PARASITOLOGY RESEARCH **Volume:** 115 **Issue:** 1 **Pages:** 313-321 **DOI:** 10.1007/s00436-015-4749-8 **Published:** JAN 2016

**Record 68 of 151**
**Title:** Cross-Sectional Serosurvey and Risk Factors Associated with the Presence of Toxoplasma gondii Antibodies in Pigs in Greece
**Author(s):** Papatsiros, VG (Papatsiros, Vasileios G.); Athanasiou, LV (Athanasiou, Labrini V.); Stougiou, D (Stougiou, Despina); Papadopoulos, E (Papadopoulos, Elias); Maragkakis, GG (Maragkakis, Giorgios G.); Katsoulos, PD (Katsoulos, Panagiotis D.); Lefkaditis, M (Lefkaditis, Menelaos); Kantas, D (Kantas, Dimitrios); Tzika, ED (Tzika, Eleni D.); Tassis, PD (Tassis, Panagiotis D.); Boutsini, S (Boutsini, Sofia)
**Source:** VECTOR-BORNE AND ZOONOTIC DISEASES **Volume:** 16 **Issue:** 1 **Pages:** 48-53 **DOI:** 10.1089/vbz.2015.1845 **Published:** JAN 1 2016

**Record 69 of 151**
**Title:** An update on the treatment of canine atopic dermatitis
**Author(s):** Saridomichelakis, MN (Saridomichelakis, Manolis N.); Olivry, T (Olivry, Thierry)
**Source:** VETERINARY JOURNAL **Volume:** 207 **Pages:** 29-37 **DOI:** 10.1016/j.tvjl.2015.09.016 **Published:** JAN 2016

**Record 70 of 151**
**Title:** Microbial Diseases of Sheep and Goats Preface
**Author(s):** Fthenakis, GC (Fthenakis, G. C.)
**Source:** VETERINARY MICROBIOLOGY **Volume:** 181 **Issue:** 1-2 **Special Issue:** SI **Pages:** 1-1 **DOI:** 10.1016/j.vetmic.2015.07.035 **Published:** DEC 14 2015

**Record 71 of 151**
**Title:** Interactions between nutritional approaches and defences against microbial diseases in small ruminants
**Author(s):** Caroprese, M (Caroprese, M.); Giannenas, I (Giannenas, I.); Fthenakis, GC (Fthenakis, G. C.)
**Source:** VETERINARY MICROBIOLOGY **Volume:** 181 **Issue:** 1-2 **Special Issue:** SI **Pages:** 8-14 **DOI:** 10.1016/j.vetmic.2015.07.014 **Published:** DEC 14 2015

**Record 72 of 151**
**Title:** Use of proteomics in the study of microbial diseases of small ruminants
**Author(s):** Katsafadou, AI (Katsafadou, A. I.); Tsangaris, GT (Tsangaris, G. Th.); Billinis, C (Billinis, C.); Fthenakis, GC (Fthenakis, G. C.)
**Source:** VETERINARY MICROBIOLOGY **Volume:** 181 **Issue:** 1-2 **Special Issue:** SI **Pages:** 27-33 **DOI:** 10.1016/j.vetmic.2015.07.017 **Published:** DEC 14 2015

**Record 73 of 151**
**Title:** Vaccination schedules in small ruminant farms
**Author(s):** Lacasta, D (Lacasta, D.); Ferrer, LM (Ferrer, L. M.); Ramos, JJ (Ramos, J. J.); Gonzalez, JM (Gonzalez, J. M.); Ortin, A (Ortin, A.); Fthenakis, GC (Fthenakis, G. C.)
**Source:** VETERINARY MICROBIOLOGY **Volume:** 181 **Issue:** 1-2 **Special Issue:** SI **Pages:** 34-46 **DOI:** 10.1016/j.vetmic.2015.07.018 **Published:** DEC 14 2015

**Record 74 of 151**
**Title:** Bluetongue in small ruminants: An opinionated review, with a brief appraisal of the 2014 outbreak of the disease in Greece and the south-east Europe
**Author(s):** Kyriakis, CS (Kyriakis, C. S.); Billinis, C (Billinis, C.); Papadopoulos, E (Papadopoulos, E.); Vasileiou, NGC (Vasileiou, N. G. C.); Athanasiou, LV (Athanasiou, L. V.); Fthenakis, GC (Fthenakis, G. C.)
**Source:** VETERINARY MICROBIOLOGY **Volume:** 181 **Issue:** 1-2 **Special Issue:** SI **Pages:** 66-74 **DOI:** 10.1016/j.vetmic.2015.08.004 **Published:** DEC 14 2015

**Record 75 of 151**
**Title:** Microbial diseases of the genital system of rams or bucks
**Author(s):** Gouletsou, PG (Gouletsou, P. G.); Fthenakis, GC (Fthenakis, G. C.)
**Source:** VETERINARY MICROBIOLOGY **Volume:** 181 **Issue:** 1-2 **Special Issue:** SI **Pages:** 130-135 **DOI:** 10.1016/j.vetmic.2015.07.016 **Published:** DEC 14 2015

**Record 76 of 151**
**Title:** Mastitis in sheep - The last 10 years and the future of research
**Author(s):** Gelasakis, AI (Gelasakis, A. I.); Mavrogianni, VS (Mavrogianni, V. S.); Petridis, IG (Petridis, I. G.); Vasileiou, NGC (Vasileiou, N. G. C.); Fthenakis, GC (Fthenakis, G. C.)
**Source:** VETERINARY MICROBIOLOGY **Volume:** 181 **Issue:** 1-2 **Special Issue:** SI **Pages:** 136-146 **DOI:** 10.1016/j.vetmic.2015.07.009 **Published:** DEC 14 2015

**Record 77 of 151**
**Title:** Orf virus infection in sheep or goats
**Author(s):** Spyrou, V (Spyrou, V.); Valiakos, G (Valiakos, G.)
**Source:** VETERINARY MICROBIOLOGY **Volume:** 181 **Issue:** 1-2 **Special Issue:** SI **Pages:** 178-182 **DOI:** 10.1016/j.vetmic.2015.08.010 **Published:** DEC 14 2015

**Record 78 of 151**
**Title:** Pregnancy toxaemia in ewes: Development of an experimental model and potential interactions with gastrointestinal nematode infections
**Author(s):** Barbagianni, MS (Barbagianni, M. S.); Giannenas, E (Giannenas, E.); Papadopoulos, E (Papadopoulos, E.); Petridis, IG (Petridis, I. G.); Spanos, SA (Spanos, S. A.); Gouletsou, PG (Gouletsou, P. G.); Valasi, I (Valasi, I.); Fthenakis, GC (Fthenakis, G. C.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 133 **Pages:** 102-107 **DOI:** 10.1016/j.smallrumres.2015.09.008 **Published:** DEC 2015

**Record 79 of 151**
**Title:** West Nile Virus Seroprevalence in the Greek Population in 2013: A Nationwide Cross-Sectional Survey
**Author(s):** Hadjichristodoulou, C (Hadjichristodoulou, Christos); Pournaras, S (Pournaras, Spyros); Mavrouli, M (Mavrouli, Maria); Marka, A (Marka, Andriani); Tserkezou, P (Tserkezou, Persefoni); Baka, A (Baka, Agoritsa); Billinis, C (Billinis, Charalambos); Katsioulis, A (Katsioulis, Antonios); Psaroulaki, A (Psaroulaki, Anna); Papa, A (Papa, Anna); Papadopoulos, N (Papadopoulos, Nikos); Mamuris, Z (Mamuris, Zissis); Tsakris, A (Tsakris, Athanasios); Kremastinou, J (Kremastinou, Jenny)
**Group Author(s):** MALWEST Project
**Source:** PLOS ONE **Volume:** 10 **Issue:** 11 **Article Number:** e0143803 **DOI:** 10.1371/journal.pone.0143803 **Published:** NOV 25 2015

**Record 80 of 151**
**Title:** Increased incidence of peri-parturient problems in ewes with pregnancy toxaemia
**Author(s):** Barbagianni, MS (Barbagianni, M. S.); Spanos, SA (Spanos, S. A.); Ioannidi, KS (Ioannidi, K. S.); Vasileiou, NGC (Vasileiou, N. G. C.); Katsafadou, AI (Katsafadou, A. I.); Valasi, I (Valasi, I.); Gouletsou, PG (Gouletsou, P. G.); Fthenakis, GC (Fthenakis, G. C.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 132 **Pages:** 111-114 **DOI:** 10.1016/j.smallrumres.2015.10.017 **Published:** NOV 2015

**Record 81 of 151**
**Title:** The effect of butorphanol on the incidence of dexmedetomidine-induced emesis in cats
**Author(s):** Papastefanou, AK (Papastefanou, Anastasia K.); Galatos, AD (Galatos, Apostolos D.); Pappa, E (Pappa, Eirini); Lymperis, AG (Lymperis, Antonios G.); Kostoulas, P (Kostoulas, Polychronis)
**Source:** VETERINARY ANAESTHESIA AND ANALGESIA **Volume:** 42 **Issue:** 6 **Pages:** 608-613 **DOI:** 10.1111/vaa.12260 **Published:** NOV 2015

**Record 82 of 151**
**Title:** Canine hyperlipidaemia
**Author(s):** Xenoulis, PG (Xenoulis, P. G.); Steiner, JM (Steiner, J. M.)
**Source:** JOURNAL OF SMALL ANIMAL PRACTICE **Volume:** 56 **Issue:** 10 **Pages:** 595-605 **DOI:** 10.1111/jsap.12396 **Published:** OCT 2015

**Record 83 of 151**
**Title:** Erythema Multiforme Associated with Respiratory Disease in a Commercial Breeding Pig Herd
**Author(s):** Papatsiros, VG (Papatsiros, Vasileios G.); Athanasiou, LV (Athanasiou, Labrini V.); Psalla, D (Psalla, Dimitra); Petridou, E (Petridou, Evanthia); Maragkakis, GG (Maragkakis, Giorgos G.); Papatsas, I (Papatsas, Ioannis); Arsenakis, I (Arsenakis, Ioannis); Maes, D (Maes, Dominiek)

**Source:** VIRAL IMMUNOLOGY **Volume:** 28 **Issue:** 8 **Pages:** 464-471 **DOI:** 10.1089/vim.2015.0063 **Published:** OCT 1 2015

**Record 84 of 151**
**Title:** Urban stray cats infested by ectoparasites with zoonotic potential in Greece
**Author(s):** Lefkaditis, MA (Lefkaditis, Menelaos A.); Sossidou, AV (Sossidou, Anna V.); Panorias, AH (Panorias, Alexandros H.); Koukeri, SE (Koukeri, Smaragda E.); Pastiu, AI (Pastiu, Anamaria I.); Athanasiou, LV (Athanasiou, Labrini V.)
**Source:** PARASITOLOGY RESEARCH **Volume:** 114 **Issue:** 10 **Pages:** 3931-3934 **DOI:** 10.1007/s00436-015-4688-4 **Published:** OCT 2015

**Record 85 of 151**
**Title:** Laboratory development of Dermacentor marginatus ticks (Acari: Ixodidae) at two temperatures
**Author(s):** Magdas, C (Magdas, Cristian); Magdas, VA (Magdas, Virginia Ana); Mihalca, AD (Mihalca, Andrei Daniel); Baciu, H (Baciu, Horea); Gherman, CM (Gherman, Calin Mircea); Stefanut, CL (Stefanut, Cristina Laura); Lefkaditis, M (Lefkaditis, Menelaos); Cozma, V (Cozma, Vasile)
**Source:** EXPERIMENTAL AND APPLIED ACAROLOGY **Volume:** 67 **Issue:** 2 **Pages:** 309-315 **DOI:** 10.1007/s10493-015-9942-z **Published:** OCT 2015

**Record 86 of 151**
**Title:** Dissemination of parasites by animal movements in small ruminant farms
**Author(s):** Vasileiou, NGC (Vasileiou, N. G. C.); Fthenakis, GC (Fthenakis, G. C.); Papadopoulos, E (Papadopoulos, E.)
**Source:** VETERINARY PARASITOLOGY **Volume:** 213 **Issue:** 1-2 **Special Issue:** SI **Pages:** 56-60 **DOI:** 10.1016/j.vetpar.2015.04.031 **Published:** SEP 30 2015

**Record 87 of 151**
**Title:** Superovulatory response of Lesvos ewes to p-FSH
**Author(s):** Samartzi, F (Samartzi, F.); Grizelj, J (Grizelj, J.); Vince, S (Vince, S.); Mastranestasis, I (Mastranestasis, I.); Saratsi, A (Saratsi, A.); Vainas, E (Vainas, E.); Valasi, I (Valasi, I.); Theodosiadou, E (Theodosiadou, E.)
**Source:** REPRODUCTION IN DOMESTIC ANIMALS **Meeting Abstract:** P128 **Volume:** 50 **Special Issue:** SI **Pages:** 75-75 **Supplement:** 3 **Published:** SEP 2015
**Conference Title:** 19th Annual Conference of the European-Society-for-Domestic-Animal-Reproduction (ESDAR)
**Conference Date:** SEP 17-19, 2015
**Conference Location:** Albena, BULGARIA

**Record 88 of 151**
**Title:** Ovarian steroid concentrations in Lesvos sheep superovulated with FSH
**Author(s):** Theodosiadou, E (Theodosiadou, E.); Samartzi, F (Samartzi, F.); Valasi, I (Valasi, I.); Dovenski, T (Dovenski, T.); Saratsi, A (Saratsi, A.); Bakaras, C (Bakaras, C.); Rekkas, C (Rekkas, C.)
**Source:** REPRODUCTION IN DOMESTIC ANIMALS **Meeting Abstract:** P148 **Volume:** 50 **Special Issue:** SI **Pages:** 80-80 **Supplement:** 3 **Published:** SEP 2015
**Conference Title:** 19th Annual Conference of the European-Society-for-Domestic-Animal-Reproduction (ESDAR)
**Conference Date:** SEP 17-19, 2015
**Conference Location:** Albena, BULGARIA

**Record 89 of 151**
**Title:** The activity of certain glycosidases in maturation medium is associated with bovine oocytes maturation
**Author(s):** Tsiligianni, T (Tsiligianni, T.); Perreau, C (Perreau, C.); Samartzi, F (Samartzi, F.); Dovolou, E (Dovolou, E.); Cordova, A (Cordova, A.); Krania, F (Krania, F.); Vainas, E (Vainas, E.); Mermillod, P (Mermillod, P.)
**Source:** REPRODUCTION IN DOMESTIC ANIMALS **Meeting Abstract:** P151 **Volume:** 50 **Special Issue:** SI **Pages:** 81-81 **Supplement:** 3 **Published:** SEP 2015
**Conference Title:** 19th Annual Conference of the European-Society-for-Domestic-Animal-Reproduction (ESDAR)
**Conference Date:** SEP 17-19, 2015
**Conference Location:** Albena, BULGARIA

**Record 90 of 151**
**Title:** Pregnancy toxaemia as predisposing factor for development of mastitis in sheep during the immediately post-partum period
**Author(s):** Barbagianni, MS (Barbagianni, M. S.); Mavrogianni, VS (Mavrogianni, V. S.); Katsafadou, AI (Katsafadou, A. I.); Spanos, SA (Spanos, S. A.); Tsioli, V (Tsioli, V.); Galatos, AD (Galatos, A. D.); Nakou, M (Nakou, M.); Valasi, I (Valasi, I.); Gouletsou, PG (Gouletsou, P. G.); Fthenakis, GC (Fthenakis, G. C.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 130 **Pages:** 246-251 **DOI:** 10.1016/j.smallrumres.2015.07.002 **Published:** SEP 2015

**Record 91 of 151**
**Title:** Hoof lesions and lameness in sows in three Greek swine herds
**Author(s):** Lisgara, M (Lisgara, Marina); Skampardonis, V (Skampardonis, Vassilis); Kouroupides, S (Kouroupides, Stelios); Leontides, L (Leontides, Leonidas)
**Source:** JOURNAL OF SWINE HEALTH AND PRODUCTION **Volume:** 23 **Issue:** 5 **Pages:** 244-251 **Published:** SEP-OCT 2015

**Record 92 of 151**
**Title:** Development and Evaluation of a Phospholipid-sterol-protein Membrane Resembling System
**Author(s):** Gortzi, O (Gortzi, Olga); Rovoli, M (Rovoli, Magdalini); Lalas, S (Lalas, Stavros); Kontopidis, G (Kontopidis, George)
**Source:** FOOD BIOPHYSICS **Volume:** 10 **Issue:** 3 **Pages:** 300-308 **DOI:** 10.1007/s11483-015-9390-7 **Published:** SEP 2015

**Record 93 of 151**
**Title:** Efficient soluble expression of active recombinant human cyclin A2 mediated by E. coli molecular chaperones
**Author(s):** Grigoroudis, AI (Grigoroudis, Asterios I.); McInnes, C (McInnes, Campbell); Premnath, PN (Premnath, Padmavathy Nandha); Kontopidis, G (Kontopidis, George)
**Source:** PROTEIN EXPRESSION AND PURIFICATION **Volume:** 113 **Pages:** 8-16 **DOI:** 10.1016/j.pep.2015.01.013 **Published:** SEP 2015

**Record 94 of 151**
**Title:** Ultrasonographic findings in the ovine udder during lactogenesis in healthy ewes or ewes with pregnancy toxaemia
**Author(s):** Barbagianni, MS (Barbagianni, Mariana S.); Gouletsou, PG (Gouletsou, Pagona G.); Valasi, I (Valasi, Irene); Petridis, IG (Petridis, Ioannis G.); Giannenas, I (Giannenas, Ilias); Fthenakis, GC (Fthenakis, George C.)
**Source:** JOURNAL OF DAIRY RESEARCH **Volume:** 82 **Issue:** 3 **Pages:** 293-303 **DOI:** 10.1017/S0022029915000382 **Published:** AUG 2015

**Record 95 of 151**
**Title:** Characteristics of non-cerebral coenurosis in tropical goats
**Author(s):** Christodoulopoulos, G (Christodoulopoulos, G.); Kassab, A (Kassab, A.); Theodoropoulos, G (Theodoropoulos, G.)
**Source:** VETERINARY PARASITOLOGY **Volume:** 211 **Issue:** 3-4 **Pages:** 216-222 **DOI:** 10.1016/j.vetpar.2015.05.020 **Published:** JUL 30 2015

**Record 96 of 151**
**Title:** Nitrates and Nitrites in meat products
**Author(s):** Govari, M (Govari, M.); Pexara, A (Pexara, A.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 66 **Issue:** 3 **Pages:** 127-140 **Published:** JUL-SEP 2015

**Record 97 of 151**
**Title:** Sialocele in the cat. A report of 2 cases
**Author(s):** Tsioli, V (Tsioli, V); Brellou, G (Brellou, G.); Siziopkou, C (Siziopkou, C.); Vamvakerou, M (Vamvakerou, M.); Georgaki, V (Georgaki, V); Voutsinou, A (Voutsinou, A.); Mastora, C (Mastora, C.); Papazoglou, LG (Papazoglou, L. G.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 66 **Issue:** 3 **Pages:** 141-146 **Published:** JUL-SEP 2015

**Record 98 of 151**
**Title:** Bluetongue Virus in wild ruminants in Europe: Concerns and facts, with a brief reference to bluetongue in cervids in Greece during the 2014 outbreak
**Author(s):** Chatzopoulos, DC (Chatzopoulos, D. C.); Valiakos, G (Valiakos, G.); Giannakopoulos, A (Giannakopoulos, A.); Birtsas, P (Birtsas, P.); Sokos, C (Sokos, C.); Vasileiou, NGC (Vasileiou, N. G. C.); Papaspyropoulos, K (Papaspyropoulos, K.); Tsokana, CN (Tsokana, C. N.); Spyrou, V (Spyrou, V.); Fthenakis, GC (Fthenakis, G. C.); Billinis, C (Billinis, C.)
**Source:** SMALL RUMINANT RESEARCH **Volume:** 128 **Pages:** 79-87 **DOI:** 10.1016/j.smallrumres.2015.03.009 **Published:** JUL 2015

**Record 99 of 151**
**Title:** A field trial of spinosad for the treatment and prevention of flea infestation in shepherd dogs living in close proximity to flea-infested sheep
**Author(s):** Saridomichelakis, MN (Saridomichelakis, Manolis N.); Chatzis, MK (Chatzis, Manolis K.); Petanides, T (Petanides, Theodoros); Papadopoulos, E (Papadopoulos, Elias)
**Source:** PARASITES & VECTORS **Volume:** 8 **Article Number:** 324 **DOI:** 10.1186/s13071-015-0945-8 **Published:** JUN 12 2015

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**Title:** UROKINASE-TYPE PLASMINOGEN ACTIVATOR DOES NOT AFFECT IN VITRO BOVINE EMBRYO DEVELOPMENT AND QUALITY
**Author(s):** Krania, F (Krania, Fotini); Dovolou, E (Dovolou, Eleni); Rekkas, CA (Rekkas, Constantinos A.); Heras, S (Heras, Sonia); Pappas, I (Pappas, Ioannis); Van Soom, A (Van Soom, Ann); Amiridis, GS (Amiridis, Georgios S.)
**Source:** ACTA VETERINARIA HUNGARICA **Volume:** 63 **Issue:** 2 **Pages:** 243-254 **DOI:** 10.1556/004.2015.022 **Published:** JUN 2015

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**Title:** Crohn's disease-specific anti-CUZD1 pancreatic antibodies are absent in ruminants with paratuberculosis
**Author(s):** Liaskos, C (Liaskos, Christos); Spyrou, V (Spyrou, Vassiliki); Athanasiou, LV (Athanasiou, Labrini V.); Orfanidou, T (Orfanidou, Timoklia); Mavropoulos, A (Mavropoulos, Athanasios); Rigopoulou, EI (Rigopoulou, Eirini I.); Amiridis, GS (Amiridis, Georgios S.); Shoenfeld, Y (Shoenfeld, Yehuda); Billinis, C (Billinis, Charalambos); Bogdanos, DP (Bogdanos, Dimitrios P.)
**Source:** CLINICS AND RESEARCH IN HEPATOLOGY AND GASTROENTEROLOGY **Volume:** 39 **Issue:** 3 **Pages:** 384-390 **DOI:** 10.1016/j.clinre.2014.12.001 **Published:** JUN 2015

**Record 102 of 151**
**Title:** A brief exposure to low pH prior to refrigerated storage reduces the motility and viability of goldfish sperm (Carassius auratus, Linnaeus, 1758)
**Author(s):** Chantzaropoulos, A (Chantzaropoulos, A.); Nathanailides, C (Nathanailides, C.); Kokokiris, L (Kokokiris, L.); Barbouti, A (Barbouti, A.); Zhang, T (Zhang, T.)
**Source:** JOURNAL OF APPLIED ICHTHYOLOGY **Volume:** 31 **Special Issue:** SI **Pages:** 89-93 **DOI:** 10.1111/jai.12735 **Supplement:** 1 **Published:** JUN 2015
**Conference Title:** 4th International Workshop on the Biology of Fish Gametes
**Conference Date:** SEP 17-20, 2013
**Conference Location:** Albufeira, PORTUGAL

**Record 103 of 151**
**Title:** Synovial fluid cytology in experimental acute canine monocytic ehrlichiosis (Ehrlichia canis)
**Author(s):** Theodorou, K (Theodorou, Konstantina); Leontides, L (Leontides, Leonidas); Siarkou, VI (Siarkou, Victoria I.); Petanides, T (Petanides, Theodoros); Tsafas, K (Tsafas, Konstantinos); Harrus, S (Harrus, Shimon); Mylonakis, ME (Mylonakis, Mathios E.)
**Source:** VETERINARY MICROBIOLOGY **Volume:** 177 **Issue:** 1-2 **Pages:** 224-227 **DOI:** 10.1016/j.vetmic.2015.02.032 **Published:** MAY 15 2015

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**Title:** Pathological Evaluation of Reproductive System of Porcine Reproductive and Respiratory Syndrome Virus-Vaccinated and Nonvaccinated Anestrus Sows and Gilts
**Author(s):** Papatsiros, V (Papatsiros, Vasileios); Psalla, D (Psalla, Dimitra); Papaioannou, D (Papaioannou, Dimitrios); Tassis, P (Tassis, Panagiotis); Tzika, E (Tzika, Eleni); Papaioannou, N (Papaioannou, Nikolaos)
**Source:** VIRAL IMMUNOLOGY **Volume:** 28 **Issue:** 4 **Pages:** 229-235 **DOI:** 10.1089/vim.2014.0138 **Published:** MAY 1 2015

**Record 105 of 151**
**Title:** The influence of retail display storage on the fatty acid composition of modified atmosphere packaged Graviera Agraphon cheese
**Author(s):** Fletouris, DJ (Fletouris, Dimitrios J.); Govari, MA (Govari, Maria A.); Botsoglou, EN (Botsoglou, Evropi N.)
**Source:** INTERNATIONAL JOURNAL OF DAIRY TECHNOLOGY **Volume:** 68 **Issue:** 2 **Pages:** 218-226 **DOI:** 10.1111/1471-0307.12182 **Published:** MAY 2015

**Record 106 of 151**
**Title:** Exposure of extensively farmed wild boars (Sus scrofa scrofa) to selected pig pathogens in Greece
**Author(s):** Marinou, KA (Marinou, K. A.); Papatsiros, VG (Papatsiros, V. G.); Gkotsopoulos, EK (Gkotsopoulos, E. K.); Odatzoglou, PK (Odatzoglou, P. K.); Athanasiou, LV (Athanasiou, L. V.)
**Source:** VETERINARY QUARTERLY **Volume:** 35 **Issue:** 2 **Pages:** 97-101 **DOI:** 10.1080/01652176.2015.1022666 **Published:** APR 3 2015

**Record 107 of 151**
**Title:** Dissemination of Methicillin-Susceptible CC398 Staphylococcus aureus Strains in a Rural Greek Area
**Author(s):** Sarrou, S (Sarrou, Styliani); Liakopoulos, A (Liakopoulos, Apostolos); Chasioti, M (Chasioti, Markella); Foka, A (Foka, Antigoni); Fthenakis, G (Fthenakis, Georgios); Billinis, C (Billinis, Charalampos); Spyrou, V (Spyrou, Vassiliki); Pantelidi, K (Pantelidi, Kleoniki); Roussaki-Schulze, A (Roussaki-Schulze, Angeliki); Lachanas, V (Lachanas, Vassilios); Makaritsis, K (Makaritsis, Konstantinos); Skoulakis, C (Skoulakis, Charalampos); Daikos, GL (Daikos, Georgios L.); Dalekos, G (Dalekos, Georgios); Spiliopoulou, I (Spiliopoulou, Iris); Petinaki, E (Petinaki, Efthymia)
**Source:** PLOS ONE **Volume:** 10 **Issue:** 4 **Article Number:** e0122761 **DOI:** 10.1371/journal.pone.0122761 **Published:** APR 2 2015

**Record 108 of 151**
**Title:** The application of in vitro fertilization techniques for the evaluation of ram fertility
**Author(s):** Papadopoulos, S (Papadopoulos, S.); Theodosiadou, E (Theodosiadou, E.); Kantas, D (Kantas, D.); Valasi, I (Valasi, I.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 66 **Issue:** 2 **Pages:** 63-69 **Published:** APR-JUN 2015

**Record 109 of 151**
**Title:** Canine Diabetic Ketosis-Ketoacidosis: A Retrospective Study of 23 Cases (1997-2013)
**Author(s):** Kasabalis, D (Kasabalis, D.); Chouzouris, TP (Chouzouris, T. P.); Timiou, DT (Timiou, D. T.); Tselekis, DP (Tselekis, D. P.); Soubasis, N (Soubasis, N.); Petanides, TA (Petanides, T. A.); Saridomichelakis, MN (Saridomichelakis, M. N.); Mylonakis, ME (Mylonakis, M. E.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 66 **Issue:** 2 **Pages:** 80-92 **Published:** APR-JUN 2015

**Record 110 of 151**
**Title:** An outbreak of Avian Encephalomyelitis in broilers in Greece
**Author(s):** Koutoulis, KC (Koutoulis, K. C.); Horvath-Papp, I (Horvath-Papp, I); Tontis, D (Tontis, D.); Papaioannou, N (Papaioannou, N.); Evangelou, K (Evangelou, K.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 66 **Issue:** 2 **Pages:** 93-100 **Published:** APR-JUN 2015

**Record 111 of 151**
**Title:** The past, present and future in scaffold-based tendon treatments
**Author(s):** Lomas, AJ (Lomas, A. J.); Ryan, CNM (Ryan, C. N. M.); Sorushanova, A (Sorushanova, A.); Shologu, N (Shologu, N.); Sideri, AI (Sideri, A. I.); Tsioli, V (Tsioli, V.); Fthenakis, GC (Fthenakis, G. C.); Tzora, A (Tzora, A.); Skoufos, I (Skoufos, I.); Quinlan, LR (Quinlan, L. R.); O'Laighin, G (O'Laighin, G.); Mullen, AM (Mullen, A. M.); Kelly, JL (Kelly, J. L.); Kearns, S (Kearns, S.); Biggs, M (Biggs, M.); Pandit, A (Pandit, A.); Zeugolis, DI (Zeugolis, D. I.)
**Source:** ADVANCED DRUG DELIVERY REVIEWS **Volume:** 84 **Pages:** 257-277 **DOI:** 10.1016/j.addr.2014.11.022 **Published:** APR 2015

**Record 112 of 151**
**Title:** Diagnostic performance of a rapid in-clinic test for the detection of Canine Parvovirus under different storage conditions and vaccination status
**Author(s):** Kantere, MC (Kantere, Maria C.); Athanasiou, LV (Athanasiou, Labrini V.); Spyrou, V (Spyrou, Vassiliki); Kyriakis, CS (Kyriakis, Constantinos S.); Kontos, V (Kontos, Vassilios); Chatzopoulos, DC (Chatzopoulos, Dimitrios C.); Tsokana, CN (Tsokana, Constantina N.); Billinis, C (Billinis, Charalambos)
**Source:** JOURNAL OF VIROLOGICAL METHODS **Volume:** 215 **Pages:** 52-55 **DOI:** 10.1016/j.jviromet.2015.02.012 **Published:** APR 2015

**Record 113 of 151**
**Title:** Nausea: Is it a big 'little problem' in animals?
**Author(s):** Xenoulis, PG (Xenoulis, Panagiotis G.)
**Source:** VETERINARY JOURNAL **Volume:** 203 **Issue:** 3 **Pages:** 267-267 **DOI:** 10.1016/j.tvjl.2014.12.012 **Published:** MAR 2015

**Record 114 of 151**
**Title:** Comparison of three skin-stretching devices for closing skin defects on the limbs of dogs
**Author(s):** Tsioli, V (Tsioli, Vassiliki); Papazoglou, LG (Papazoglou, Lysimachos G.); Papaioannou, N (Papaioannou, Nikolaos); Psalla, D (Psalla, Dimitra); Savvas, L (Savvas, Ioannis); Pavlidis, L (Pavlidis, Leonidas); Karayannopoulpou, M (Karayannopoulpou, Maria)
**Source:** JOURNAL OF VETERINARY SCIENCE **Volume:** 16 **Issue:** 1 **Pages:** 99-106 **DOI:** 10.4142/jvs.2015.16.1.99 **Published:** MAR 2015

**Record 115 of 151**
**Title:** A feed additive containing Bacillus toyonensis (Toyocerin (R)) protects against enteric pathogens in postweaning piglets
**Author(s):** Kantas, D (Kantas, D.); Papatsiros, VG (Papatsiros, V. G.); Tassis, PD (Tassis, P. D.); Giavasis, I (Giavasis, I.); Bouki, P (Bouki, P.); Tzika, ED (Tzika, E. D.)
**Source:** JOURNAL OF APPLIED MICROBIOLOGY **Volume:** 118 **Issue:** 3 **Pages:** 727-738 **DOI:** 10.1111/jam.12729 **Published:** MAR 2015

**Record 116 of 151**

**Title:** Interactions between parasitic infections and reproductive efficiency in sheep
**Author(s):** Fthenakis, GC (Fthenakis, G. C.); Mavrogianni, VS (Mavrogianni, V. S.); Gallidis, E (Gallidis, E.); Papadopoulos, E (Papadopoulos, E.)
**Source:** VETERINARY PARASITOLOGY **Volume:** 208 **Issue:** 1-2 **Special Issue:** SI **Pages:** 56-66 **DOI:** 10.1016/j.vetpar.2014.12.017 **Published:** FEB 28 2015

**Record 117 of 151**
**Title:** Colonisation of pig gallbladders with Salmonella species important to public health
**Author(s):** Evangelopoulou, G (Evangelopoulou, Grammato); Filioussis, G (Filioussis, Georgios); Kritas, S (Kritas, Spyridon); Christodoulopoulos, G (Christodoulopoulos, Georgios); Triantafillou, EA (Triantafillou, Eleftherios A.); Burriel, AR (Burriel, Angeliki R.)
**Source:** VETERINARY RECORD **Volume:** 176 **Issue:** 7 **Pages:** 174-+ **DOI:** 10.1136/vr.102822 **Published:** FEB 14 2015

**Record 118 of 151**
**Title:** Effects of Addition of Tissue-Type Plasminogen Activator in In Vitro Fertilization Medium on Bovine Embryo Development and Quality
**Author(s):** Krania, F (Krania, F.); Dovolou, E (Dovolou, E.); Rekkas, CA (Rekkas, C. A.); Theodosiadou, EK (Theodosiadou, E. K.); Pappas, I (Pappas, I.); Amiridis, GS (Amiridis, G. S.)
**Source:** REPRODUCTION IN DOMESTIC ANIMALS **Volume:** 50 **Issue:** 1 **Pages:** 112-120 **DOI:** 10.1111/rda.12456 **Published:** FEB 2015

**Record 119 of 151**
**Title:** Effect of dietary incorporation of a multi-strain probiotic on growth performance and health status in rainbow trout (Oncorhynchus mykiss)
**Author(s):** Giannenas, I (Giannenas, Ilias); Karamaligas, I (Karamaligas, Ioannis); Margaroni, M (Margaroni, Maritsa); Pappas, I (Pappas, Ioannis); Mayer, E (Mayer, Elisabeth); Encarnacao, P (Encarnacao, Pedro); Karagouni, E (Karagouni, Evdokia)
**Source:** FISH PHYSIOLOGY AND BIOCHEMISTRY **Volume:** 41 **Issue:** 1 **Pages:** 119-128 **DOI:** 10.1007/s10695-014-0010-0 **Published:** FEB 2015

**Record 120 of 151**
**Title:** Iterative Conversion of Cyclin Binding Groove Peptides into Drug like CDK Inhibitors with Antitumor Activity
**Author(s):** Premnath, PN (Premnath, Padmavathy Nandha); Craig, SN (Craig, Sandra N.); Liu, S (Liu, Shu); Anderson, EL (Anderson, Erin L.); Grigoroudis, AI (Grigoroudis, Asterios I.); Kontopidis, G (Kontopidis, George); Perkins, TL (Perkins, Tracy L.); Wyatt, MD (Wyatt, Michael D.); Pittman, DL (Pittman, Douglas L.); McInnes, C (McInnes, Campbell)
**Source:** JOURNAL OF MEDICINAL CHEMISTRY **Volume:** 58 **Issue:** 1 **Special Issue:** SI **Pages:** 433-442 **DOI:** 10.1021/jm5015023 **Published:** JAN 8 2015

**Record 121 of 151**
**Title:** Effects of aflatoxins on male reproductive system: A review
**Author(s):** Kourousekos, GD (Kourousekos, G. D.); Theodosiadou, EK (Theodosiadou, E. K.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 66 **Issue:** 4 **Pages:** 201-210 **Published:** 2015

**Record 122 of 151**
**Title:** Laboratory investigation of adult small ruminant Leptospirosis, a neglected infection in Greece: problems and recommendations
**Author(s):** Bisias, AG (Bisias, A. G.); Kritas, CS (Kritas, C. S.); Billinis, CH (Billinis, C. H.); Burriel, RA (Burriel, R. A.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 66 **Issue:** 4 **Pages:** 223-230 **Published:** 2015

**Record 123 of 151**
**Title:** DO WEATHER AND MOON HAVE ANY INFLUENCE ON SPOTLIGHTING MAMMALS? THE CASE OF HARE IN UPLAND ECOSYSTEM
**Author(s):** Sokos, C (Sokos, C.); Papaspyropoulos, KG (Papaspyropoulos, K. G.); Birtsas, P (Birtsas, P.); Giannakopoulos, A (Giannakopoulos, A.); Billinis, C (Billinis, C.)
**Source:** APPLIED ECOLOGY AND ENVIRONMENTAL RESEARCH **Volume:** 13 **Issue:** 4 **Pages:** 925-933 **Published:** 2015

**Record 124 of 151**
**Title:** Influence of a titanium mesh on the management of segmental long bone defects An experimental study in a canine ulnar model
**Author(s):** Zoi, SI (Zoi, S. I.); Papadimitriou, SA (Papadimitriou, S. A.); Galatos, AD (Galatos, A. D.); Prassinos, NN (Prassinos, N. N.); Psalla, D (Psalla, D.); Dalstra, M (Dalstra, M.); Stavropoulos, A (Stavropoulos, A.)
**Source:** VETERINARY AND COMPARATIVE ORTHOPAEDICS AND TRAUMATOLOGY **Volume:** 28 **Issue:** 6 **Pages:** 417-424 **DOI:** 10.3415/VCOT-14-11-0173 **Published:** 2015

**Record 125 of 151**
**Title:** Associations between claw lesions and reproductive performance of sows in three Greek herds
**Author(s):** Lisgara, M (Lisgara, M.); Skampardonis, V (Skampardonis, V.); Angelidou, E (Angelidou, E.); Kouroupides, S (Kouroupides, S.); Leontides, L (Leontides, L.)
**Source:** VETERINARNI MEDICINA **Volume:** 60 **Issue:** 8 **Pages:** 415-422 **DOI:** 10.17221/8416-VETMED **Published:** 2015

**Record 126 of 151**
**Title:** Isolation and Antimicrobial Testing of Aeromonas spp., Citrobacter spp., Cronobacter spp., Enterobacter spp., Escherichia spp., Klebsiella spp., and Trabulsiella spp. from the Gallbladder of Pigs
**Author(s):** Evangelopoulou, G (Evangelopoulou, Grammato); Filioussis, G (Filioussis, Georgios); Kritas, S (Kritas, Spyridon); Kantere, M (Kantere, Maria); Burriel, AR (Burriel, Angeliki R.)
**Source:** POLISH JOURNAL OF MICROBIOLOGY **Volume:** 64 **Issue:** 2 **Pages:** 185-188 **Published:** 2015

**Record 127 of 151**
**Title:** Reproductive performance of sows was improved by administration of a sporing bacillary probiotic (Bacillus subtilis C-3102)
**Author(s):** Kritas, SK (Kritas, S. K.); Marubashi, T (Marubashi, T.); Filioussis, G (Filioussis, G.); Petridou, E (Petridou, E.); Christodoulopoulos, G (Christodoulopoulos, G.); Burriel, AR (Burriel, A. R.); Tzivara, A (Tzivara, A.); Theodoridis, A (Theodoridis, A.); Piskorikova, M (Piskorikova, M.)
**Source:** JOURNAL OF ANIMAL SCIENCE **Volume:** 93 **Issue:** 1 **Pages:** 405-413 **DOI:** 10.2527/jas2014-7651 **Published:** JAN 2015

**Record 128 of 151**
**Title:** Synthesis and biological evaluation of potential small molecule inhibitors of tumor necrosis factor
**Author(s):** Papaneophytou, C (Papaneophytou, Christos); Alexiou, P (Alexiou, Polyxeni); Papakyriakou, A (Papakyriakou, Athanasios); Ntougkos, E (Ntougkos, Evangelos); Tsiliouka, K (Tsiliouka, Katerina); Maranti, A (Maranti, Anna); Liepouri, F (Liepouri, Fotini); Strongilos, A (Strongilos, Alexandros); Mettou, A (Mettou, Anthi); Couladouros, E (Couladouros, Elias); Eliopoulos, E (Eliopoulos, Elias); Douni, E (Douni, Eleni); Kollias, G (Kollias, George); Kontopidis, G (Kontopidis, George)
**Source:** MEDCHEMCOMM **Volume:** 6 **Issue:** 6 **Pages:** 1196-1209 **DOI:** 10.1039/c5md00023h **Published:** 2015

**Record 129 of 151**
**Title:** Pharmacokinetics and clinical assessment of amoxicillin for the control of necrotic enteritis in broiler-breeders under field conditions
**Author(s):** Koutoulis, KC (Koutoulis, K. C.); Pappas, I (Pappas, I.); Filioussis, G (Filioussis, G.); Athanasiou, LV (Athanasiou, L. V.)
**Source:** AVIAN BIOLOGY RESEARCH **Volume:** 8 **Issue:** 2 **Pages:** 89-96 **DOI:** 10.3184/175815515X14292912200460 **Published:** 2015

**Record 130 of 151**
**Title:** Effect of prolonged aflatoxin B-1 administration on blood serum oestradiol-17 beta and progesterone concentrations of goats during the anoestrus period
**Author(s):** Kourousekos, GD (Kourousekos, G. D.); Theodosiadou, EK (Theodosiadou, E. K.); Lymberopoulos, AG (Lymberopoulos, A. G.); Belibasaki, S (Belibasaki, S.); Boscos, C (Boscos, C.)
**Source:** CZECH JOURNAL OF ANIMAL SCIENCE **Volume:** 60 **Issue:** 4 **Pages:** 164-170 **DOI:** 10.17221/8130-CJAS **Published:** 2015

**Record 131 of 151**
**Title:** Determination of the proper time for mating after oestrous synchronisation during anoestrous or oestrous by measuring electrical resistance of cervical mucus in ewes
**Author(s):** Theodosiadou, E (Theodosiadou, E.); Tsiligianni, T (Tsiligianni, T.)
**Source:** VETERINARNI MEDICINA **Volume:** 60 **Issue:** 2 **Pages:** 87-93 **DOI:** 10.17221/7982-VETMED **Published:** 2015

**Record 132 of 151**
**Title:** The effect of a natural feed additive (Macleaya cordata), containing sanguinarine, on the performance and health status of weaning pigs
**Author(s):** Kantas, D (Kantas, Dimitrios); Papatsiros, VG (Papatsiros, Vasileios G.); Tassis, PD (Tassis, Panagiotis D.); Athanasiou, LV (Athanasiou, Labrini V.); Tzika, ED (Tzika, Eleni D.)
**Source:** ANIMAL SCIENCE JOURNAL **Volume:** 86 **Issue:** 1 **Pages:** 92-98 **DOI:** 10.1111/asj.12240 **Published:** JAN 2015

**Record 133 of 151**
**Title:** Conservation Considerations for a Management Measure: An Integrated Approach to Hare Rearing and Release
**Author(s):** Sokos, C (Sokos, Christos); Birtsas, P (Birtsas, Periklis); Papaspyropoulos, KG (Papaspyropoulos, Konstantinos G.); Giannakopoulos, A (Giannakopoulos, Alexios); Athanasiou, LV (Athanasiou, Labrini V.); Manolakou, K (Manolakou, Katerina); Spyrou, V (Spyrou, Vassiliki); Billinis, C (Billinis, Charalambos)
**Source:** ENVIRONMENTAL MANAGEMENT **Volume:** 55 **Issue:** 1 **Pages:** 19-30 **DOI:** 10.1007/s00267-014-0388-6 **Published:** JAN 2015

**Record 134 of 151**
**Title:** Diagnosis of pancreatitis in dogs and cats
**Author(s):** Xenoulis, PG (Xenoulis, P. G.)
**Source:** JOURNAL OF SMALL ANIMAL PRACTICE **Volume:** 56 **Issue:** 1 **Special Issue:** SI **Pages:** 13-26 **DOI:** 10.1111/jsap.12274 **Published:** JAN 2015

**Record 135 of 151**
**Title:** European Surveillance Network for Influenza in Pigs: Surveillance Programs, Diagnostic Tools and Swine Influenza Virus Subtypes Identified in 14 European Countries from 2010 to 2013
**Author(s):** Simon, G (Simon, Gaelle); Larsen, LE (Larsen, Lars E.); Durrwald, R (Duerrwald, Ralf); Foni, E (Foni, Emanuela); Harder, T (Harder, Timm); Van Reeth, K (Van Reeth, Kristien); Markowska-Daniel, I (Markowska-Daniel, Iwona); Reid, SM (Reid, Scott M.); Dan, A (Dan, Adam); Maldonado, J (Maldonado, Jaime); Huovilainen, A (Huovilainen, Anita); Billinis, C (Billinis, Charalambos); Davidson, I (Davidson, Irit); Aguero, M (Agueero, Montserrat); Vila, T (Vila, Thais); Herve, S (Herve, Severine); Breum, SO (Breum, Solvej Ostergaard); Chiapponi, C (Chiapponi, Chiara); Urbaniak, K (Urbaniak, Kinga); Kyriakis, CS (Kyriakis, Constantinos S.); Brown, IH (Brown, Ian H.); Loeffen, W (Loeffen, Willie)
**Group Author(s):** ESNIP3 Consortium
**Source:** PLOS ONE **Volume:** 9 **Issue:** 12 **Article Number:** e115815 **DOI:** 10.1371/journal.pone.0115815 **Published:** DEC 26 2014

**Record 136 of 151**
**Title:** An update on the diagnosis and treatment of canine leishmaniosis caused by Leishmania infantum (syn. L. chagasi)
**Author(s):** Noli, C (Noli, Chiara); Saridomichelakis, MN (Saridomichelakis, Manolis N.)
**Source:** VETERINARY JOURNAL **Volume:** 202 **Issue:** 3 **Pages:** 425-435 **DOI:** 10.1016/j.tvjl.2014.09.002 **Published:** DEC 2014

**Record 137 of 151**
**Title:** Evaluation of indirect immunofluorescence antibody test and enzyme-linked immunosorbent assay for the diagnosis of infection by Leishmania infantum in clinically normal and sick cats
**Author(s):** Chatzis, MK (Chatzis, Manolis K.); Leontides, L (Leontides, Leonidas); Athanasiou, LV (Athanasiou, Labrini V.); Papadopoulos, E (Papadopoulos, Elias); Kasabalis, D (Kasabalis, Dimitrios); Mylonakis, M (Mylonakis, Mathios); Rallis, T (Rallis, Timoleon); Koutinas, AF (Koutinas, Alexandros F.); Andreadou, M (Andreadou, Margarita); Ikonomopoulos, J (Ikonomopoulos, John); Saridomichelakis, MN (Saridomichelakis, Manolis N.)
**Source:** EXPERIMENTAL PARASITOLOGY **Volume:** 147 **Pages:** 54-59 **DOI:** 10.1016/j.exppara.2014.10.004 **Published:** DEC 2014

**Record 138 of 151**
**Title:** Molecular identification of Bartonella species in dogs with leishmaniosis (Leishmania infantum) with or without cytological evidence of arthritis
**Author(s):** Mylonakis, ME (Mylonakis, Mathios E.); Soubasis, N (Soubasis, Nectarios); Balakrishnan, N (Balakrishnan, Nandhakumar); Theodorou, K (Theodorou, Konstantina); Kasabalis, D (Kasabalis, Dimitrios); Saridomichelakis, M (Saridomichelakis, Manolis); Koutinas, CK (Koutinas, Christos K.); Koutinas, AF (Koutinas, Alexander F.); Breitschwerdt, EB (Breitschwerdt, Edward B.)
**Source:** VETERINARY MICROBIOLOGY **Volume:** 174 **Issue:** 1-2 **Pages:** 272-275 **DOI:** 10.1016/j.vetmic.2014.08.035 **Published:** NOV 7 2014

**Record 139 of 151**
**Title:** Flock-level factors associated with the risk of Mycobacterium avium subsp paratuberculosis (MAP) infection in Greek dairy goat flocks
**Author(s):** Angelidou, E (Angelidou, E.); Kostoulas, P (Kostoulas, P.); Leontides, L (Leontides, L.)
**Source:** PREVENTIVE VETERINARY MEDICINE **Volume:** 117 **Issue:** 1 **Pages:** 233-241 **DOI:** 10.1016/j.prevetmed.2014.09.002 **Published:** NOV 1 2014

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**Title:** Rationally Designed Less Toxic SPD-304 Analogs and Preliminary Evaluation of Their TNF Inhibitory Effects
**Author(s):** Alexiou, P (Alexiou, Polyxeni); Papakyriakou, A (Papakyriakou, Athanasios); Ntougkos, E (Ntougkos, Evangelos); Papaneophytou, CP (Papaneophytou, Christos P.); Liepouri, F (Liepouri, Fotini); Mettou, A (Mettou, Anthi); Katsoulis, I (Katsoulis, Ioannis); Maranti, A (Maranti, Anna); Tsiliouka, K (Tsiliouka, Katerina); Strongilos, A (Strongilos, Alexandros); Chaitidou, S (Chaitidou, Sotiria); Douni, E (Douni, Eleni); Kontopidis, G (Kontopidis, George); Kollias, G (Kollias, George); Couladouros, E (Couladouros, Elias); Eliopoulos, E (Eliopoulos, Elias)
**Source:** ARCHIV DER PHARMAZIE **Volume:** 347 **Issue:** 11 **Pages:** 798-805 **DOI:** 10.1002/ardp.201400198 **Published:** NOV 2014

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**Title:** Isolation of methicillin-resistant Staphylococcus spp. from ready-to-eat fish products
**Author(s):** Sergelidis, D (Sergelidis, D.); Abrahim, A (Abrahim, A.); Papadopoulos, T (Papadopoulos, T.); Soultos, N (Soultos, N.); Martziou, E (Martziou, E.); Koulourida, V (Koulourida, V.); Govaris, A (Govaris, A.); Pexara, A (Pexara, A.); Zdragas, A (Zdragas, A.); Papa, A (Papa, A.)
**Source:** LETTERS IN APPLIED MICROBIOLOGY **Volume:** 59 **Issue:** 5 **Pages:** 500-506 **DOI:** 10.1111/lam.12304 **Published:** NOV 2014

**Record 142 of 151**
**Title:** Primary portal vein hypoplasia with portal hypertension in a young dog
**Author(s):** Kasabalis, D (Kasabalis, D.); Alatzas, D (Alatzas, D.); Alatza, D (Alatza, D.); Petanides, TA (Petanides, T. A.); Alatzas, G (Alatzas, G.); Papazoglou, LG (Papazoglou, L. G.); Harley, R (Harley, R.); Mylonakis, ME (Mylonakis, M. E.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 65 **Issue:** 4 **Pages:** 257-264 **Published:** OCT-DEC 2014

**Record 143 of 151**
**Title:** Glucose measurement using portable blood glucose meters in dogs and cats
**Author(s):** Athanasiou, LV (Athanasiou, L. V.); Tsokana, CN (Tsokana, C. N.); Saridomichelakis, MN (Saridomichelakis, M. N.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 65 **Issue:** 4 **Pages:** 273-288 **Published:** OCT-DEC 2014

**Record 144 of 151**
**Title:** Early-weaning diets for gilthead sea bream (Sparus aurata L.) and their potential use in Hellenic marine fish hatcheries
**Author(s):** Pantazis, PA (Pantazis, P. A.); Benekos, G (Benekos, G.); Papadomichelakis, G (Papadomichelakis, G.)
**Source:** AQUACULTURE INTERNATIONAL **Volume:** 22 **Issue:** 5 **Pages:** 1621-1636 **DOI:** 10.1007/s10499-014-9769-3 **Published:** OCT 2014

**Record 145 of 151**
**Title:** Effect of olive leaf (Olea europea L.) extracts on protein and lipid oxidation of long-term frozen n-3 fatty acids-enriched pork patties
**Author(s):** Botsoglou, E (Botsoglou, Evropi); Govaris, A (Govaris, Alexander); Arnbrosiadis, I (Arnbrosiadis, Ioannis); Fletouris, O (Fletouris, Oimitrios); Botsoglou, N (Botsoglou, Nikolas)
**Source:** MEAT SCIENCE **Volume:** 98 **Issue:** 2 **Pages:** 150-157 **DOI:** 10.1016/j.meatsci.2014.05.015 **Published:** OCT 2014

**Record 146 of 151**
**Title:** Pharmacokinetics and tolerability of aminosidine after repeated administrations using an optimal dose regimen in healthy dogs and in dogs with leishmaniosis
**Author(s):** Athanasiou, LV (Athanasiou, L. V.); Batzias, GC (Batzias, G. C.); Saridomichelakis, MN (Saridomichelakis, M. N.); Delis, G (Delis, G.); Soubasis, N (Soubasis, N.); Kontos, VI (Kontos, V. I.); Rallis, TS (Rallis, T. S.)
**Source:** VETERINARY PARASITOLOGY **Volume:** 205 **Issue:** 1-2 **Pages:** 365-370 **DOI:** 10.1016/j.vetpar.2014.06.019 **Published:** SEP 15 2014

**Record 147 of 151**
**Title:** A cross-sectional study of the seroprevalence and flock-level factors associated with ovine and caprine brucellosis in southeastern Iran
**Author(s):** Sharifi, H (Sharifi, H.); Tabatabaei, S (Tabatabaei, S.); Rashidi, H (Rashidi, H.); Kazeminia, S (Kazeminia, S.); Sabbagh, F (Sabbagh, F.); Khajooei, P (Khajooei, P.); Karamouzian, M (Karamouzian, M.); Nekouei, O (Nekouei, O.); Sardooei, MA (Sardooei, Adeli M.); Leontides, L (Leontides, L.)
**Source:** IRANIAN JOURNAL OF VETERINARY RESEARCH **Volume:** 15 **Issue:** 4 **Pages:** 370-374 **Published:** FAL 2014

**Record 148 of 151**
**Title:** Mapping farm animal welfare education at university level in Europe

**Author(s):** Illmann, G (Illmann, G.); Keeling, L (Keeling, L.); Melisova, M (Melisova, M.); Simeckova, M (Simeckova, M.); Ilieski, V (Ilieski, V.); Winckler, C (Winckler, C.); Kostal, L (Kostal, L.); Meunier-Salaun, MC (Meunier-Salaun, M-C); Mihina, S (Mihina, S.); Spoolder, H (Spoolder, H.); Fthenakis, G (Fthenakis, G.); Sarova, R (Sarova, R.); Spinka, M (Spinka, M.)
**Source:** ANIMAL WELFARE **Volume:** 23 **Issue:** 4 **Pages:** 401-410 **DOI:** 10.7120/09627286.23.4.401 **Published:** SEP 2014

**Record 149 of 151**
**Title:** Ghrelin accelerates in vitro maturation of bovine oocytes
**Author(s):** Amiridis, GS (Amiridis, G. S.); Dovolou, E (Dovolou, E.); Messinis, I (Messinis, I.); Guttierez-Adan, A (Guttierez-Adan, A.); Periquesta, E (Periquesta, E.); Dafopoulos, K (Dafopoulos, K.)
**Source:** REPRODUCTION IN DOMESTIC ANIMALS **Meeting Abstract:** P10 **Volume:** 49 **Special Issue:** SI **Pages:** 53-53 **Supplement:** 3 **Published:** SEP 2014
**Conference Title:** 18th Annual Conference of the European-Society-for-Domestic-Animal-Reproduction (ESDAR)
**Conference Date:** SEP 11-13, 2014
**Conference Location:** Helsinki, FINLAND

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**Title:** Relationship between electrical resistance of cervical mucus and ovarian steroid concentration at the time of artificial insemination in ewes
**Author(s):** Theodosiadou, E (Theodosiadou, Ekaterini); Amiridis, GS (Amiridis, Georgios S.); Tsiligianni, T (Tsiligianni, Theodora)
**Source:** REPRODUCTIVE BIOLOGY **Volume:** 14 **Issue:** 3 **Pages:** 234-237 **DOI:** 10.1016/j.repbio.2014.03.001 **Published:** SEP 2014

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**Title:** Quality policy in the veterinary diagnostic laboratory; the paradigm of application of Good Laboratory Practice
**Author(s):** Athanasiou, LV (Athanasiou, L. V.)
**Source:** JOURNAL OF THE HELLENIC VETERINARY MEDICAL SOCIETY **Volume:** 65 **Issue:** 3 **Pages:** 139-148 **Published:** JUL-SEP 2014

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