

Providing high-quality research training for veterinary pathologists in Europe

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Despite their key role in a wide range of fields relating to animal and public health, there is currently a lack of veterinary pathologists in Europe. In 1999, to help address the problem, the European College of Veterinary Pathologists (ECVP) and the European Society of Veterinary Pathology (ESVP) established a joint Education Committee. In this Special Article, Professor Anja Kipar and colleagues, all members of the committee, describe the ECVP/ESVP Summer Schools in Veterinary Pathology programme, which aims to provide high-quality research training for veterinary pathologists from all over Europe and beyond.

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VETERINARY pathologists play key roles in the health and welfare of people and animals. They contribute vital expertise to a wide range of fields, particularly the monitoring of animal health and welfare, diagnosis of emerging diseases, food safety, identification and/or development of animal models for human diseases, development of new drugs for the treatment of animal and human diseases, epidemiological studies, wildlife conservation and studies on wildlife as indicators of environmental health.

However, there is currently a worldwide dearth of experienced veterinary pathologists. This places a severe constraint on scientific programmes in academia and industry, and jeopardises personnel resources in national and private diagnostic laboratories (AFIP 2002). In Europe, the situation could become more serious unless appropriate measures are put in place, as many experienced pathologists are due to retire within the next few years. In addition, the European standard of veterinary pathology research has not previously been harmonised, and the profession has suffered from a lack of consistency between training programmes. Thus, low numbers of candidates have registered for the globally recognised, high-standard qualifying examination provided for researchers in the field by the European College of Veterinary Pathologists (ECVP) (ECVP 2003, Kipar and others 2007).

To help address these issues, the ECVP (a member of the European Board of Veterinary Specialisation) (Kipar and others 2007) and the European Society of Veterinary Pathology (ESVP) formed a joint ECVP/ESVP Education Committee in 1999, with the objective of establishing high-standard, structured postgraduate training courses in the core skills and latest research techniques in veterinary pathology. In 2001, the Education Committee committed itself to the development of ECVP/ESVP Summer Schools in Veterinary Pathology, and has so far organised four such events, in August 2003 in Nantes, France, in July 2004 and 2005 in Padova, Italy, and in July 2006 in Helsinki, Finland. All four have been organised at venues with large auditoriums for lectures and practical sessions as well as low-cost accommodation and catering for the participants (ECVP 2006a). The summer school for 2007, which will be held in Helsinki, Finland, is currently in preparation.

ORGANISATION OF THE SUMMER SCHOOLS

The summer schools provide complementary research training for veterinarians aiming for a career in veterinary pathology and planning to sit the ECVP (or American [A]CVP) certifying examination. They focus on both the scientific and technical aspects of the discipline. A complete programme consists of a four-year cycle (the first cycle was held between 2003 and 2006) of two-week events, each with several independent modules. The programme comprises core training in general and veterinary pathology, technical modules that

cover both methodological and interpretative aspects, and modules on comprehensive pathology and problem-solving/complementary skills. Each module is composed of high-standard theoretical lectures and practical training sessions (predominantly gross and histological specimens) in equal proportions, complemented by self-assessment and discussions. An outline of the modules covered in the first cycle of summer schools is shown in Table 1. Lecturers are internationally acknowledged experts in their specific topic and are mostly ECVP- or ACVP-certified veterinary pathologists. Modules are complemented by reading lists (provided before each event), a handbook with background information and/or lecture outlines (provided during the event), a CD with lecture files and additional information useful for individual review (provided after the event), as well as histology slide sets assembled into a slide collection available for private study.

Every second year, a former member of the ECVP Examination Committee, together with recent ECVP diplomates, prepares a two-day representative mock examination with subsequent thorough revision and discussion. Participation in the mock exam is voluntary and anonymous for the summer school participants, but the mock exam committee offers to mark the papers, thereby allowing feedback on the general quality of the research training and the individual level of knowledge of the trainees.

In order to allow the participation of trainees from any country and type of employment, the summer schools are deliberately low-budget events for the participants. Financial support has been secured for 2005 to 2008 through the successful application for a Marie Curie Actions Grant from the European Commission (EC 2006). This grant mainly provides financial support for 70 veterinarians at an early stage of their career to participate in the summer schools, but requires additional subsidy by the ECVP and ESVP through essential financial support from corporate sponsors to ensure that the summer schools can continue to be organised in the future.

Who attends?

Summer school participants are veterinarians training or working in the field of pathology, mainly from universities (68 to 78 per cent), as these are the main providers of postgraduate research training in the field (ECVP 2006b), but also from state and private diagnostic laboratories (10 to 15 per cent), research laboratories (up to 9 per cent) or pharmaceutical companies (7 to 12 per cent). The vast majority of trainees attend the summer schools with the goal of obtaining high-standard research training that will also complement their preparation for the ECVP certifying examination. Feedback has indicated that they consider the summer schools to be an essential component of their individual preparation for the examination and their future professional life, and they often attend several, mostly consecutive, summer schools. ►

The overall number of participants has increased over time, from 54 from 12 European countries in 2003, to 83 from 21 countries in 2006, with a consistent increase in the number of eastern European participants (Fig 1). This reflects the growing awareness of the summer schools and shows that the financial support available to participants is vital.

THE EFFECTS

The summer schools have already shown several positive effects. An international network of experienced, qualified veterinary pathologists and trainees is developing. This is reflected by the formation of international study groups and the attendance of trainees from work environments that are unable to offer supervision by board-certified pathologists at institutions with a strong training emphasis in preparation for the ECVF certifying examination. A collaborative network between institutions and senior pathologists is expected to develop soon. Already, the Education Committee has noticed a previously unseen level of harmonisation of postgraduate training in veterinary pathology, the driving forces of which are the lecturers and organisers of the summer schools. The numbers of new entrants for the ECVF certifying examination and ECVF diplomates have increased in the last few years. Also, trainees increasingly adopt a high-standard, up-to-date approach to scientific questions and use internationally applied skills for identifying, describing and interpreting pathological lesions. Because the approach of the ECVF and the ACVP to describing and interpreting findings is very similar, veterinary pathologists will increasingly speak one global language.

Overall, therefore, the summer schools are expected to have a long-lasting effect on the profession. They help to eliminate institutional and national boundaries and intensify international research cooperation, leading to a more efficient use of experimental data and case material, a greater and more effective research output and, hopefully, more international grant applications. In addition, they provide an international job market where senior pathologists have the opportunity to seek out excellent potential employees, and where pathologists in training are made aware of career opportunities.

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TABLE 1: Modules in the first complete cycle of the ECVF/ESVP Summer Schools in Veterinary Pathology, 2003 to 2006

Module*	Duration (days)	Module*	Duration (days)
Technical modules		Species-specific modules	
Technical introduction	0.5	Poultry	2
Cytology	1	Reptiles	1
Ultrastructural pathology	1	Primates	1
Molecular pathology	1	Zoo and wild animals	1
Clinical pathology	2	Fish	1
		Marine mammals	0.5
Organ-specific modules		General pathology modules	
Cardiovascular system	0.5	Carcinogenesis	0.5
Haemolymphatic system	1	Inflammation	0.5
Respiratory system	1.5	Comprehensive pathology and problem-solving	
Gastrointestinal tract	2	Comprehensive pathology	2
Liver	3	Basics of toxicological pathology	1
Urinary tract	2	Animal models	1
Reproductive tract	1	Genetically engineered mice	1
Skeletal system	1	Emerging and zoonotic infectious diseases	1
Muscular system	1	Other components	
Nervous system	2	Mock exam (and revision)	2
Eye	1.5	AFIP systematic pathology training website	Evening
Endocrine system	1	ECVP certifying examination	Evening
Skin	3		

* Not all the modules in each section are taught in the same year
ECVP European College of Veterinary Pathologists, ESVP European Society of Veterinary Pathology, AFIP Armed Forces Institute of Pathology

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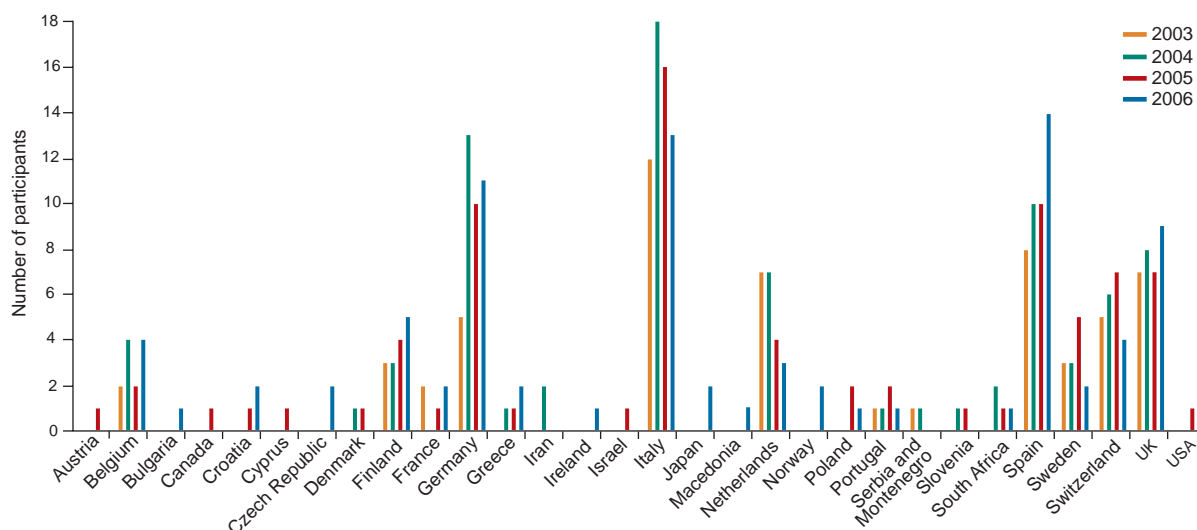


FIG 1: Country of origin of the participants in the ECVF/ESVP Summer Schools in Veterinary Pathology of 2003 to 2006