



Royal Veterinary College
University of London

Postgraduate Prospectus 2009-10

Clinical and non-clinical opportunities

No limits

The Royal Veterinary College

- 5 Welcome from the Principal – Professor Quintin McKellar
- 7 One of a kind – the Royal Veterinary College
- 9 A comprehensive service – The Graduate School
- 12 A holistic approach – Skills training and development

Masters, Diplomas and Masters level short courses

- 17 MSc and Postgraduate Diploma in Control of Infectious Diseases in Animals
- 20 MSc Veterinary Epidemiology
- 25 MSc and Postgraduate Diploma in Veterinary Physiotherapy
- 27 MSc Wild Animal Health
- 31 MSc Wild Animal Biology
- 35 MScs, Postgraduate Diplomas, Postgraduate Certificates and Short Courses by distance learning

Research opportunities

- 45 A pioneering spirit – Research activities
- 47 Musculoskeletal Biology research group
- 48 Reproduction, Genes and Development research group
- 50 Cardiovascular and Inflammation Biology research group
- 51 Infection and Immunity research group

- 53 Playing an active role – Clinical Training Scholars

Further information

- 57 A close community – Postgraduate life
- 59 A place to live – Accommodation
- 61 Looking after our students – Student Support Services
- 64 Be prepared – Pre-application procedures
- 66 Facts and figures – Finances
- 70 A range of options – Funding
- 74 Making your case – How to apply

‘The quality and variety of international research activity here mean there is a huge amount of expertise and support to call on.’

‘I am being lectured by top people in their field, people whose books I have read! It is great to be able to ally yourself to their work.’

‘A residency at the RVC offers an unrivalled opportunity to develop skills in both an academic and a commercial environment.’

‘Because I am a vet as well as a scientist, the strong link that exists here between clinical and basic science is invaluable.’

‘We are uniquely placed to liaise and network with other institutions within Europe’s largest bioscience research cluster.’

‘I have made a great many friends here, and have always found people very willing to share experiences and expertise.’

Welcome from the Principal

Professor Quintin McKellar

This prospectus tells you about the Royal Veterinary College (RVC) past and present, lists our range of postgraduate courses, both taught and research and gives an insight into the experience of living and working within a stimulating, multicultural learning environment.

In the pages that follow, you will find that we have set out the principal ways in which you can undertake veterinary and related postgraduate study here, from full and part-time programmes to short courses and distance learning options.

The vast expansion of knowledge and access to rich libraries of information have pushed the boundaries of specialisation deep into the territory of postgraduate study. Whether through research, taught degree courses or clinical training opportunities, postgraduate study is increasingly a part of lifelong learning which contributes to job satisfaction, professional development and career progression.

At the RVC, students from all over the world benefit from state-of-the-art clinical and scientific facilities. They also have the privilege of learning from and working with some of the field's finest individuals whose research interests and expertise lie at the cutting edge of science today. I very much hope that you will find a course here to interest you and that we will soon be able to welcome you to the College.

One of a kind

The Royal Veterinary College

The RVC has both tradition and innovation at the heart of its teaching, learning and research. Founded in 1791, the RVC was the first of its kind in the UK, and the driving force behind the establishment of the nation's veterinary profession.

We have one campus in Camden, North London (the London Campus) and one on a 575-acre site near Potters Bar (the Hertfordshire Campus). Both provide a friendly, supportive environment and excellent facilities for basic and applied research and for teaching and learning.

Both our campuses have excellent Learning Resource Centres with both library and IT facilities, laboratories, teaching areas to suit large and small student groups and student accommodation. The London Campus has the London BioScience Innovation Centre, and one of our small animal hospitals. The Hertfordshire Campus is located near the town of Potters Bar and is only a twenty-minute train journey from Kings Cross station. It houses the busiest small animal referral hospital in Europe, our large animal practices and working farm. Sports facilities are available at Potters Bar or through the University of London's facilities.

Equipped for anything

The clinical, educational and information resources at the Royal Veterinary College are second to none, and at no time in our history have we ever stopped investing in their development. We have a brand new small animal hospital and a new building to house the Centre for Epidemiology and the Centre for Emerging, Endemic and Exotic Diseases (CEEED) opening in autumn 2008. Further plans for new laboratory and teaching facilities on both campuses are in development.

Our Learning Resource Centres combine open access computers with more traditional library resources. Using the College's virtual learning environment (VLE), students can consult a range of multimedia resources and almost 4000 electronic journals and databases, such as Medline, CAB Abstracts and the ISI Citation Index. Staff work hard to maintain our impressive library. Approximately 28,000 volumes of books, pamphlets and journals relating specifically to veterinary science form the core collection of veterinary literature for the College and the University of London. Students and staff are also free to use the libraries of the University of London for reference purposes.

Over 250 high quality, open access PCs are available to students in 17 different locations, and the IT Department provides an efficient helpdesk service. We have a high-capacity broadband connection giving fast access to other UK universities and the internet. If you are resident, you can connect to the College intranet from your bedroom. And if you have a laptop, wireless connectivity to most areas on both campuses will also make life easier.

Enquiries to

The Graduate School
The Royal Veterinary College
Royal College Street
London NW1 0TU
Telephone +44 (0) 20 7468 5134
Fax +44 (0) 20 7468 5060
Email graduateschool@rvc.ac.uk

www.rvc.ac.uk/postgrad

A comprehensive service

The Graduate School

The Graduate School provides the focus for postgraduate affairs within the College and provides support for the more than 300 students studying with us.

We aim to offer you a great education, both in respect of your chosen field of specialist study and the wider needs of a graduate education. We have postgraduate tutors to help you and we provide Graduate School courses to support your learning. We take care of student administration and encourage you to take part in College life through representation on College committees and through the Postgraduate Students' Society.

The Head of the Graduate School, Dr Anne Hamblin, has more than 30 years' experience of research and teaching. She is responsible for steering the academic direction of the Graduate School and for promoting graduate activities inside and outside the College.

Postgraduate study

The College offers several types of postgraduate study. On campus we have research degrees leading to MRes, PhD and DVetMed; taught programmes leading to postgraduate Diplomas or Masters degrees; and advanced training for veterinarians in preparation for various veterinary certificates. We offer a variety of distance learning courses through the University of London. All these programmes provide a rich learning experience and the opportunity to develop advanced skills and expertise.

Taught Masters (MSc) and Postgraduate Diploma programmes

- MSc Wild Animal Health (one year full-time)
- MSc Wild Animal Biology (one year full-time)
- MSc Control of Infectious Diseases in Animals (one year full-time)**
- Postgraduate Diploma in Control of Infectious Diseases in Animals (six months full-time)**
- MSc Veterinary Epidemiology (one year full-time)*
- MSc Veterinary Physiotherapy (two years part-time)
- Postgraduate Diploma in Veterinary Physiotherapy (two years part-time)

* Part-time opportunities in study blocks are also available

* Short courses available

Taught Masters (MSc), Postgraduate Diploma, Postgraduate Certificate and Short Course programmes by distance learning

- MSc Livestock Health and Production (between two and five years)
- Postgraduate Diploma or Postgraduate Certificate in Livestock Health and Production (between one and five years)
- MSc Veterinary Epidemiology and Public Health (between two and five years)
- Postgraduate Diploma or Postgraduate Certificate in Veterinary Epidemiology and Public Health (between one and five years)
- Short courses derived from the distance learning programmes (35 hour, 50 hour and 240 hour) are also available

Clinical training

- Junior Clinical Training Scholarships (one year full-time)
- Senior Clinical Training Scholarships (three years full-time)

Start dates

Most MSc courses start in September. The MSc and Postgraduate Diploma in Veterinary Physiotherapy starts in March. The MSc and Diploma in Livestock Health and Production, and in Veterinary Epidemiology and Public Health start in February. Start dates for research programmes may be at any time throughout the year although most students join in October.

A comprehensive service

The Graduate School

Research degrees*

- Doctor of Philosophy, PhD (three or four years full-time)
 - Doctor of Veterinary Medicine by Research, DVetMed (Res) (two to three years full-time)
 - Master of Research, MRes (one year full-time)
- * Part-time study opportunities available

The RVC offers a number of research degrees awarded by the University of London which have different purposes to suit both veterinarians and non-veterinarians. You will join or be attached to at least one of our excellent research groups. You will have at least two supervisors whose complimentary skills will provide expert input to your training, and you will have access to courses which allow you to build the additional competencies you need for your future career.

To apply for a PhD, MPhil or MRes degree you will need to have a BSc (second class or better) or a veterinary degree. Every year the RVC advertises research scholarships for UK/EU students funded by government or charities who may specify additional or different specific requirements. For the DVetMed you will need a recognised veterinary degree (see below). For any of these opportunities you will need to have an identified RVC research group in which you wish to work or the specified advertised project(s) which you would like to undertake.

PhD and MPhil

These research degrees offer in depth study in a particular scientific area over either 3 or 4 years (PhD) or 2 years (MPhil) of full-time research or part-time equivalents. The courses are accompanied by a skills training programme (see page 12). A PhD is essential for a career in academia and for many other research opportunities outside academia.

DVetMed

This degree is a similar level to a PhD but is aimed at those wishing to undertake research leading to a doctorate particularly from veterinary clinical practice. Applicants must usually have a veterinary degree from a UK university or hold an overseas veterinary qualification and be eligible for registration as a veterinary surgeon at least on a temporary basis by the Royal College of Veterinary Surgeons and be working in the UK at the time of carrying out work for the thesis.

Master of Research (MRes) A New Opportunity!

If you enjoyed your undergraduate research project but would have liked to have done more, or if you are thinking of undertaking a PhD but aren't sure you want to commit to 3-4 years of research yet, then the one year MRes degree may be a great opportunity for you. Students will join excellent research teams and undertake a one year research project with the Graduate School skills training programme (see page 12). You will thus receive training in research processes whilst getting to grips with substantial research projects.

Students undertaking this course will be in a good position to apply for PhD programmes or other career opportunities where evidence of having significant research skills is important.

A holistic approach

Skills training and development

As a postgraduate, you will want to develop a wide range of knowledge and skills in your specialist area and you will also want to develop the qualities and transferable skills necessary for employment post-graduation. We recognise that every student is different and that although you come to the RVC with various skills there are others which you will wish to develop during your time with us.

All postgraduates

When you arrive at the RVC, an Induction Programme will introduce you to the Graduate School and to studying here. You will also be given a handbook explaining more about your course of study and how to source any information you may need.

PhD and MRes students

We offer a comprehensive range of skills training workshops that cover planning your research, presentation skills, scientific writing, preparing for appraisal and for your viva, technical training and career development. Courses in experimental design and statistics are provided through lectures and hands-on sessions, and statistical advice is available from a consultant. PhD students will be given a training log in which to keep a record and reflect upon your supervisory meetings and training; this will help you plan your own development. If you like, we will also help you develop your teaching and information technology skills at a variety of levels. In addition, you may join students in the wider university for skills training.

Short courses essential to your scientific work may be conducted on or off-campus. Specific laboratory techniques will be taught by your supervisors, or by members of our academic staff with the appropriate expertise. It is also common for our students to learn new techniques from collaborators working at other cutting-edge institutions.

You may dip into our undergraduate or postgraduate courses (taught or distance learning), or study at other institutions with whom we collaborate. Interactive seminar programmes featuring external speakers and post-doctoral professionals will broaden and deepen your scientific knowledge. You will be able to test and demonstrate your evolving scientific, research and report-writing skills at your annual appraisal.

Enterprise Training

Our Business Development team brings together expertise in technology transfer, contract negotiation, corporate marketing and communications to focus on developing the culture of commercial awareness and enterprise across the College. It identifies and develops opportunities for the commercial exploitation of RVC research and supports our academic staff and students in their interactions with industry partners. As well as providing enterprise training it also encourages research students to develop entrepreneurial skills through activities such as the BBSRC Young Entrepreneurs Scheme (YES).

Yoshika Yamakawa

PhD student 08

'The RVC is a leading scientific institute with an international reputation for outstanding research. The laboratories are state-of-the-art and research groups collaborate freely, making this a great place to hone my technical skills and broaden my knowledge base. My supervisor is very supportive and the Graduate School organises useful supplementary courses in IT, presentation skills and scientific writing. The atmosphere at Hawkshead is friendly and relaxed, even the local birds and hares seem to feel at home here!'

Sharing specialist knowledge

Masters and diploma courses

- 17 MSc and Postgraduate Diploma in Control of Infectious Diseases in Animals
- 20 MSc Veterinary Epidemiology
- 25 MSc and Postgraduate Diploma in Veterinary Physiotherapy
- 27 MSc Wild Animal Health
- 31 MSc Wild Animal Biology
- 35 MScs, Postgraduate Diplomas, Postgraduate Certificates and Short Courses
by distance learning

Mandy Nevel
Co-Course Director
The Royal Veterinary College
Email mnevel@rvc.ac.uk

Barbara Wieland
Co-Course Director
The Royal Veterinary College
Email bwieland@rvc.ac.uk

For more information please email
graduateschool@rvc.ac.uk

Control of Infectious Diseases in Animals

MSc and Postgraduate Diploma

MSc: Full-time course for one year

Postgraduate Diploma: Full-time course for seven months

Part-time MSc or Diploma courses over two or three years

The recent outbreaks of Avian Influenza Virus, Foot and Mouth disease, BSE and Swine Fever have highlighted the threat to human and animal health arising from endemic and emerging infectious diseases. The threat is complex, often unpredictable, and international. As well as the health aspects, there are huge economic implications.

The Control of Infectious Diseases in Animals (CIDA) course addresses control issues through an integrated programme in the biology, diagnosis, epidemiology, prevention and management of infectious disease in, or arising from, animal populations. The course focuses on the principles needed to effectively control endemic diseases and to respond rapidly and effectively to disease outbreaks, including emerging diseases. State-of-the-art methodologies applied in disease control are taught by internationally recognised experts.

The course is appropriate for those working in the state veterinary service and to anyone with an interest in disease control. As disease control is a multidisciplinary subject, we welcome people with different backgrounds. A significant component of the course consists of small group work, where students will be able to learn from each other.

Career prospects

Graduates from this course should be able to take up careers in government, teaching, research and other organisations where they will be involved in the implementation and management of disease control programmes.

Former students of this course have been enrolled in PhD studies at different universities worldwide. Within the UK, our graduates are employed by the Department for Environment, Food and Rural Affairs (DEFRA), and the Centre for Epidemiology and Risk Analysis at the Veterinary Laboratories Agency. Past graduates now work for the United Nations' World Health and Food and Agriculture

Organisations. Further afield they are working for government departments in New Zealand, Thailand, Vietnam, Singapore, Spain, Bangladesh, Ethiopia, Croatia, Ireland, Switzerland, Pakistan, Iceland, Norway and France.

Entry requirements

Applicants should have a university honours degree (first or second class). Individuals with degrees in veterinary or biological science, statistics and relevant postgraduate experience, are all encouraged to apply. As we welcome a broad range of students, including policy-makers, other experience may be deemed appropriate. Potential students are encouraged to contact the course director if they are in any doubt.

Aims and objectives

The MSc aims to offer a sound foundation in the principles governing the prevention, management, and control of infectious diseases in animals and to equip students with the specialised skills required to assess risk, and implement appropriate control measures. On completion of the course students will be able to:

- demonstrate an understanding of the key concepts underpinning the control of infectious diseases in animals
- analyse and interpret microbiological, epidemiological and field data, and suggest further investigations
- evaluate the risks and relevant factors pertaining to specific disease outbreaks, and to formulate an appropriate control strategy
- communicate effectively with other relevant groups, such as those involved in human and animal health, governmental agencies, food producers, the media and the public
- review critically the published literature, and design and undertake a research project in a relevant field.

Control of Infectious Diseases in Animals

MSc and Postgraduate Diploma

Course content

The MSc course comprises:

- a taught component occupying two academic terms, comprising an introductory module and a further six modules. The six modules are each examined at the end of the module
- an individual research project of four months, carried out between May and early September for full-time students

The Postgraduate Diploma comprises:

- a taught component occupying two academic terms, comprising an introductory module and a further six modules. The six modules are each examined at the end of the module

Term One

The introductory module includes: an introduction to the scientific basis for disease control; fundamentals of epidemiology, immunology, vaccinology and molecular biology, veterinary law and generic skills. Modules one and two cover Bacterial and Parasitic Diseases and Viral and Prion diseases. Each looks at three to four selected diseases from a variety of different perspectives, including biology, pathogenesis, diagnosis, epidemiology and control. Further, an assessed statistics course starts in the introductory module and runs through terms one and two.

Term Two

Term two consists of four modules. Module three, Animal Health Economics, introduces students to the principles of economics as applied to animal health, and to the practical use of economic methods. No prior knowledge of economics is required. Module four, Preventing Infectious Diseases, teaches methods of preventing and reducing the risk of the spread of infectious disease, including the use of bio security measures, vaccines and import/export controls. Module five, Applied Risk Assessment and Management, covers modelling of infectious diseases and provides an opportunity for students to develop disease control strategies and conduct risk assessments for policy-relevant

questions. Module six, Contingency Planning and Communication, addresses the development and implementation of contingency plans for dealing with disease outbreaks, and addresses the benefits of and approaches to communication with involved stakeholders.

The teaching strategy consists of interactive lectures, group work, directed learning sessions, practicals, and private study. All modules include an in-course assignment to integrate knowledge and to reflect on taught subjects.

Term Three (MSc only)

You will be asked to prepare a project proposal and a relevant literature review written in the form of a grant proposal. You will then spend the rest of the summer working on your project and writing it up as a report in the style of a scientific paper. The project is a scholarly endeavour in an appropriate area, involving collection and analysis of relevant new and pre-existing data. It may or may not involve laboratory work.

Assessment

Each taught module is assessed by an in-course assignment and/or a written open book examination. For the MSc, a comprehensive literature review on the topic of the project and a project report (in the style of a scientific paper) are produced and students are examined orally.

Duration of study

The course for full-time students runs for one calendar year (MSc) or seven months (Postgraduate Diploma), or part-time for two or three years. Although it is more straightforward to undertake the course in the order described above, we recognise that it is not possible for all people to take a year off full-time. We have therefore designed the course to be modular, with assessment within each module, allowing credit accumulation. It is recommended that students who wish to study part-time discuss their intended programme with the course directors.

Kennedy Mwakalimba**MSc CIDA 05**

'I am currently working with swine and sheep farms, trying to control endemic disease like Swine Dysentery, Streptococcus Suis and respiratory disease of sheep. I am also teaching Veterinary Public Health and components of Veterinary Economics and Veterinary Epidemiology at the University of Zambia. I am a member of the Zambia Bureau of Standards Technical Committee on milk standards and I recently co-chaired a national consultative meeting on the harmonization of milk standards in the COMESA region (Common Market for East and Southern Africa). In research, I have been doing a retrospective rabies study and trying to do risk assessments for the presence of avian influenza in the poultry marketing chain, and also the presence of American Foul Brood in Apiaries in Zambia. There are a number of economic analyses of zoonotic diseases I am currently working on in collaboration with other researchers at the University of Zambia.'

Fernando Blanco Esporas**MSc CIDA 06**

'I am now undertaking a PhD through the Royal Veterinary School at the University of Edinburgh. The majority of the practical work will take place at the Veterinary Laboratories Agency in Weybridge. The project, which is mainly laboratory based, involves the creation of a recombinant strain of Mycobacterium tuberculosis BCG.'

Peter Moore**MSc CIDA 07**

'One of the great strengths of the course is that teaching is carried out by world experts in their field and their knowledge and passion is clear. The atmosphere created by the tutors and by the course structure inspires you to research each topic long after lectures are over.'

Mick Millar**MSc CIDA 08, studying part-time and working at the VLA**

'The MSc CIDA course offered a steady platform to develop and enhance my understanding of the epidemiology, pathogenesis and control of infectious diseases of animals. World experts in the principal infectious diseases of farmed animals gave informative and up-to-date lectures on diseases as diverse as avian influenza, Rabies and Johnes disease in cattle. Economics, risk analysis, surveillance and other aspects of disease control in our rapidly changing world were part of the broad scope of this inspiring course.'

Veterinary Epidemiology

MSc

Full-time course for one year
Part-time course over two years

Offered in conjunction with the London School of Hygiene and Tropical Medicine

In a world experiencing rapid technological change and with evolving patterns of international trade, the need to protect human and animal health and consequently the recognition of the importance of veterinary epidemiology have increased. The course draws upon the strengths of the London School of Hygiene and Tropical Medicine (LSHTM) in epidemiological principles and communicable disease epidemiology, and those of the RVC in all aspects of animal health and production. It also receives generous support from the Biological Sciences Research Council (BBSRC) in the form of scholarships for UK applicants.

The course presents an excellent opportunity to learn from veterinary epidemiologists and policy makers working at the heart of government (in the UK Government Department for Environment, Food and Rural Affairs and its executive agency, the Veterinary Laboratories Agency (VLA), Weybridge). The majority of the teaching will be delivered using the excellent facilities of the LSHTM in London. Selected lectures will be delivered at both our London and Hertfordshire Campuses. The course also includes visits to the VLA.

Career prospects

With a shortage of trained veterinary epidemiologists, there are excellent opportunities in a variety of organisations involved in disease control at national, regional and international level, as well as in teaching, research and various parts of the food-related industries.

Former students of this course have been enrolled in PhD studies at different universities worldwide including the RVC Epidemiology Division, Cornell University and Massey University, New Zealand. In the UK, our graduates are employed by government agencies including the Department for Environment, Food and Rural Affairs, and the Centre for Epidemiology and Risk Analysis at the Veterinary Laboratories Agency, as well as in research centres and pharmaceutical companies. Past graduates

now work for the United Nations' World Health and Food and Agriculture Organisations. Further afield they are working for government departments in New Zealand, Thailand, Vietnam, Singapore, Spain, Bangladesh, Ethiopia, Croatia, Ireland, Switzerland, Pakistan, Iceland, Norway and France.

Entry requirements

Applicants should have a first or second class university honours degree. Individuals with degrees in veterinary science, biological science, medicine, mathematics or statistics, and relevant postgraduate and veterinary work experience, are all encouraged to apply. Applicants from overseas will be required to provide evidence of proficiency in spoken and written English, including scientific usage and comprehension.

The course is appropriate for those working in the state veterinary service and to anyone with an interest in veterinary epidemiology. As this is a multidisciplinary subject, we welcome people with different backgrounds.

Funding

The course has attracted the award of a prestigious Masters Training Grant from the BBSRC, which will fund four scholarships (fees and stipend) for UK students. These are awarded competitively. A scholarship application form is published on our website for submission with your course application.

Aims and objectives

The course will provide students with an understanding of the conceptual basis of veterinary epidemiology and with training in essential methodological skills for the conduct of epidemiological studies in animal populations. On completion, students will be able to:

- demonstrate an understanding of the key concepts underpinning the discipline of veterinary epidemiology
- select an appropriate study design when confronted

Dirk Pfeiffer

Course Director

Professor of Veterinary Epidemiology
The Royal Veterinary College
Email pfeiffer@rvc.ac.uk

www.rvc.ac.uk/vetepi

Ellen Fragaszy

Course Director

Lecturer
London School of Hygiene
and Tropical Medicine
Email Ellen.Fragaszy@lshtm.ac.uk

For more information please email
graduateschool@rvc.ac.uk

with an epidemiological research question and develop a detailed study protocol capable of answering the research question

- analyse and interpret epidemiological data derived from cross-sectional, case-control and follow-up studies
- review critically the published epidemiological literature
- apply epidemiological principles to surveillance and infection and disease control within animal and human populations
- communicate effectively with researchers from different disciplinary backgrounds
- communicate effectively with other people with an interest in human and animal health, including the general public and key policy makers.

Course content

The course comprises:

- a taught component occupying three academic terms leading to examinations in June
- an individual research project occupying 10 weeks

Term One

All students take the core units and usually the recommended units. Students are advised to take at most one optional unit unless they are very familiar with the content of several core or recommended units.

Core units

Extended Epidemiology; Statistics for EPH; Epidemiological Aspects of Laboratory Investigation; Surveillance of Animal Health and Production; Data Management using Epi-Data; Communication Skills in Epidemiology

Recommended units

Public Health lecture series

Optional units

Epidemiology in Context; Introduction to Computing

Term Two

Compulsory study units

Animal Health Economics, Epidemiology and Control of Communicable Diseases; Statistical Methods in Epidemiology; Applied Risk Assessment and Management

Recommended units

Public Health lecture series

Term Three

Compulsory study units

Advanced Statistical Methods in Veterinary Epidemiology

Recommended units

Modelling and Dynamics of Infectious Diseases; Genetic Epidemiology; Methods of Vector Control

Optional units

Bayesian Statistics and Computationally Intensive Methods; Epidemiology and Control of Non-communicable Diseases

Project report

Students spend the last two months of the course working full-time on an individual project, with the guidance of a member of staff. The project report consists of two components, one being a literature review and the other a scientific report. The aim is to give students an opportunity to apply knowledge and skills gained during the course to a substantial individual piece of work. Students sponsored by an employer may undertake a project related to their work, and students from overseas are encouraged to bring data to London for this purpose, when possible.

Veterinary Epidemiology

MSc

Assessment

The Veterinary Epidemiology MSc examination consists of three components:

- two three-hour written examination papers in June.
Paper One examines the content of Term One teaching; Paper Two is a synthesis of the whole year, examining skills, concepts and methods related to course objectives
- in-course assessment: candidates will complete six in-course assignments, one for each of the study units taken in the second and third terms of the programme.
The marks for the candidate's six assessments are averaged to give an overall mark
- assessment of a project report with oral examination in September

Duration

The course can be undertaken on a full-time basis over one calendar year starting in late September, or on a part-time basis over two years. Part-time study necessitates full-time attendance from October to December in Year One, followed by classes during one half of the week from January to May. Normally, the balance of Term Two study units will be completed in Year Two with two written examinations in June and a research project from July to August, with oral examination in September. However, the part-time study option can be tailored to meet the specific requirements of the student in agreement with the course director.

Apisit Prakarnkamanant

MSc Veterinary Epidemiology 08

'As there are some newly emerging infectious diseases like Avian Influenza (H5N1), I decided to study the MSc in Veterinary Epidemiology. Since joining in September 07, I am not only learning the technical knowledge in epidemiology, but also the culture of various nationals and building networks with my friends on the course. I am learning the core principles, the advanced knowledge and relevant techniques which are practical and offer broader perspectives. These are very useful for me to systematically approach the disease problem and determine the feasible control measures efficiently, economically and appropriately. As I am a government officer, I will grow more confident in communicating to all related governmental authorities the economically suitable options which are possibly satisfied with all related stakeholders.'

Chitwambi Makungu

MSc Veterinary Epidemiology 08

'As a state veterinarian, my work involves addressing animal health issues at a population level; this presented me with a lot of challenges that my clinical training could not fully address. An MSc in Veterinary Epidemiology was a necessity for me, and choosing to pursue one at the RVC/LSHTM was a natural decision because the degree they offer has a rich and broad coverage well endowed with courses covering all areas of the discipline. The components on study design and risk analysis will be especially useful in my line of work. I am confident that this MSc will equip me for any field or academic challenges ahead.'

Ricardo Soares Magalhaes
Senior Clinical Training Scholar
MSc Veterinary Epidemiology 04

I came to the RVC for the experience of working with its renowned epidemiology group, and the chance to be involved in research activity at a national and an international level. Our investigations and the intensity of our workload should enable me to fulfil the requirements of the European College of Veterinary Public Health in a relatively short time. Here in London, we are uniquely placed to liaise and build synergies with other top research institutions, and to create an extensive professional network.

Tracy Crook
Course Director
Lecturer in Veterinary Physiotherapy
The Royal Veterinary College
Email tcrook@rvc.ac.uk

www.rvc.ac.uk/vetphysio

Shirley Benbow/Cathy Crane
Course Administrators
The Royal Veterinary College
Email sabenbow@rvc.ac.uk
ccrane@rvc.ac.uk

Veterinary Physiotherapy

MSc and Postgraduate Diploma

Part-time course over two years

The RVC was the first UK institution to offer an MSc/Postgraduate Diploma in Veterinary Physiotherapy. This internationally renowned programme has been running since 2000 and to date over 120 veterinary physiotherapists have graduated from the course. This is an excellent opportunity for human physiotherapists seeking to apply their professional knowledge, experience and practical therapy skills to the treatment of animal patients.

The programme is run as a part-time course in which the directed study modules, together with the clinical training, are designed to provide veterinary physiotherapy training.

Students are encouraged to take a critical view of the underlying assumptions of accepted physical therapy practice, thus developing a rational approach to the practice of physiotherapy on animals.

Entry requirements

- Degree or diploma in human physiotherapy
- Membership of the Chartered Society of Physiotherapy (or equivalent EU body)
- Membership of the Health Professions Council
- Postgraduate experience in musculoskeletal medicine is normally preferred
- Previous animal handling experience with both large and small animals is essential
- An academic reference
- A reference from your current employer
- A reference from a stable owner, vet or category 'A' ACPAT member vouching for animal handling experience
- Appropriately qualified non-UK candidates will be considered, but will be required to provide evidence of comparable undergraduate physiotherapy training. Non-EU candidates will be liable for higher tuition fees.

Career prospects

All students who complete either the postgraduate diploma or MSc will be able to term themselves veterinary physiotherapists.

Veterinary Physiotherapists often choose to set up their own private practice, whilst others choose to work as members of multidisciplinary teams in veterinary hospitals and centres. Many graduates choose to continue to practise in the human field and to combine this with treating animal patients. Some postgraduate students continue with research in this developing field, whilst others become involved in teaching and consultancy activities.

Aim

To provide Chartered Physiotherapists with the opportunity to apply their professional knowledge, experience and practical skills to the treatment of animal patients.

Objectives

- On successful completion of the programme, students will be able to:
- explain the theoretical basis underpinning the practice of veterinary physiotherapy
 - apply the knowledge and practical skills they have already gained in human physiotherapy to animal patients
 - critically evaluate the efficacy and efficiency of their practice.

Course duration

The two year part-time programme starts each March. It is delivered as a series of modules one weekend per month over the first 18 months of the course. Students complete their clinical training over the two year duration of the course and Masters students undertake their project during the final six months of the course.

Veterinary Physiotherapy

MSc and Postgraduate Diploma

Barbara Houlding

MSc Veterinary Physiotherapy 02

'This course is at the forefront of advancing effective clinical practice of physiotherapy in the veterinary science world. It is a good MSc course giving the opportunity to develop a depth of knowledge through research.'

Course content

Taught course

The integrated modules are as follows:

- An Introduction to Veterinary Therapy
- Comparative Anatomy and Biomechanics
- Behaviour and Pain Management
- Exercise Physiology, Biomechanics and Farriery
- Recognition and Management of Myopathies
- Orthopaedics and Rheumatology
- Neurology
- Physiotherapy Assessment and Techniques
- Physiotherapy Rehabilitation
- Revision and Research.

Clinical education

In addition to the taught modules, each student undertakes their practical training in the clinical environment over the two year duration of the course. This will take around 35 days to complete in total. The aims of clinical education are to enable graduates to work safely and effectively as Chartered Veterinary Physiotherapy Practitioners, providing students with the opportunity to experience the complex contexts of veterinary physiotherapy practice, in order to develop their skills through the implementation of a problem solving approach. Clinical education is designed to enable students to transfer their skills and knowledge across a variety of clinical settings and client groups thus facilitating the ability to respond to the changing demands of contemporary practice and fostering a commitment to lifelong learning.

The clinical syllabus comprises short courses for both large and small animals, placements at the RVCs hospitals and clinical placements with animal physiotherapists. Students will be required to maintain a log of clinical hours and will be responsible for ensuring that these hours have taken place prior to the final practical exam.

Research project

Each Masters student will be required to undertake an individual research project and to submit a report not exceeding 10,000 words in the form of a literature review and a scientific paper suitable for submission to a peer reviewed journal. The project will encompass a practical study on an approved aspect of veterinary physiotherapy and will be supervised by an experienced RVC expert.

Assessment

There will be three exams (two written, one practical) and two assignments that contribute to the award. In addition, there will be a number of formative assignments and in-course practical tests. For the MSc, a project report will be submitted and students will be examined orally.

Wild Animal Health

MSc

Full-time course for one year

Offered in conjunction with the Institute of Zoology, London

ZSL

Institute of Zoology

LIVING CONSERVATION

Over the last 30 years, interventions for reasons of health, welfare and the conservation of free-living wild animals have been undertaken with increasing frequency. Such actions require specialist veterinary input, in assessing and controlling the risk of accidental disease introduction to wildlife, and to domestic animal and human populations associated with wildlife translocation. At the same time, emerging infectious diseases are recognised as a serious hazard for wild animals, and the domestic animal and human populations that interact with these species. In addition, a wide range of wild animals are now kept in captivity.

This subject area receives relatively little attention in the undergraduate veterinary curriculum. Consequently, there is a growing need for veterinarians with a relevant qualification that provides detailed knowledge of the management of wild animals, and the epidemiology, surveillance, treatment and control of diseases of both free-living and captive wild animals. This Master's course, the only one of its kind in the world, meets this need and has produced over 165 graduates (originating from 44 different countries) with wildlife health skills in the last 13 years.

Career prospects

Graduates from the course go on to work with captive and free-living wild animals as clinicians, pathologists, epidemiologists, academics and senior management in zoological collections, national parks, universities, rehabilitation centres and government departments worldwide, some proceeding to study for a PhD or DVetMed.

Michael Waters

Course Director

Senior Lecturer in Clinical Pathology
The Royal Veterinary College

Tony Sainsbury

Course Director

Lecturer in Wild Animal Health
The Royal Veterinary College and Institute
of Zoology, London

www.rvc.ac.uk/wah

For more information please email
graduateschool@rvc.ac.uk

Wild Animal Health

MSc

Entry requirements

Applications are invited from EU and non-EU candidates with a degree from a recognised veterinary school.

Applicants from overseas will be required to provide evidence of proficiency in spoken and written English (see page 64). You must have at least one year's post-graduation experience in veterinary practice, and additional relevant work experience (e.g. at a zoo, wildlife rehabilitation centre, wildlife hospital) would be an advantage.

Aims

The course will:

- offer a sound foundation in the principles governing wild animal biological science, conservation biology, veterinary interventions in wildlife, wild animal management, and the surveillance, epidemiology, control and prevention of wildlife disease
- equip students with appropriate clinical veterinary skills for the physical and chemical restraint, diagnosis and treatment of captive and free-living wild animals.

Objectives

Upon graduation, students will have:

- a critical awareness of current problems in wildlife disease with implications for wildlife conservation and welfare, and a new insight into veterinary interventions for the management of captive and free-living wild animals
- the ability to demonstrate basic competence in wild animal veterinary techniques and preventative medicine
- a conceptual and practical understanding of how established techniques of research and enquiry are used to create knowledge and a comprehensive understanding of scientific skills, including critical review of the scientific literature, and design and analysis of laboratory or field studies

Course content

The course comprises:

- a taught component leading to examinations
- an individual research project leading to the final assessment

The MSc in Wild Animal Health is structured around a series of problem-based learning scenarios which encourage critical thinking, decision-making, exploration and inquiry, and awareness of current issues at the forefront of wild animal health. Insights into novel research and important systematic knowledge is given in lectures to complement the problem-based approach, while practical skills are taught through rotations and visits to selected advanced institutions.

Project

Each student will be required to undertake an individual research project and to submit a report not exceeding 10,000 words in the form of a literature review and a scientific paper suitable for submission to a peer-reviewed journal. The project will encompass a practical study on an approved aspect of wild animal health. The project may be undertaken at any place approved by the Institute/ College with the guidance of a course supervisor.

Assessment

Assessment will comprise written papers, course work (assignments and casebook), an individual research project report and an oral examination for all candidates, irrespective of their performance in other parts of the course. The project report must be submitted by mid-August and oral examinations are held in mid-September.

Duration

Full-time for one year

Puja Basu,

MSc Wild Animal Health 07

'Nothing can compare with the knowledge I have gained from the Wild Animal Health course. I never really thought one year could be such an eye-opener and give me so much awareness on such wide but related topics. But this course did just that and more! It is packed with action and I highly recommend it to anyone who has got their heart set on a career in "wildlifing"!

Michael Waters

Course Director

Senior Lecturer in Clinical Pathology
The Royal Veterinary College

www.rvc.ac.uk/wab

Tony Sainsbury

Course Director

Lecturer in Wild Animal Health
The Royal Veterinary College and Institute
of Zoology, London

For more information please email
graduateschool@rvc.ac.uk

Wild Animal Biology

MSc

Full-time course for one year

Offered in conjunction with the Institute of Zoology, London



Recent years have seen an increasing demand for training in the wild animal health field from biologists and zoologists because of the need for research into the effect of wild animal diseases on biodiversity and the importance of health in the management of captive and free-living wild animals. The Wild Animal Biology MSc course provides a high quality learning experience in the wild animal health field through practical, theoretical and problem-based teaching, and high calibre training in research methodologies relevant to the study of wildlife health and disease. Wild Animal Biology students share many of their classes with their Wild Animal Health MSc colleagues.

Career prospects

Graduates from the course would be expected to follow careers in wild animal management, conservation and welfare (government agencies, developing and developed countries, charities), wild animal rehabilitation, wildlife related research (universities, zoological collections) and zoo management (collection/section curators), with some students proceeding to study for a PhD.

Entry requirements

Applications are invited from EU and non-EU candidates with a biology, zoology (not less than class 2.2 or the international equivalent) or veterinary degree. Preference will be given to applicants with training in microbiology, parasitology and pathology. Overseas applicants will be required to provide evidence of proficiency in spoken and written English (see page 64). Relevant work experience (e.g. zoo, wild animal hospital, wild animal research) would be an advantage.

Aims

The course will:

- offer a sound foundation in the principles governing wild animal biological science, interventions in wildlife, wild animal management, conservation biology and the surveillance, epidemiology, control, and prevention of wildlife disease
- equip students with essential methodological skills for the conduct of research studies in wild animal populations

Objectives

Upon graduation, students will be able to demonstrate:

- a critical awareness of current problems in wildlife disease with implications for wildlife conservation and welfare, and a new insight into interventions for the management of captive and free-living wild animals
- basic competence in management and pathological techniques in wild animals;
- a conceptual and practical understanding of how established techniques of research and enquiry are used to create knowledge, and a comprehensive understanding of scientific skills, including critical review of the scientific literature, and design and analysis of laboratory or field studies.

Course content

The course comprises:

- a taught component leading to examinations
- an individual research project leading to the final assessment

The MSc in Wild Animal Biology is structured around a series of problem-based learning scenarios which encourage critical thinking, decision-making, exploration and inquiry, and awareness of current issues at the forefront of wild animal biology. Insights into novel research and important systematic knowledge is given in lectures to complement the problem-based approach, while practical skills are taught through rotations and visits to selected advanced institutions.

Wild Animal Biology

MSc

Project

Each student will be required to undertake an individual research project and to submit a report not exceeding 10,000 words in the form of a literature review and a scientific paper suitable for submission to a peer-reviewed journal.

The project will encompass a practical study on an approved aspect of wild animal biology. The project may be undertaken at any place approved by the Institute/College with the guidance of a course supervisor.

Assessment

Assessment will comprise written papers, course work (assignments, casebook), an individual research project report and an oral examination, irrespective of students' performance in other parts of the course. The project report must be submitted by mid-August and oral examinations are held in mid-September.

Duration

Full-time for one year.

Katharine Bowgen

MSc Wild Animal Biology 07

'Taking the MSc in Wild Animal Biology was a great choice to further my future career plans of working in wildlife research. The quality of the lecturers who taught on the course was fantastic, as were the included practical sessions. The course also gave us the chance to work and discuss current issues with researchers and staff at the Institute of Zoology, London and Whipsnade Zoos. The skills gained from all these areas have added to my CV immensely and I now have many fond memories including catching swans for health checks! Since graduating I have used the experiences from the MSc to gain work as a research assistant to an ornithologist in France and to work for a cheetah hand rearing team in South Africa. I hope to undertake a PhD in the near future into avian conservation research.'

Chloe Booth

Winner of the WAB Project Prize

MSc Wild Animal Biology 06

'Work with the animals and keepers at London Zoo and Whipsnade Wild Animal Park has given me invaluable experience which I will carry with me forever. As well as being taught the basics of wild animal care and pathology, I was also able to refine my problem-solving skills, making me better prepared to deal with, and think critically about, difficult situations I could face when working with animals in the wild. As a graduate I now have a number of career options open to me. I have been given a place to study veterinary medicine starting next October and have also been offered an opportunity to undertake a PhD working with Blue Whales in Mexico.'

Dr Christine Thuranira-McKeever
Distance Learning Director
The Royal Veterinary College
Email cthuraniramckeever@rvc.ac.uk

Ruth Chandler
Course Administrator
The Royal Veterinary College
Email rchandler@rvc.ac.uk

Mary Logan

MSc in Veterinary Epidemiology and Public Health, graduated with distinction 06

'Working for an MSc in my spare time has required considerable commitment and was a real challenge. I have really enjoyed the opportunity to study for a postgraduate degree though and the knowledge that I have gained has proved to be invaluable in my job. I am even contemplating further postgraduate study!'

Jacoba Joubert

Postgraduate Diploma in Livestock Health and Production 04

'It is one of the best compiled courses I have ever seen! I enjoyed every moment of studying, even if it meant only studying at night. With the knowledge I have gained, I opened my own business working in the field of reproduction and I will never look back!'

Distance learning courses

MScs, Postgraduate Diplomas, Postgraduate Certificates and Short Courses

MSc: minimum two years, maximum five years

Postgraduate Diploma: minimum one year, maximum five years

Postgraduate Certificate: minimum one year, maximum five years

Short Courses: minimum one year, maximum two years

Studying through distance learning provides an attractive option for those with work, family or financial constraints, to gain a University of London qualification without coming to London.

The courses are of interest to those working in livestock health, production, epidemiology and veterinary public health. They are built on our expertise in these areas and draw on contributions from people well recognised in their fields. All are comprehensive, have worldwide relevance, and offer options to people from diverse professional backgrounds. What is more, all necessary study and extra reading materials are supplied.

Career prospects

Current students in these programmes are employed in organisations that deal with veterinary inspection, disease surveillance, veterinary public health and livestock production. In the UK, these include the Department for the Environment, Food and Rural Affairs, animal health colleges, universities and veterinary research institutes. Others are employed overseas in municipalities, food and environmental departments and other governmental departments related to livestock issues in Malaysia, Canada, Australia, United Arab Emirates, South Africa, Saudi Arabia, USA, Hong Kong, Jamaica, Malawi, Switzerland, Austria, Bahamas, Belgium, Germany, Japan, Namibia, Serbia and Montenegro, and Sweden.

Entry requirements

For the MSc degree, applicants should have either a second class honours degree or the equivalent in a scientific subject, veterinary science, animal science, agriculture, biological sciences or medicine. Alternatively, you must have a second class honours degree in a scientific discipline which has, in the opinion of the University of London, included suitable training.

For the Postgraduate Diploma, Postgraduate Certificate, 240-hour and 50-hour Short Courses, applicants should have a degree or a technical or professional qualification and work experience considered appropriate and relevant by the University of London. For the 35-hour Short Courses, there are no entrance requirements.

English language requirements

All applicants must provide proof of their English language ability. If your first language is not English, the University will require documentary evidence that within the last three years you have:

- either been educated in English for at least 18 months
- or worked in English for at least 18 months
- or passed a recognised English proficiency test, for example:
 - IELTS (overall score 6.5 and 6.0 in each sub-test)
 - TOEFL (written test score 580 or computerised test score 237, and Test of Written English score 4.5)

Before making an offer of registration, the University reserves the right to insist that applicants pass an appropriate English language proficiency test.

Distance learning courses

MScs, Postgraduate Diplomas, Postgraduate Certificates and Short Courses

Aims and objectives

Livestock Health and Production Programme

www.rvc.ac.uk/lhap

A graduate of the Livestock Health and Production Programme should be able to:

- describe how animals respond to agents of disease at an individual and population level
- critically apply the appropriate husbandry systems for different animals in diverse environmental and socio-economic conditions
- demonstrate how feeding, breeding, management and interaction with the environment influence animal production
- identify clinical signs of infectious and production diseases that affect livestock, describe diagnosis and treatment and devise control policy to reduce and/or eliminate disease incidence of livestock
- conduct basic statistical analysis, explain the methods used to design and analyse epidemiological studies and conduct economic analysis of animal health problems at farm and national project level
- identify the impact of changes in markets and policies on the performance of livestock production and assist in planning and appraising livestock enterprises, projects and programmes
- understand and manipulate reproductive processes to improve production levels on livestock units at individual and farm level
- apply risk analysis methods to identify the critical stages of the food chain that lead ‘from farm to fork’ and apply preventive measures to protect public health
- be able to develop salmonella and tuberculosis control programmes to prevent endemic infections at farms
- develop a comprehensive knowledge of welfare and ethical issues connected with farm animal practice.

Veterinary Epidemiology and Public Health Programme

www.rvc.ac.uk/Education/Postgraduate/MScVetEpiPublicHealth

A graduate of the Veterinary Epidemiology and Public Health Programme should be able to:

- use the knowledge gained in epidemiology and economics to design and deliver effective veterinary services to improve animal health and productivity
- use risk analysis and disease surveillance to regulate zoonotic diseases and develop strategies to increase the quality and safety of food production
- conduct statistical modelling of epidemiological data
- apply socio-economic, political and environmental principles of livestock development to analyse the issues confronting producers, their advisers, planners and policy makers
- spatially analyse epidemiological data and modelling and production data
- design and evaluate animal health surveillance and control programmes involving multiple herds
- critically apply the appropriate husbandry systems for different animals in diverse environmental and socio-economic conditions
- formulate a hypothesis and undertake a research project, analyse and present data and develop a grant application.

Course content

Students have to undertake core courses and choose a number of optional courses, depending on the qualification.

- MSc students are required to study three core and four optional courses
- Postgraduate Diploma students are required to study two core and two optional courses
- Postgraduate Certificate students are required to study two courses.

Livestock Health and Production MSc (seven courses)

Three compulsory core courses: Animal Disease Part I (Current Concepts); Principles of Livestock Production; Developing and Monitoring of Livestock Production Systems.

Plus four further optional courses selected from: Economics for Livestock Development and Policy; Veterinary Public Health; Reproduction and Fertility – A Species Approach; Epidemiology and Animal Health Economics; Animal Welfare; Research Design, Management and Grant Application Writing; Management of Infectious Viral Disease Outbreaks in Animal Populations; and Research Project in Livestock Health and Production.

Livestock Health and Production Postgraduate Diploma (four courses)

Two compulsory core courses: Animal Disease Part I (Current Concepts) and one other chosen from the following: Principles of Livestock Production or Developing and Monitoring of Livestock Production Systems.

Plus two other courses chosen from the remaining core course and the optional courses of the MSc degree (excluding the Research Project).

Livestock Health and Production Postgraduate Certificate (two courses)

One compulsory core course: Animal Disease Part I (Current Concepts) plus one other chosen from the following: Principles of Livestock Production or Developing and Monitoring of Livestock Production Systems.

Veterinary Epidemiology and Public Health MSc (seven courses)

Three compulsory core courses : Epidemiology and Animal Health Economics; Veterinary Public Health; Statistical Methods in Veterinary Epidemiology.

Plus four further optional courses selected from: Economics for Livestock Development and Policy; Developing and Monitoring of Livestock Production Systems; Advanced Statistical Methods in Veterinary Epidemiology; Surveillance and Investigation of Animal Health; Research Design, Management and Grant Application Writing; Management of Infectious Viral Disease Outbreaks in Animal Populations; Research Project in Veterinary Epidemiology and Public Health.

Veterinary Epidemiology and Public Health Postgraduate Diploma (four courses)

Two compulsory core courses: Epidemiology and Animal Health Economics and Veterinary Public Health.

Plus two other courses chosen from the remaining core courses and the optional courses of the MSc degree (excluding the Research Project).

Veterinary Epidemiology and Public Health Postgraduate Certificate (two courses)

Two compulsory core courses: Epidemiology and Animal Health Economics and Veterinary Public Health.

Please note: Students are advised to take the compulsory core courses before the optional courses. Certain courses have a minimum computer requirement.

Assessment

Each course is examined by one three-hour unseen written paper and a compulsory tutor-marked assignment. A full list of examination centres around the world is available.

Assessment for both the 50 and 35-hour short courses is assignment completion only. There is no written examination.

Distance learning courses

MScs, Postgraduate Diplomas, Postgraduate Certificates and Short Courses

Duration

Students registering for the MSc in Livestock Health and Production or the MSc in Veterinary Epidemiology and Public Health have a minimum of two years and a maximum of five years in which to complete the degree, whilst for the Postgraduate Diploma and Postgraduate Certificate, students have a minimum of one year and a maximum of five. The 'study year' is effectively between February and September, with examinations held in October. Students must register by 1 November with the University of London (this date may be extended with prior permission gained from Postgraduate Admissions).

Training for official veterinary surgeons

A short, distance learning course entitled Import Control of Products of Animal Origin at Border Inspection Posts was launched in 2006 in conjunction with the Department for Food, Rural Affairs and Environment. It is part of the training requirement for prospective Official Veterinary Surgeons.

For all distance learning you can get more details and a prospectus from:

The External Programme
The Information Centre
Senate House
University of London
Malet Street
London WC1E 7HU
United Kingdom
Telephone +44 (0) 20 7862 8360/8361
Fax +44 (0) 20 7862 8358
Email enquiries@lon.ac.uk

www.londonexternal.ac.uk/rvc

Research opportunities

- 45 A pioneering spirit – Research activities
 - 47 Musculoskeletal Biology research group
 - 48 Reproduction, Genes and Development research group
 - 50 Cardiovascular and Inflammation Biology research group
 - 51 Infection and Immunity research group
-
- 53 Playing an active role – Clinical Training Scholars

Opposite Confocal image showing activation of the Wnt/b-catenin pathway by Lithium Chloride induced rearrangement of the f-actin cytoskeleton (in red) and increased paxillin staining (in green) in osteoblasts (bone forming cells). Image supplied by The Bone Unit, Department of Veterinary Basic Sciences.

A pioneering spirit

Research activities

Research at the Royal Veterinary College is of international quality. We aim to train scientists to work in interdisciplinary teams capable of tackling problems of practical relevance to veterinary and biomedical science.

As a self-governing college within the University of London, we attract a unique blend of basic and clinical scientists who work together within one research division. The research environment is enriched by its close proximity to international centres of excellence in biomedical and biological sciences, which allows us to benefit directly from expertise in functional genomics, proteomics, metabolomics and bioinformatics. Close collaborations exist with the Institute of Orthopaedics (part of University College London; with the Musculoskeletal Biology research group), the London School of Hygiene and Tropical Medicine, the School of Pharmacy, the Institute for Animal Health, the Health Protection Agency and the Veterinary Laboratories Agency (all with the Infection and Immunity research group) and the Animal Health Trust (Newmarket) (with the Musculoskeletal Biology and Reproduction, Genes and Development research groups).

Our research programmes extend from molecules to the whole animal or populations of animals. The objectives of the research we undertake are to understand:

- how animals function normally
- the pathophysiological basis of disease

At the present time, the RVC focuses on four themes and organises its research-active academics and their postgraduate students (PhD, MRes, Clinical Training Scholars) into four groups of between 20 and 50 academics, each led by a senior member of staff. The groups are:

- Musculoskeletal Biology
- Infection and Immunity
- Reproduction, Genes and Development
- Cardiovascular and Inflammation Biology

Animal welfare lies at the heart of much RVC research. Professor Christopher Wathes leads our new Animal Welfare Centre and co-ordinates research of welfare significance across the College. Two new academic appointments have been made recently in animal behaviour and welfare.

The new Animal Welfare Barn provides unrivalled facilities to study animal behaviour, physiology and welfare in well-controlled environments. Completed in July 2006, this unique facility enables us to study the impact of environmental influences on animal welfare and was funded by a BBSRC Programme Grant.

Joint research between projects involving scientists and clinicians with a focus on animal welfare across all the species covered by the College and other researchers in all of the College's research groups is already underway. Recent success in obtaining major funding from BBSRC's Endemic Diseases Initiative to work on Porcine Metabolic Wasting Syndrome is a good example of this strategy. In this multidisciplinary programme of research, animal welfare integrates with pathology, microbiology, immunology and epidemiology.

The College has built a very strong epidemiology team with complementary research interests such that they are represented in each of the College's research groups. All are veterinarians, and key members of each group facilitate interactions between basic and clinical scientists. The College has also developed the first Veterinary Phase II Clinical Trials Unit in Europe. The Clinical Investigation Centre manages these trials and facilitates research involving the clinical caseload seen within the College's hospitals and partner practices.

We are also investing over £4 million to build a new Centre for Emerging, Endemic and Exotic Diseases (CEEED) which is due to open in November 2008. Integrating veterinary epidemiology and public health with high quality molecular microbiology and immunology research is the major goal of this centre and of the Infection and Immunity research group. In the future, research will focus on emerging diseases, particularly those of zoonotic importance.

Alan Wilson

Head of Group

Professor in Locomotor Biomechanics
BBSRC Research Development Fellow
and Royal Society Wolfson Research
Merit Award Holder
The Royal Veterinary College and UCL
Email awilson@rvc.ac.uk

www.rvc.ac.uk/research/groups/

Musculoskeletal Biology research group

The goal of our research is to understand the mechanisms that regulate the development and maintenance of functionally effective architecture in bones, joints, tendons and muscles.

Mission

- To define and analyse the mechanical environment of the musculo-skeletal system and elucidate mechanisms regulating development, mechanical responsiveness, maintenance and repair of the architecture of bones, joints and tendons
- To define the fundamental principles and physical laws governing and constraining locomotor economy and performance through comparative analysis of locomotor system form and function

Research activity

Our musculoskeletal research is unique, combining comparative biomechanics to understand the stresses and strains on the bodies of animals in all forms of movement with research at a cellular and genetic level to understand how the tissues of the locomotor system (bones, tendons, muscles and joints) respond to these strains, develop strength and repair following injury. This helps us to suggest ways of combatting diseases of ageing (such as osteoporosis and osteoarthritis) which are important in both people and animals. In addition, our research is important in understanding the limits to athletic performance in animals and people and in devising novel diagnostic and therapeutic techniques for musculoskeletal injuries (e.g. tendon ruptures) of the animal and human athlete.

Facilities

The main research centre is at the Structure and Motion Laboratory on the Hertfordshire Campus, where a newly built, 46m x 17m Faraday screened animal locomotion laboratory houses state-of-the-art facilities for studying the biomechanics of locomotion. These include a new high speed treadmill for horses, humans and other animals, a 12-camera high speed motion capture system, nine high speed video cameras, high speed fluoroscopy (video x-ray), 12 large and two small animal force plates, and single and multi-lane rodent treadmills. We also have high speed hydraulic materials testing equipment and a well equipped

electronics lab, workshop and forge. In addition, we have access to onsite veterinary MRI and CT and farriery. For more details, visit www.rvc.ac.uk/sml. Technical support is provided by a full-time lab manager, an electronics design engineer and two technicians. The study of rodent models and mechanisms at the cellular level is facilitated by micro-CT, confocal microscopy and a range of cell and molecular biological research equipment based on our Camden site.

Current research interests

- Mechanisms by which resident bone cells respond to mechanical loading
- The role of the estrogen receptor in bone physiology
- The genetic factors associated with fracture in the thoroughbred racehorse
- Evolutionary biomechanics of locomotor form and function in large land animals such as dinosaurs (including birds), elephants, rhinoceroses and crocodylians
- Interaction between bone geometry and soft tissue properties and their effect on functional anatomy
- Control and optimisation of elastic systems and interaction between tendon and muscle
- Optimisations for and constraints to performance in terrestrial and arboreal locomotion and flight
- The risk factors associated with tendon injury in horses
- The relationship between the contractile element and elasticity in the muscle tendon unit
- Aerodynamics of flapping flight
- The development and application of novel methods for assessment of field locomotion
- Developing and applying novel imaging techniques to investigating the function of the musculoskeletal system
- Pre-natal influences on muscle development and their consequences for later growth
- The use of stem cell therapy in tendon repair
- The functional roles of conventional myosins during neuronal growth cone motility and the molecular mechanism of myosin-linked regulation

Reproduction, Genes and Development research group

The birth of healthy offspring depends on developmental processes proceeding normally through pregnancy. The goal of this area of research is to understand how genetic and environmental influences interact to affect the entire reproductive process and then influence offspring health and welfare.

Mission

To understand the physiological mechanisms regulating reproductive performance and subsequent development of the offspring and to use this information to:

- maximise reproductive performance without compromising animal welfare
- reduce the incidence of infertility
- control fertility in humans, domesticated animals and endangered species
- understand at the molecular level how each particular tissue develops, and how the normal developmental mechanism can be altered to give rise to a pathological state

Research activity

Understanding and controlling the mechanisms underlying fertility is a key challenge which is of fundamental importance in successful breeding of farm livestock, companion animals, endangered wildlife and in our own species. Reproductive performance is strongly influenced by both genetic and environmental factors such as nutrition and disease. Birth of healthy offspring is also dependent on the complex chain of developmental processes during pregnancy proceeding normally.

Understanding the mechanisms that control the development of tissues is a prerequisite to comprehending how a disease of that tissue evolves, and more importantly how tissue damage can be limited or repaired. There is much excitement in the field of developmental biology since it seems that the genetic cascades used during tissue development are redeployed when regeneration takes place. These principles are the basis for repair of many tissues and are fundamental to our Musculoskeletal Biologists who are trying to elucidate mechanisms whereby functional tissue strength can be regenerated following injury.

The RVC has a strong tradition of research in reproduction and development. There is close interaction between clinical

and preclinical departments and we also have collaborative research links with many other institutions in the UK and overseas that have particular interests in human, farm animal and wildlife fertility. We have excellent facilities for everything from applied molecular biology through cell biology to studies of whole animal physiology and herd epidemiology. Our developmental biologists work on a variety of tissues (including skeletal and cardiac muscle, bone, neural tissue, thymus) with the common aim of understanding tissue development at the molecular level. In each particular case we want to identify the key proteins that enable the tissue to grow and differentiate, then how the tissue is subsequently maintained in a functional state. Ultimately we hope to identify the adult equivalents of the cells that enable tissue growth and development which could be used for therapeutic purposes.

Current research interests

- Ovarian function
- Nutritional effects on fertility and development
- Dairy cow and equine fertility
- Reproductive neuroendocrinology
- Sperm physiology, cryopreservation of gametes
- Artificial insemination and in vitro fertilisation
- Embryonic muscle development
- Muscle growth during foetal life
- Cardiac muscle regeneration
- Fish muscle development
- Development of the thymus
- Neural crest and head skeleton development
- Muscle cell fusion and novel mechanisms regulating signal transduction
- Genomic approaches to identify causes of veterinary diseases
- Understanding myopathies in animals and humans
- Neuronal development and outgrowth
- Development of obesity and diabetes
- Development of the reproductive system

Waleed Marei
PhD student

'I chose the RVC because the Reproduction, Genes and Development group is engaged in some fascinating research, and because it came highly recommended by my Egyptian colleagues. They said I would find the environment friendly, motivating and very well equipped, and they were right. My tutors have helped me better define and understand my research topic and techniques, and I hope this PhD will enable me to return to Cairo University as a fully-fledged lecturer in veterinary medicine.'

Neil Stickland
Head of Group

Professor of Anatomy
The Royal Veterinary College
Email nstickland@rvc.ac.uk

www.rvc.ac.uk/research/groups/

Cardiovascular and Inflammation Biology group

Over the last decade the College research expertise in the area of cardiovascular and inflammation biology has been growing steadily. The success of staff in attracting funding and building strong teams in this field led to the formation of this research group in 2004. The group has developed particular interest in dietary and endocrine factors influencing cardiovascular and renal function.

Mission

To elucidate the pathophysiological mechanisms of cardiovascular and inflammatory disease processes from the molecular level to the whole animal, through:

- studying cells and mediators that regulate inflammatory processes or cardiac and vascular function
- studying the effects of disease (naturally occurring or models) on cellular function in isolated cell tissues or the whole animal
- studying the influences of dietary manipulation and pharmacological intervention on the cardiovascular system and inflammatory processes
- using this knowledge to develop novel methods of disease management

Research activity

The group comprises 12 members of academic staff who are basic scientists and nine who are clinical scientists.

The skills of the group are highly complementary, covering genomics and proteomics; cell signalling, isolated cell and tissue biology; in vivo whole animal experimental approaches; clinical research using patients with a range of diseases; and epidemiological approaches to studying cardiovascular and renal diseases.

Current research interests

- Inflammation
- Endothelial cell biology
- Atherosclerosis and coronary heart disease
- Cardiovascular and renal diseases of veterinary species

Kathleen M Botham

Head of Group

Professor in Biochemistry
The Royal Veterinary College
Email kbotham@rvc.ac.uk

www.rvc.ac.uk/research/groups/

Infection and Immunity research group

Control of infectious diseases requires a multi-disciplinary approach to understand the pathogens, the host response to these organisms and the way infections behave in different populations of animals. Experts in all these disciplines work together under this theme to address questions of global importance affecting animal and human health.

Mission

To study infectious agents of global importance to animal and human health; to understand the mechanisms used to establish infection, cause disease and transmit to other hosts; and to develop new and appropriate interventions to control disease.

Increasing emphasis is being placed on emerging diseases in animals, particularly those of zoonotic potential. Vector-borne diseases will become a new focus of this group as climate change enables vectors to invade new habitats and leads to spread of diseases into naïve populations.

Research activity

Infectious agents have evolved specific mechanisms to enter and survive in their host, often involving subversion of the host cell machinery. All infectious disease research involves the interaction between pathogen and host – the molecular microbiologists within this group focus on the role of the pathogen in this interplay, characterising genes, proteins and other molecules that are important in the infection process. They work with immunologists to define the host's response to the organism in question, defining molecular mechanisms underlying inflammation and immunity, and the role of innate and adaptive defence/immune systems. The successful control and prevention of infectious animal diseases needs to take the dynamics of infectious organisms in populations into consideration, which is based on an understanding of their relationship with the environment and possible hosts and is informed by both pathogen and host factors. Epidemiologists are integral to our Infection and Immunity multi-disciplinary research teams. In addition, acceptability and feasibility of control measures are critical for the success of control efforts. Economic evaluations are therefore part of the group's integrated approach to the development of effective and efficient infection control programmes.

Current research interests

- Novel risk-based surveillance models for emerging zoonotic diseases (avian influenza, Rift Valley fever and antimicrobial resistance)
- Porcine metabolic wasting syndrome
- Methicillin resistant staphylococcus aureus: domestic animal – human interactions
- Bovine viral diarrhoea virus: development of a UK National Control Strategy
- Foot and Mouth Disease virus in the UK
- Canine Coronavirus: role in infectious canine respiratory disease complex
- M Tuberculosis latency and hypervirulence
- Innate immunity in domestic species and the interaction of the innate immune system with a range of pathogens (viruses, bacteria, parasites)
- Cell biology, immunity and epidemiology of prion diseases
- Economic evaluation of surveillance and disease control programmes

Infection and Immunity Research at the RVC will become increasingly focused within a new £4M facility, the Centre for Emerging, Endemic and Exotic Diseases (CEEED). This has been designed to optimise integration between epidemiologists, microbiologists, immunologists and clinicians supported by excellent pathology services to facilitate multi-disciplinary programmes of research.

One of the key characteristics of this research group is its ability to respond quickly to emerging animal health challenges, due to its focus on flexible analytical research tools in Veterinary Epidemiology and Public Health.

Katharina Staerk

Head of Group

Professor of Veterinary Public Health
The Royal Veterinary College
Email kstaerk@rvc.ac.uk

www.rvc.ac.uk/research/groups/

Playing an active role

Clinical Training Scholars

Both the Department of Veterinary Clinical Sciences and the Department of Pathology and Infectious Diseases offer postgraduate clinical training programmes.

In the Department of Veterinary Clinical Sciences opportunities include one-year Junior Clinical Training Scholar programmes (internships) and three-year Senior Clinical Training Scholar programmes (residencies).

The Department of Pathology and Infectious Diseases also offers postgraduate clinical training programmes. These include three-year Senior Clinical Training Scholar programmes (residencies) in both clinical pathology and anatomic pathology.

Clinical training is through the management of cases under the supervision of specialist academic staff. The large and diverse caseload of the College's hospitals will ensure that Scholars are exposed to a wide variety of clinical problem-solving and the management of patients. Opportunities exist for scholars to spend time on placement in other diagnostic laboratories or clinical centres to broaden their experience.

All Scholars are expected to participate in RVC research activities, including developing a prospective clinical research project allied to one of the College's research themes, and attendance and participation in a range of regular meetings, seminars, tutorials and lectures is important. For pathologists, these include a weekly meeting in anatomic or clinical pathology.

Our Senior Clinical Training Scholarships equip veterinary graduates to work at a specialist level in their chosen field, and provide appropriate exposure to the clinical caseload. They are designed to ensure that the scholarly activity engaged in meets the criteria for accreditation, and to prepare individuals thoroughly for a specialist diploma examination. It is expected that students will register for a Masters degree, the MVetMed.

The majority of Scholarships are advertised in February/March and start in July, although some programmes may start throughout the year. Please visit www.rvc.ac.uk/postgrad for any current vacancies.

Completing the picture

Further information

- 57 A close community – Postgraduate life
- 59 A place to live – Accommodation
- 61 Looking after our students – Student Support Services
- 64 Be prepared – Pre-application procedures
- 66 Facts and figures – Finances
- 70 A range of options – Funding
- 74 Making your case – How to apply

Opposite Detection of caveolin-1 and caveolin-3 by a polyclonal antibody in bovine dendritic. Three colour confocal microscopy staining of bovine dendritic cells (identified by the surface antigen CD172a=green) express caveolin-1 and 3 (red). Nuclei are stained in blue. Caveolin-1 and 3 are important molecules involved in cell-signalling and lipid rafts formation. Their aggregation leads to the formation of small vesicles, called caveolae, which are 'hijacked' by some viruses to enter cells. Image supplied by Professor Dirk Werling.

Tim Potter

PhD student, Chair of Postgraduate Student Society

'Having undertaken my undergraduate and postgraduate studies at the RVC, I have experienced first-hand the friendly atmosphere and advantages of both campuses. I spent two years in Camden; a great opportunity to experience city life. For the last three years, I have been based in Hertfordshire, where I have enjoyed the full benefit of the RVC's excellent teaching and clinical facilities. I have been on the Postgraduate Student Society committee for over a year now and find it very rewarding. We represent postgraduate interests, bring students together and help them get to know people from right across the College. We also arrange social events; from get-togethers after graduate school events, to museum and gallery visits; helping everyone take advantage of all the Capital has to offer.'

A close community

Postgraduate life

The RVC offers you a great opportunity to study at a small and friendly College but also enjoy the benefits of being in or near London with all its opportunities to mingle with other students and enjoy the cultural opportunities of a great capital city.

Living in London

London is one of the world's greatest capital cities and provides students with a wealth of cultural and intellectual opportunities, complemented by a cosmopolitan social scene that few other European cities can match. Remember, many of London's national museums and art galleries are free, and every part of the city can be reached easily by bus or Underground.

Living in Hertfordshire

At our Hertfordshire Campus, only 20 minutes from central London by train, students swap the pace of city life for leafy Hertfordshire. The countryside provides many opportunities for rural pursuits such as riding, and yet it's just a few minutes' drive to the ancient city of St Albans. Here, the old market, the cathedral and the Verulamium Roman Town rub shoulders with the Hatfield Galleria shopping centre and cinema, and several large supermarkets.

University of London Union (ULU)

The University of London Union (ULU) supplements the social, cultural and athletic activities of RVC students, helping to foster a united spirit among the scattered colleges in London by fielding all sorts of sports teams and providing a wide range of student services, including a fantastic gym and several bars. As an RVC student you will qualify for membership of ULU and your ULU card will entitle you to discounts at many cinemas and theatres, on travel, and in some shops.

Postgraduate Students' Society

The Royal Veterinary College Postgraduate Students' Society (RVC PGSS) liaises with academic and administrative staff and with the RVC Students' Union in all matters involving postgraduate students. It is also involved in the ULU postgraduate network, which brings postgraduates from across London together and represents their needs at a national level. It plays a vital role in ensuring that student opinion is heard, and relies on all postgraduates putting forward their views, complaints and suggestions for change.

The RVC PGSS has three main objectives:

- representation of students' academic interests
- co-ordinating student welfare
- organising social events.

RVC PGSS committee members represent postgraduate students at College meetings, including campus committees and Academic Board. They also sit on the Students' Union Council, which allows the postgraduate voice to be heard at all levels within the College. The Society is committed to creating a positive and friendly atmosphere within the College by arranging social events in which everyone can take part, and does everything in its power to respond to the changing needs of the postgraduate student body.

A place to live

Accommodation

If you would like us to help you find accommodation in London, your first port of call should be the Graduate School.

Application forms for accommodation will be automatically sent to those who have accepted an MSc place when they become available in Spring 2009 and must be returned no later than 1 July. Accommodation is not allocated until after 1 July.

We receive significantly more applications for accommodation than we have rooms available. Priority is given to international students and those who live a considerable distance from London.

London Campus

College Grove is a development of 83 single occupancy rooms in the form of 12 maisonette-style properties with up to seven rooms in each. All rooms have an external telephone point and computer data point, en suite facilities with shower, toilet and hand-basin. Each maisonette contains a large kitchen/dining area and is designed as a self-contained unit. Rooms are let on a self-catering basis for a minimum of 50 weeks.

Rates for 2008-09 are £115.50 per week and the tariff is reviewed on an annual basis.

The RVC and UNITE Group plc opened a purpose-built, self-catering student hall in Kentish Town, a short bus ride or 20-minute walk from the College. The Graduate School has a limited number of en suite bedrooms arranged into flats with a common kitchen/dining area. Rooms are let on a 50-week tenure and rent includes contents insurance.

Rates for 2008-09 are £127.09 per week and the tariff will be reviewed on an annual basis.

Hertfordshire Campus

Odiham Hall comprises 30 single study rooms, let on a self-catering basis. Residents share bathroom and kitchen facilities.

In addition, College Close is a recent development comprising 17 self-sufficient houses for up to six people sharing. Each house is fully equipped and furnished and is let on a six-people 46-week tenure.

For further information about RVC accommodation, please visit our website at www.rvc.ac.uk/accommodation

Alternatively, contact:
Accommodation Manager
Royal Veterinary College,
Hertfordshire Campus, Hawkshead Lane,
North Mymms, Herts AL9 7TA
Telephone +44 (0) 1707 666203
Email accommodation@rvc.ac.uk

Intercollegiate Halls of Residence

International Hall can accommodate couples and families in one or two bedroom flats. Only one partner needs to be registered as a University of London student. If you are interested in these flats, you should apply directly to the Hall and not through the College. An application form is available from www.london.ac.uk/halls

Other intercollegiate halls may be able to accept applications from 1 September if they have spaces remaining.

For prices and further information on the Intercollegiate Halls, please visit www.london.ac.uk/halls

If you would like to know about non-affiliated halls of residence in London, please contact the Graduate School (graduateschool@rvc.ac.uk) for an information sheet.

A place to live

Accommodation

Private rented sector accommodation

If you need general advice about looking for housing in London, we recommend the London Student Housing Guide website: www.studenthousing.lon.ac.uk. This will guide you through the process of planning your search, inspecting properties, signing the contract and paying deposits.

The University of London Housing Services has a Private Housing Unit (PHU) which is funded by the Colleges of the federal University to provide a range of services to their students who are considering living, or live, in private rented housing. There is a database offering contact lists of students offering/wanting accommodation which can be found at www.housing.london.ac.uk

The PHU has members of staff who are able to give a range of housing advice. Increasingly the problems students have to deal with are of a legal nature, such as clarifying terms of a tenancy agreement and dealing with landlord disputes concerning issues of disrepair and refunding deposits. www.housing.london.ac.uk/cms/housing-advice

The Property Management Unit (PMU) of the University of London Housing Services also manages accommodation for both student and visiting academics. The PMU provides centrally managed self-catering flats and houses for around 285 full-time students. Further details can be found on the www.housing.london.ac.uk website.

Private rented accommodation in London is plentiful. The Graduate School can advise on convenient areas of the city for travel to campus.

Looking after our students

Student Support Services

The Student Support Service team is here to offer advice, information and advocacy to current and prospective RVC students. As a team they are here to help you make your time at the University a success.

Students with dyslexia/dyspraxia, long-term health conditions and disabilities

The RVC is committed to ensuring that students with disabilities, dyslexia/dyspraxia and/or health conditions are fully supported at the College. Our Disability Officer, Celia Cockburn, is available once a week at each campus to talk to current or prospective students about any access issues or support that you might need. She can assist with dyslexia screenings/reports, DSA applications (Disabled Student Allowances for home students) and advice and guidance for international students.

It is important that you inform the College about any access needs you might have as soon as possible, so that support can be put in place before you start your course. Please note down anything we need to know on your application form, and rest assured that all information will be treated sensitively and in the strictest confidence.

Email: clcockburn@rvc.ac.uk

Financial or welfare-related matters

General welfare and financial advice to students and prospective students is offered by the Student Finance Guidance and Welfare Officer, Simon Beale. He is available one day a week at each campus. He can assist with Student funding and loan entitlements; initial legal advice on a range of issues (small claims, etc); consumer problems; debt issues; housing or homelessness problems and welfare benefits.

Email: sbeale@rvc.ac.uk

Counselling

Student life and professional training can be both exciting and stressful. The RVC offers a free confidential counselling service, to help you with any emotional or psychological difficulties that may prevent you from making the most of your time while you are here. The counsellors are available at least one day a week at each campus.

Email: rvccounselling@herts.ac.uk
Telephone: +44 (0) 1707 284 453 for queries or appointments – please make sure you say you are a student/ prospective student at the RVC.

Pastoral care, regardless of religious belief

The College Chaplain, Rev. Pippa Turner, offers independent support and advice to everyone, regardless of religious belief. And of course, your tutors are always on hand. Information and help can be offered on personal matters, relationships and ethical decision-making, matters of social action and justice, and activity in the University and wider community. She is available two and a half days each week. She is often out and about in the college community so the best way to contact her is by email.

Email: pturner@rvc.ac.uk

Occupational Health Service

All students are urged to consult their own physician to ensure that they have proper protection at all times, such as up-to-date tetanus jabs. Additionally, students on the MSc courses in Wild Animal Health or Wild Animal Biology must arrange vaccination against hepatitis A, hepatitis B and rabies before joining the course.

Each student should keep a record of injections. The Occupational Health Service offers primary and booster inoculations when required, as well as vaccinations for students travelling abroad for research purposes or to attend conferences.

Looking after our students

Student Support Services

Our Occupational Health Service offers a confidential service to all students who are experiencing illness affecting their ability to pursue aspects of their course, or to those whose illness is caused or exacerbated by their studies. A full-time service operates from the Hertfordshire Campus and is available at the London Campus on pre-arranged days once a month.

Email: sshaw@rvc.ac.uk
Telephone: +44 (0) 1707 666 405

National Health Service

All students from the UK and EU, and overseas students who are studying in the UK for longer than six months, are eligible for treatment by the UK National Health Service, although we do recommend that you arrange some personal accident insurance for added protection.

If you are not already registered with a doctor in the London area, you must do this as soon as possible on arrival. Those in halls of residence on the London Campus can register with a local practice. Those in University Intercollegiate Halls or private accommodation in the Bloomsbury area may register with the University's Central Institutions Health Service. Dental services are also available from the University Dental Clinic. Students living on the Hertfordshire Campus should register with the local medical practice.

For a list of local GP surgeries, and more information on how to register with a doctor or dentist, please visit www.nhs.uk/england/doctors

Learning Skills Support

Studying for a postgraduate degree is different from any other course you may have done. You might find that you need to up-date your learning skills or are not familiar with the UK learning environment. The Learning Support Manager, Belinda Yamagishi, who is based in Camden or Helen Shore, who is based at Hawkshead, are available for one-to-one support and also run courses throughout the academic year.

Email: byamagishi@rvc.ac.uk or hshore@rvc.ac.uk

The Student Support Services Manager, Fiona Nouri, co-ordinates student support services and has overall concern for students' life outside of academia. You can contact her any time regarding any of the above services or matters not covered above.

Her contact details are: fnouri@rvc.ac.uk
or tel +44 (0) 207 468 5037

Be prepared

Pre-application procedures

English language proficiency

If your first language is not English, you must speak and understand it well enough to benefit fully from your studies at the College. You will therefore be asked to take one of two tests:

The British Council's International English Language Testing System (IELTS) academic test

Your overall band score must be at least 7.0 and you must have obtained a minimum of 6.5 in each of the four individual components of the test.

Further details can be obtained from local British Council Offices:
www.britishcouncil.org/home-contact-worldwide

Or from:

The British Council
10 Spring Gardens
London SW1A 2BN
Telephone +44 (0)161 957 7755
Fax +44 (0)161 957 7762
Email: general.enquiries@britishcouncil.org

General details about the test can be found on the IELTS website at
www.ielts.org

The Princeton Test of English as a Foreign Language (TOEFL)

You will need to score at least 580 (paper-based test), 237 (computer-based test) or 93 (internet-based test). The test is valid for up to two years after the result.

If you take the paper-based test, you should also be examined in the Test of Written English (TWE).

For further details about TOEFL contact:
Test of English as a Foreign Language (TOEFL)
PO Box 6151
Princeton
New Jersey
Telephone +1 8541-6151 USA

www.toefl.org

Learning English in the UK

You may study English in the UK prior to beginning your course. This is particularly useful for applicants who have taken either the IELTS or TOEFL test and failed by a small margin to achieve the required scores. In such circumstances, any formal offer of a place on a course will be made conditional upon your achieving a satisfactory score in an English for Academic Purposes (EAP) test. Details of British Council accredited institutions offering pre-session courses in English can be obtained from the British Council.

Visa requirements

The EU countries are: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the UK. EEA countries comprise: all of the above plus Iceland, Liechtenstein and Norway. Swiss nationals have certain rights similar to those of EEA nationals. Nationals of these countries do not require a student visa prior to studying in the UK, although they may wish to apply for a residence permit.

Please refer to

www.ukcisa.org.uk/student/info_sheets/planning_study.php

If you are a national of a country that is on the 'visa national list' it is compulsory to obtain entry clearance (known as a 'visa') before travelling. If you are a non-EU national and not from a country on the visa national list you are strongly advised to apply for a visa before departing for the UK. You should apply for entry clearance (either in the form of a visa or an entry certificate) before you come to the UK by contacting the British Embassy or High Commission in your home country. For further information refer to:

UK Visas

The Foreign and Commonwealth Office

King Charles Street

London SW1A 2AH

Main switchboard/General enquiries:

Telephone +44 (0) 20 7270 1500

Visa enquiries +44 (0) 20 7238 3838

Or visit the UK visas website at

www.ukvisas.gov.uk

If you are a non-EEA national coming to the UK to undertake a programme of study leading to a PhD, you are likely to need to apply for clearance from the Academic Technology Approval Scheme (ATAS), which monitors students studying in certain scientific fields. You should do this prior to applying for your student visa.

For further information, please look at the postgraduate section of our website or contact the Graduate School by email at graduateschool@rvc.ac.uk

Facts and figures

Finances

Table one

Masters and Postgraduate Diploma Courses	overseas (non EU)	EU/UK
MSc Control of Infectious Diseases in Animals*	£14,160	£4,860
Postgraduate Diploma Control of Infectious Diseases in Animals*	£10,260	£3,650
MSc Wild Animal Health	£18,970	£8,120
MSc Wild Animal Biology	£18,970	£5,950
MSc Veterinary Epidemiology*	£14,600	£4,640
MSc Veterinary Physiotherapy	£17,800	£8,820
Postgraduate Diploma Veterinary Physiotherapy	£17,800	£7,490
MSc Livestock Health and Production or MSc Veterinary Epidemiology and Public Health	£8,520 (or £1120 registration and £1120 x 7 courses)	£8,520
Postgraduate Diploma Livestock Health and Production or Postgraduate Diploma Veterinary Epidemiology and Public Health	£5,060 (or £985 registration and £1085 x 4 courses)	£5,060
Postgraduate Certificate Livestock Health and Production or Postgraduate Certificate Veterinary Epidemiology and Public Health	£2,660	£2,660
Short Course Students (Distance Learning)		
240 hour Short Course	£1,120	£1,120
50 hour Short Course	£440	£440
35 hour Short Course	£325	£325

Table two

Research degrees per annum*	overseas (non EU)	EU/UK
DVetMed	£19,300	£3,300**
MPhil/PhD	£19,300	£3,300**
MRes	£19,300	£3,300**

*Part-time fees available on request

**2008/9 fees; please contact the Graduate School for confirmation of 2009/10 fees

Fee status classification

The Graduate School will conduct a fee status assessment upon receipt of your completed application and the notes below are intended as a guide only in determining whether you will be regarded as a Home/EU or Overseas student for fee purposes. See www.ukcisa.org.uk/files/pdf/info_sheets/tuition_fees_ewni.pdf

Generally, you will be liable for the higher (Overseas) rate unless:

- 1 You are 'settled' (i.e. ordinarily resident without any immigration restriction on the length of your stay) in the UK and have been ordinarily resident therein throughout the three-year period preceding 1 September, 1 January or 1 April closest to the start of your proposed course, and the main purpose of your residence has not been wholly or mainly to receive full-time education.
- 2 You are an EU national (or the spouse or child of an EU national) and have been ordinarily resident in the EEA (see below) throughout the three-year period prior to the relevant date (see 1) and the main purpose of your residence has not been wholly or mainly to receive full-time education.
- 3 You are an EEA national (or the spouse or child of an EEA national) and resident in the UK as a 'migrant worker' and have been ordinarily resident in the EEA (see 1) throughout the three-year period prior to the relevant date (see 1) and the main purpose of your residence has not been wholly or mainly to receive full-time education.

- 4 You have been recognised as a refugee by the UK Government (or are the spouse or child of a refugee) and have remained ordinarily resident in the UK since that time.
- 5 You have been granted exceptional leave to enter or remain by the UK Government (or are the spouse or child of such a person), and have been ordinarily resident in the UK since that time.

Tuition fees

UK and EU nationals who fulfil the residence conditions are liable to pay the lower rate of tuition fee unless you already have a Masters level qualification or PhD from an EU institution and are applying for a qualification at the same or a lower level. Please contact the Graduate School for discussion of your fee status if you are in this category.

Research degrees may also be subject to additional research costs or bench fees that depend on the project being undertaken. Formal offers of a place to pursue a research degree will contain details of fees and research costs to be paid in each year of the course (table two opposite).

Facts and figures

Finances

Deposit: MSc courses

Unless you have evidence of funding from a recognised sponsor, a non-refundable deposit of £1,000 is required by 1 June preceding the start date of any full-time MSc course starting in October and £600 by 1 April for Veterinary Physiotherapy students starting in May.

Writing-up fees (PhD, DVetMed and MPhil)

You are normally expected to submit your thesis within the period of your initial registration and study: three or four years for a full-time PhD and two years for a full-time MPhil (or the equivalent for part-time students). Should you be unable to submit your thesis within three months of completing this period, a 'writing-up' fee of £440 (2009/10 rate) will apply.

Maintenance costs

You are required to have sufficient funds to cover tuition fees, project costs and maintenance expenses for the duration of your studies.

It is currently estimated that a single student requires at least £11,500 per year to cover accommodation and personal maintenance expenses while studying in London (costs for a student accompanied by family would, of course, be proportionately higher). However, this figure is meant as a guide only as accommodation costs, individual requirements and expected standards of living vary. Tuition fees and the cost of travel to the UK are additional.

Financial guarantee

All applicants offered a place at the College will be required to complete a Financial Undertaking form before being allowed to start their proposed course. Students in receipt of sponsorship are required to provide a letter from their sponsor stating the terms.

Self-supporting students must:

- confirm that they will have sufficient financial support for the duration of their studies
- accept responsibility for payment of the required tuition fees.

Non-payment of fees at any time will necessitate withdrawal from the RVC.

A range of options

Funding

Many postgraduate students at the RVC are recipients of prestigious scholarships. Among others we currently have students with DFID Shared and Commonwealth Scholarships.

For more extensive funding information, please see the RVC website at www.rvc.ac.uk/pgfunding/

UK students

The RVC has a number of BBSRC scholarships for UK students undertaking the MSc in Veterinary Epidemiology and PhDs. Part Scholarships are also available for the MSc in Control of Infectious Diseases in Animals. The RVC also obtains a number of other scholarships for specified PhD projects from charitable sources. These scholarships comprise tuition fees and a tax-free stipend, which is a minimum of £14,940 in 2009-10 (veterinarians attract an increased stipend). To be eligible, you must have achieved at least a 2.1 at undergraduate level or be a qualified veterinarian and be classified as a UK student under the research council guidelines. If you are not sure that you qualify, please contact the Graduate School.

More details will be available on our website closer to the scholarship application deadline.

The College regrets that it is unable to offer scholarships to assist students wishing to undertake an MSc course other than MSc in Veterinary Epidemiology and Control of Infectious Diseases in Animals; securing funds is your responsibility. Intending applicants should discuss their plans with their employer or Head of Department at their home institute/laboratory at the earliest possible stage, not only to seek leave of absence but because internal or local funds are sometimes available.

Success with grant applications requires perseverance and an early start is advisable. Application to the College for admission should also be made well in advance; provisional acceptance on a specified degree course can add weight to a request for funding.

Overseas students

- your own Ministry of Education or Education Department may provide a scholarship scheme that supports study in the UK
- your nearest British Council office will be able to advise you on British scholarship schemes and provide information about living and studying in the UK
- your employer may provide scholarships for vocational studies
- the UK government and other UK and EU organisations offer a number of scholarships to enable international students to study in the UK

Examples of organisations offering scholarships are given below.

Alban Programme

A high level scholarship programme targeted at Latin American students. For more information, visit www.programalban.org

British Chevening Scholarships

For more information, go to www.chevening.com or contact the British Embassy, British High Commission or British Council office in your own country.

Commonwealth Scholarship and Fellowship Plan (CSFP)

For citizens of most Commonwealth countries (other than the Commonwealth of Independent States) or British dependent territories. Please consult the Association of Commonwealth Universities (ACU) or email info@acu.ac.uk

Commonwealth Shared Scholarship Scheme

This scheme assists academically able students from developing Commonwealth countries who would benefit from higher education in the UK, providing that the course they want to take is to the developmental advantage of their home country. It is aimed at people who are unable to study in the UK for financial reasons, and are outside the scope of other British Government support schemes. Please contact the Graduate School for further information.

British Marshall Scholarships

Awards are open to US citizens under 26 years of age who are graduates of US universities, to undertake study in any subject leading to a degree at a UK university. For more information, please go to www.marshallscholarship.org

Fulbright Scholarships

These awards are open to US graduate students for study in the UK. For more information, please visit www.fulbright.co.uk

Other useful websites

UKCISA is the UK Council for International Student Affairs. It provides advice on a range of issues including sources of funding, immigration and health and welfare.

www.ukcisa.org.uk

Foreign and Commonwealth Office (London) offers a search facility to help you find the British Embassy, High Commission or Consulate in your home country, and visa information.

www.fco.gov.uk

The Immigration and Nationality Directorate (IND) provides information about the UK's immigration rules.

www.ind.homeoffice.gov.uk

International Education Financial Aid provides information on additional sources of funding.

www.iefa.org

The British Council provides information on its diverse activities, including its overseas English Language teaching operations (IELTS). It also helps you to locate your nearest British Council Office.

www.britishcouncil.org

The International Education Site gives general information about living and learning in the UK.

www.intstudy.com/study_abroad/livuk.htm

Making your case

How to apply

MSc courses

- Applications should include a short statement (approximately one typed A4 page) indicating why you wish to follow your chosen programme and how it relates to your previous experience and future plans
- Early application is recommended for the MSc courses as places are filled rapidly. A deposit or document demonstrating you have sponsorship will secure your place subject to you fulfilling any other requirements
- Applications are invited until 31 August for the September start and 28 February for the March start

Part-time study

Some of the MSc courses are offered on a part-time basis and are completed in two or three years. Students interested in part-time study should contact the appropriate Course Director to discuss course requirements and likely timetables. See also the individual course entry details.

Research study

- Applications for the degrees of MPhil or PhD are welcomed throughout the year
- Applications for admission to the College should be made through the Graduate School
- Application forms should not be sent directly to members of academic staff
- So that your application can be directed to appropriate potential supervisors, we require a short research proposal indicating in which areas you wish to specialise

Admission

The Head of the Graduate School will let you know whether or not your application has been successful. If it has been, you will be sent a formal offer of admission. This offer may contain certain conditions, typically, proof of proficiency in English and confirmation of financial adequacy. The offer will be confirmed only when these conditions have been met.

Admission to the College is subject to the requirement that you will comply with our registration procedures, and duly observe the Charter, Statutes, Ordinances and Regulations of the College and the University of London.

Qualification for admission

Apart from the MSc/Postgraduate Diploma in Veterinary Physiotherapy (see individual course application details) the normal minimum entrance qualification for registration is one of the following:

- a second class honours degree from a UK university, or an overseas qualification of an equivalent standard in a subject appropriate to that of the subject to be followed
- a registered qualification appropriate to the course of study to be followed, in medicine, dentistry or veterinary studies
- a masters degree in a subject appropriate to the course of study to be followed
- a professional qualification obtained by written examination and approved by the University of London as an appropriate entrance qualification for the degree in question.

Academic Technology Approval Scheme (ATAS)

The majority of non-EU applicants to the research programme will require clearance from the Academic Technology Approval Scheme (ATAS) prior to applying for a visa. Further details on how to apply for ATAS clearance will be provided should you be offered a place at the College. There is more information about ATAS on the UK Foreign and Commonwealth Office website at www.fco.gov.uk/atas.

Currently, none of our MSc courses require ATAS clearance; should this change, details will be provided.

Evidence of qualification

When you apply, you must provide a copy of your degree certificate(s) and a transcript of each degree, i.e. an authorised statement from the university where the courses were undertaken, including the grades/marks achieved. In the case of recent graduates, an authorised statement from the university indicating the degree result will be accepted until a certificate is available. In addition, EU or overseas applicants must provide a certified translation of any transcripts written in a language other than English. The College reserves the right to request original, official evidence of academic entry qualifications at any time. Should you go on to attend the College, we will request to see the original document at enrolment.

English language proficiency

If your first language is not English, you will be required to obtain an acceptable score in an English Language Test (see page 64). A certified copy of your test result should be submitted with your application where appropriate, or provided no later than one month prior to the start of the course. Please remember that applying for a visa can be a lengthy process and that you should fulfil the conditions of your offer as early as possible in order to allow sufficient time for your visa application.

References

The College requires two recent references in support of your application. Both referees should be familiar with your academic work, preferably at the institution at which you have recently studied/are studying. A reference referring to specific work experience relevant to the course you wish to undertake can be substituted for one of the academic references with the approval of the Course Director and the Head of the Graduate School. Both referees should be provided with these guidelines and one envelope.

You should send your references to us with your completed application. Please note that consideration of your application will be delayed if references are not enclosed.

Guidelines for referees

References should be written on official headed paper and be placed in an envelope. As they are confidential, the envelopes must be sealed and signed across the seal by the appropriate referee before they are returned to the candidate.

References should include the following points:

- 1 Full name of applicant
- 2 Intellectual qualities (e.g. present performance, future potential, ranking in class, current position)
Do you consider the applicant's degree result a true reflection of his/her abilities?
- 3 Suitability of chosen programme
- 4 Powers of expression
- 5 Interests and future plans
- 6 Other relevant information (e.g. the length of time you have known the applicant and in what capacity). If you are an applicant's present/former employer, please include an outline of responsibilities and an appraisal of their competence
- 7 Your signature
- 8 Your title, name and position

London Campus
Royal College Street
London NW1 0TU
Telephone +44 (0) 20 7468 5000
Fax +44 (0) 20 7388 2342

Hertfordshire Campus
Hawkshead Lane
North Mymms
Hatfield
Hertfordshire AL9 7TA
Telephone +44 (0) 1707 666333
Fax +44 (0) 1707 652090

The Royal Veterinary College welcomes applications from people from all backgrounds.

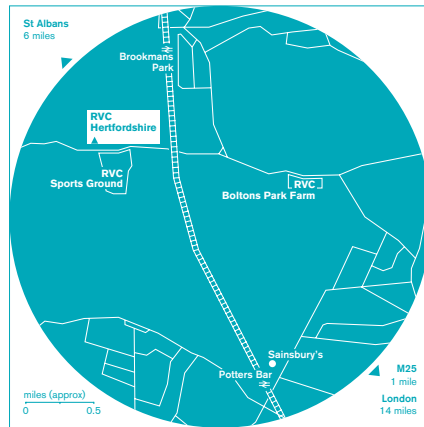
Our equality policy can be found at www.rvc.ac.uk/aboutus/policyandlegal/humanresources

Whilst all reasonable care has been taken in the compilation of this publication, the College can accept no liability which might arise from an unintentional inaccuracy, or from such changes as may take place from time to time. Readers are recommended to verify current circumstances for themselves whenever there is a need to do so. Any enquiries relating to this prospectus or to the work of the Royal Veterinary College should be addressed to:

The Graduate School
The Royal Veterinary College
Royal College Street
London NW1 0TU
Telephone +44 (0) 20 7468 5134
Email graduateschool@rvc.ac.uk

The College has charitable status.

RVC Hertfordshire Campus



RVC London Campus



For specific travel directions to both campuses, please go to www.rvc.ac.uk/AboutUs