



*Population Medicine Group,
Northumberland Hall,
Royal Veterinary College,
Hawkshead Lane,
North Mymms,
Hatfield,
Herts., AL9 7TA*

*Tel: 01707-666333
Email: tkjones@rvc.ac.uk*

27th September 2007

To The Secretary of the European College of Veterinary Public Health (ECVPH);

**APPLICATION FOR APPROVAL OF ROYAL VETERINARY COLLEGE RESIDENCY TRAINING PROGRAMME
BY THE EUROPEAN COLLEGE OF VETERINARY PUBLIC HEALTH - APPLICANT: THEO KNIGHT-JONES**

I am writing to formally apply for acceptance of the Veterinary Public Health residency training programme outlined below by the ECVPH.

The proposed Veterinary Public Health residency at the Royal Veterinary College (RVC) is a three year programme structured to fit the requirements of the Resident Training Programme outlined by the European College of Veterinary Public Health within the sub-speciality of Population Medicine.

It is designed to educate and develop the resident in a number of different ways. One aspect consists of formal didactic learning through the completion of an MSc in Veterinary Epidemiology (RVC and London School of Hygiene and Tropical Medicine (LSHTM)) and a Post-Graduate Diploma (PGDipl.) in Veterinary Epidemiology and Public Health (RVC). The Resident shall also gain broad experience and knowledge through a variety of placements and involvement with different institutions (e.g. the RVC, the Veterinary Laboratories Agency (VLA), the Department of Environment Food & Rural Affairs (DEFRA), the Health Protection Agency (HPA) and the Norwegian School of Veterinary Science). Project based learning is another major constituent of the Residents training.

A number of projects will be undertaken during the Residency programme (see programme outline), in particular the main residency project will be on Highly Pathogenic Avian Influenza (HPAI). This project will consist of the following objectives:

- 1) To verify the current risk ranking of bird species and areas with regard to their importance in the potential incursion, amplification and dissemination of the Avian Influenza (AI) H5N1 virus. This will consist of descriptive statistical analysis of available surveillance data.
- 2) To assess the efficiency and feasibility of the current housing order that will be applied to domestic poultry upon the identification of a case of HPAI in the wild bird or domestic bird population. This will be done via questionnaire based field work involving visiting a representative sample of poultry farms. Potential disease networks representing possible methods of spread of infection will also be investigated.
- 3) To identify the key risk factors involved in the transmission of HPAI from wild birds to domestic birds, should infection be present in the wild bird population in the UK. A quantitative risk assessment will be performed through the development of a risk simulation model using @RISK software. Results will be used to optimise surveillance and risk management strategies.

For full details of the programme see the outline below. I look forward to your response.

Yours Faithfully,

Mr Theo J. D. Knight-Jones BVSc, BSc, MRCVS.
Senior Clinical Training Scholar (Veterinary Public Health)

RESIDENCY PROGRAMME OUTLINE

OBJECTIVE	(Pre-Residency) 2006	Year 1	Year 2	Year 3
Part I - core elements (45 ECTS points)				
Introductory aetiology, epidemiology, diagnostics and control of infectious and non-infectious diseases of livestock populations	PGDipl. (Distance Learning): Epidemiology & Animal Health Economics – <i>Introduction to Veterinary Epidemiology</i> Veterinary Public Health – <i>Control of Food Safety</i>	MSc: Epidemiological Aspects of Laboratory Investigations Epidemiology & Control of Communicable Diseases PGDipl. (Distance Learning): Surveillance & Investigation of Animal Health		
Optimisation of animal welfare during production, transport and slaughter	PGDipl. (Distance Learning): Veterinary Public Health – <i>Control of food Safety</i>		RVC Distance Learning short courses: <i>Animal Welfare - Animal Transport & Slaughter</i> <i>Farm Animal Welfare of Intensively Farmed Ungulates</i>	Self directed study assisted by supervisor
Principles and concepts of population medicine, with emphasis on quantitative veterinary epidemiology	PGDipl. (Distance Learning): Epidemiology & Animal Health Economics – <i>Introduction to Vet. Epidemiology</i>	MSc: Extended Epidemiology PGDipl. (Distance Learning): Statistical Methods for Veterinary Epidemiology	Application through HPAI project (see above)	
Principles and concepts of food science	PGDipl. (Distance Learning): Veterinary Public Health – <i>Control of food Safety</i>			See Part V- Food Safety placement Self directed study assisted by supervisor
Principles and operation of food safety and food quality management	PGDipl. (Distance Learning): Veterinary Public Health – <i>Control of food Safety</i>			See Part V- Food Safety placement Self directed study assisted by supervisor

Biostatistics as related to VPH and disease and control problems encountered	PGDipl. (Distance Learning): Epidemiology & Animal Health Economics – <i>Introduction to Statistics</i>	MSc: Statistics for Epidemiology and Public Health Statistical Methods in Epidemiology PGDipl. (Distance Learning): Statistical Methods for Veterinary Epidemiology Surveillance & Investigation of Animal Health	Application through HPAI project	Application through additional projects
Familiarity with information and communication technology as related to VPH		MSc: Data Management Using Epidemiological Data PGDipl. (Distance Learning): Surveillance & Investigation of Animal Health	Application through HPAI project	Application through additional projects
Data handling and management for veterinary public health		MSc: Data Management Using Epidemiological Data PGDipl. (Distance Learning): Surveillance & Investigation of Animal Health Statistical Methods for Veterinary epidemiology	Application through HPAI project	Application through additional projects
Scientific writing and presentation of results from investigation		RVC residents induction training programme. Self directed study assisted by supervisor Internal & external presentation of project work	Writing of 1-2 Manuscripts relating to project work (See HPAI project outline above)	Writing of 2 Manuscripts
Veterinary and scientific ethics, professionalism in VPH		Exposure through various projects	RVC Animal Welfare course module – <i>Veterinary ethics and animal welfare</i>	

General concepts & principles of VPH	PGDipl. (Distance Learning): Veterinary Public Health – <i>Principles of veterinary Public Health</i>	MSc: Public Health Lecture Series Exposure through various projects	Exposure through various projects	
Principles & concepts of human and animal health economics	PGDipl. (Distance Learning): Epidemiology & Animal Health Economics – <i>Principles of Economic Analysis</i>		MSc: Animal Health Economics	See Part V- DEFRA cost-benefit analysis of surveillance systems
Principles, concepts and methods of risk assessment	PGDipl. (Distance Learning): Veterinary Public Health – <i>Introduction to risk Analysis & Risk assessment</i>	MSc: Surveillance of Animal Health & Production PGDipl. (Distance Learning): Surveillance & Investigation of Animal Health	MSc: Applied Risk Assessment & Management Application through HPAI project	See Part V- HPA placement
Awareness of EU and international legislation in relation to VPH	PGDipl. (Distance Learning): Veterinary Public Health – <i>Principles of veterinary Public Health</i>	Application through HPAI project	Self directed study of EFSA, SCFCAH and DGSANGO websites assisted by supervisor	
Part II - Population Medicine subspeciality elements (45 ECTS points)		Diverse aspects of Veterinary Population Medicine discussed in weekly epidemiology group seminars	Diverse aspects of Veterinary Population Medicine discussed in weekly epidemiology group seminars	Diverse aspects of Veterinary Population Medicine discussed in weekly epidemiology group seminars
Principles and procedures for field trial design and study design, conduct and interpretations (including data collection, data processing, interpretation and management)		MSc: Extended Epidemiology	Application through HPAI project	
Concepts, principles and applications of quantitative veterinary epidemiology (special emphasis on diagnostic test evaluation, sampling procedures, observational analytical studies, questionnaire-based surveys, disease modelling)		MSc: Extended Epidemiology Epidemiological Aspects of Laboratory Investigations	Application through HPAI Project	

Procedures and applications of qualitative and quantitative risk analysis (risk assessment, risk management and risk communication) of animal diseases and residues or contaminants at farm level	PGDipl. (Distance Learning): Veterinary Public Health – <i>Control of food Safety & Introduction to risk Analysis & Risk assessment</i>	MSc: Surveillance of Animal Health & Production PGDipl. (Distance Learning): Surveillance & Investigation of Animal Health	Application through HPAI project MSc: Applied Risk Assessment & Management VLA based work	See Part V- HPA placement
The population dynamics of infections and intoxications, including disease modelling		PGDipl. (Distance Learning): Surveillance & Investigation of Animal Health See part III- VLA project on avian disease modelling	Application through HPAI project MSc: Modelling & Dynamics of Infectious diseases Epidemiology & Control of Non-Communicable Diseases	
Concepts, principles and applications of disease control programmes as well as of good hygiene practices, sanitation and disinfection procedures	PGDipl. (Distance Learning): Veterinary Public Health – <i>Control of food Safety</i>	MSc: Surveillance of Animal Health & Production Epidemiology & Control of Communicable Diseases PGDipl. (Distance Learning): Surveillance & Investigation of Animal Health	Application through HPAI project	See Part V- Food safety placement
Intervention studies and decision support modelling		MSc: Extended Epidemiology	MSc: Modelling & Dynamics of Infectious diseases Application through HPAI project	
Application of animal health economics (e.g. disease loss estimations, cost-benefit calculations) decision support modelling, decision tree analysis	PGDipl. (Distance Learning): Epidemiology & Animal Health Economics – <i>The Use of Economic Tools in Veterinary epidemiology</i>		MSc: Animal Health economics	See Part V- DEFRA cost-benefit analysis of surveillance systems
Issues related to epidemiology for policy makers, EU and national legislation regarding animal health and welfare, as well as public health and food safety.		MSc: Surveillance of Animal Health & Production	Self directed study of EFSA, SCFCAH and DGSANGO websites assisted by supervisor	See Part V- DEFRA cost-benefit analysis of surveillance systems

Further aetiology, epidemiology, diagnostics and control of infectious and non-infectious diseases of livestock populations, either monofactorial or multifactorial in nature (specifically including zoonoses originating from livestock populations and those infections which can be raw animal product and/or food borne)	PGDipl. (Distance Learning): Veterinary Public Health – <i>Control of food Safety</i>	MSc course element 3 MSc: Surveillance of Animal Health & Production PGDipl. (Distance Learning): Surveillance & Investigation of Animal Health	MSc: Applied Risk Assessment & Management Application through HPAI project Self directed study assisted by supervisor	See Part V- HPA placement
Hazard identification – recognition and workings of disease problems as they occur in livestock populations as related to the discipline; outbreak investigation.	PGDipl. (Distance Learning): Veterinary Public Health – <i>Principles of Veterinary Public health</i>	MSc: Surveillance of Animal Health & Production Pg Diploma module 4 See Part III- DEFRA project on European AI outbreaks	Self directed study assisted by supervisor	See Part V- HPA attachment
Design, implementation and evaluation of monitoring and surveillance systems regarding animal diseases (including zoonoses and food-borne diseases)	PGDipl. (Distance Learning): Veterinary Public Health – <i>Current Issues in Veterinary Public Health</i>	MSc: Surveillance of Animal Health & Production PGDipl. (Distance Learning): Surveillance & Investigation of Animal Health	Application through HPAI project	See Part V- DEFRA cost-benefit analysis of surveillance systems
Principles and applications of tracking and trading of animal diseases (including zoonoses and food-borne diseases)	PGDipl. (Distance Learning): Veterinary Public Health – <i>Current Issues in Veterinary Public Health</i>	MSc: Surveillance of Animal Health & Production PGDipl. (Distance Learning): Surveillance & Investigation of Animal Health VLA AI project	Application through HPAI project Self directed study assisted by supervisor	
Concepts, principles and applications of pre-harvest quality management programmes (including good manufacturing practice codes, HACCP, total quality management, ISO)	PGDipl. (Distance Learning): Veterinary Public Health – <i>Control of Food Safety</i>	MSc: Public Health Lecture Series		Self directed study assisted by supervisor

<p>Part III – advanced level subspeciality modules (36 ECTS points)</p> <p>The population dynamics of infections and intoxications, including disease modelling</p> <p>Hazard identification – recognition and workings of disease problems as they occur in livestock populations as related to the discipline; outbreak investigation.</p>		<p>MSc: Advanced Statistical Methods in Veterinary Epidemiology</p> <p>DEFRA based study into epidemiology of past AI outbreaks in Europe (<i>feasibility of project under investigation</i>)</p> <p>VLA based Avian Disease Model project (<i>details to be finalised via Uta Hesterberg</i>) <i>To commence Jan 08, finish April 08.</i></p>	<p>Optional units on MSc not undertaken during previous course of study</p> <p>MSc research project Consisting of approx. 6 weeks research and 2 weeks write up time. Topic could follow on from VLA avian disease work or HPAI project</p>	
<p>Part IV – research element (36 ECTS points)</p>			<p>HPAI Project (main project – duration approx. 30 weeks, see above) Fieldwork to commence September 2008</p>	
<p>Part V – elective elements (18 ECTS points)</p>				<p>Attend elements of Food Safety course (Norwegian School of Veterinary Science)</p> <p>2 month placement to HPA to gain experience of risk assessment with regard to public health</p> <p>DEFRA placement to gain experience within economics relating to the cost-benefit analysis of surveillance systems and within policy development</p> <p>Training in communication in Veterinary Public Health (to be arranged)</p> <p>Further electives to be decided</p>

Royal Veterinary College/London School Of Hygiene & Tropical Medicine-MSc Veterinary Epidemiology

The course is divided into three terms and each term is divided into study units. Term 1 is taken full time from September to December 2007. Elements of term 2 and 3 are taken over the next 2 years completing the MSc in July 2009.

Term 1

- 1 Extended Epidemiology
- 2 Statistics for Epidemiology and Public Health
- 3 Epidemiological Aspects of Laboratory Investigations
- 4 Surveillance of Animal Health and Production
- 5 Data Management using Epi-Data
- 6 Critical Readings in Epidemiology
- 7 Public Health Lecture Series

Term 2

- 1 Animal Health Economics
- 2 Statistical Methods in Epidemiology
- 3 Applied Risk Assessment and Management
- 4 Epidemiology and Control of Communicable Diseases
- 5 Public Health Lecture Series

Term 3

- 1 Advanced Statistical Methods in Veterinary Epidemiology
- 2 Modelling and Dynamics of Infectious Diseases
- 3 Genetic Epidemiology
- 4 Methods of Vector Control
- 5 Bayesian Statistics & Computationally Intensive Methods (optional)
- 6 Epidemiology & Control of Non-Communicable Diseases (optional)

Royal Veterinary College – Postgraduate Diploma in Veterinary Epidemiology & Public Health

I commenced study for this distance learning course in February 2006 and shall complete it in December 2007. The course consists of four modules (each module requiring 240 hours of study).

2006

- 1 Epidemiology & Animal Health Economics
- 2 Veterinary Public Health

2007

- 1 Statistical Methods for Veterinary Epidemiology
- 2 Surveillance & Investigation of Animal Health