

## Jim Bee Award – LIVE sponsored teaching prizes and projects

LIVE evaluates current learning opportunities and supports staff when they look beyond the boundaries of veterinary education, this way encompassing best teaching and learning practice from across various disciplines.

One way to help staff to design more effective classes and learning packages are the James (Jim) Bee Educator Awards, which are given out to staff on an annual basis.

As part of the recognition process of excellence in teaching at the RVC, the College has created the James Bee Educator Awards, supporting innovation in teaching with an overall amount of £ 60.000 per year. LIVE rewards staff who engage in the development of new of new learning resources for helping students to use their time and the college's resources efficiently in achieving their goals.

In 2006 a discussion about the actual set up of the Teaching Prizes was started, considering a new modus of awarding the prizes and how to create a new shape for the Jim Bee Award, and in 2007 the following suggestions were made:

- Each year, there should be 4 team awards, each linked to a project proposal, and each to a maximum value of £15k. These would require self-nomination, and the adjudication would be based on a combination of the teams past track records of excellence in delivery and effective innovation, and the quality of their proposal. Projects expected to be completed within 2 years of the award.
- For individual awards each year, based upon staff or student nominations, and each valued at £1,000 per annum for a period of 3 years. I suggest that the staff given these awards deemed "Teaching Fellows" for the period of the award, and that during that period they should be available to support and mentor colleagues. We might want to extend this, e.g. to include publication, presentation or conference attendance. This would mean that, over a period of 3 years, we would at any one time have a maximum of 12 Teaching Fellows, which in a College of over 130 Academic Staff would not be excessive. We might also want to investigate ways of integrating the Teaching Fellows into the work of the LIVE Centre. A number of other institutions have similar schemes, and if it is thought worthwhile then it might be worth studying one or two of them in greater detail to flesh out this proposal. However, if colleagues would prefer to remain with the current scheme, in which teaching prizes for individuals are a one off reward for past excellence, then we could stay in that positions.

At this point in time the discussion has not yet come to a final conclusion, however during the last meeting in July 2007 it was decided that we would look to approve of these changes for the awards of the following year, 2007-08.

## **Projects awarded in the year 2004/2005 include:**

### **Project 1: The Development of a Screen-based Clinical Case Simulator**

*Dez Hughes, Senior Lecturer, Emergency Critical Care Unit,  
Peter Nunn, e-learning developer, LIVE  
Sarah Baillie, LIVE*

Today patients and clients often do not accept being used for the purpose of training; they expect the health professionals to be competent. This planned simulator will help students to work on their problem solving skills. It will give our vet students an opportunity to manage clinical scenarios in an environment in which mistakes do not result in real untoward outcomes, in which feedback is immediate and in which they can repeat their performance until they acquire these skills.

It is hoped for that future mistakes will be reduced after training on this simulator. The simulator will allow the student to make a clinical assessment, develop a hypothesis, initiate a therapy, anticipate consequences of intervention communicate treatment goals to staff and evaluate effectiveness of therapy.

#### **Current Progress Report:**

- ✓ Start in March 2006, good progress in the beginning. Due to heavy ECU commitments of project leader progress has been slower than anticipated. Peter Nunn has developed the shell for the simulator. However, project leader Dez Hughes has left the College in spring 2007 and the project has come to a hold.

### **Project 2: The Development of Computer-aided Learning and formative Assessments in Anaesthesia**

*Dr Kathy Clarke, Equine Senior Lecturer  
Dr Hatim Alibhai, Lecturer in Anaesthesia  
Kate Borer, Lecturer in Anaesthesia*

The primary aim of this teaching and learning project is to develop a Direct Learning class for the third year which can be carried out on the computer and which also contains its own integral formative assessment, so students are enabled to take on responsibility for their own learning. The intended outcome is the improvement of anaesthesia teaching to larger number of students at the RVC.

#### **Current Progress Report:**

- ✓ Start in autumn 2006, not very good progress in the beginning. Due to heavy staff commitments the start has been later than anticipated. But now the team is moving forward – LIVE to talk to them again about results.

### **Project 3: A Tool for Integrating the Teaching of Clinical Skills, Clinical Reasoning and Communication Skills to Aid Transition from Student to Practitioner.**

*Melanie Cappello, Clinical Skills Tutor  
Perdi Welsh, Veterinary Skills Developer and Clinical Skills consultant  
Nicki Coombes, Clinical Skills Tutor*

*Belinda Yamagishi, Communications Skills*

The idea behind this project is that the team can combine practical skills with clinical decision-making and communication skills. A number of skills are integrated into one scenario but can effectively be broken down and/or reassembled to fit the learning objective. The student will use a computer-based program to complement the practical skill.

**Current Progress Report:**

- ✓ Start in February 2006, good progress from the beginning. Two of the scenarios have already been fully completed and will be presented at the LIVE Symposium/ Interactive Veterinary Showcase on 21 February 2007. Clinical Skills tutor Melanie Cappello has developed an equine wound management scenario with Peter Nunn (LIVE e-learning developer), which they presented at the SMILE conference (AMEE) in Genoa, Italy in September 2006. The second completed scenario deals with the improvement on how to enhance the learning of drug calculations. Perdi Welsh and Peter Nunn have completed the production phase and are now looking to evaluate its use with students and clinical staff. Further scenarios still to be completed.

**Project 4: Genotyping Two Breeds of Cattle Using Restriction Mapping Techniques**

*Dr Ketan Patel, Reader, Cell & Developmental Biology*

Dr Patel questions why it is the case that students are put off the subject of molecular biology? He indicates that we fail to teach this subject correctly, and thus, we are letting the students down and also the professional bodies who want us to encourage more students to become scientifically competent.

His idea to improve the students' experience with molecular biology is to use specific equipment for an integrated series of practicals that will allow students to use molecular biology in a veterinary setting, thus empowering them with tools relevant for their chosen career path.

**Current Progress Report:**

- ✓ Start in February 2006, good progress from the beginning. Ketan Patel has completed his development of practicals. Student feedback so far very good.

**Project 5: Facilitation of Self and Peer Assessment during Clinical Placements – does it lead to Improved Learning?**

*Alison Price, Lecturer in Small Animal Medicine*

Alison's idea behind the project is to work with final year students in clinical placements, divided into experimental and control groups. The experimental group will be exposed to self and peer assessment on more than one clinical placement/rotation. The control groups will experience clinical placement without exposure to self and peer assessment. The benefit to learning and teaching at the College is an increased student participation in the assessment process which will potentially lead to better learning and hence better undergraduates/graduates. This should also create opportunities for dialogue between tutors and students and students should also benefit from increased timely feedback.

**Current Progress Report:**

- ✓ Slow start as Alison struggles with the actual research part of her project. LIVE has offered help by suggesting theoretical input in order to set up the right questions. Trying to engage with Alison is not an easy task, as she is not based on campus and contacting her is difficult. Since February 2007 Birgit Pirkelbauer has assisted Alison with the further development of her project and Alison now has a project plan she is committed to.

**Project 6: Development of a Clinical Video Bank**

*Team award to the E-Media Unit at the RVC*

The E-media Unit's project is basically to use videos more frequently for teaching and learning at the College. There is a lot of expertise in producing high quality video for teaching and learning but there is also a lack of hardware to use the full capacity of these skills. There is a clear advantage of digital video in order to record procedures which students can view during or after they have taken place. The proposal is to purchase hardware such as a small digital video camera that can be fitted to a surgical light and then be attached to the College network. This will film the procedure taking place under the light and transmit to a high powered video PC. The video will then be archived and streamed across campus.

**Current Progress Report:**

- ✓ Completed.

## **Projects awarded in the year 2005/2006 include:**

### **Project 1: Enabling Effective Practical Teaching in Microbiology**

*Dr Andrew Rycroft – Reader in Infectious Diseases*

#### **The need for microbiology teaching:**

Infectious disease, caused by bacteria and fungi, is a very common reason for initial veterinary consultation. Antimicrobial drugs are among the most widely used drugs, both in small animal and farm animal practice. This way, acquired understanding of the infectious agents is crucial to making an appropriate and balanced response in veterinary practice.

#### **What to achieve:**

The result is to get the student to think rather than memorize. In so doing, the student is forced to use the information and language accumulated in the course and to gain understanding rather than facts. They need to have an understanding and a vocabulary necessary for them to be involved in discussion and participate as young professionals. Practical aspects of the subject are crucial to understanding the subject in the very short time of exposure allowed for our undergraduates.

In order to achieve this understanding it is suggested to make a series of 6 digitised live illustrations (videos), with commentary, to substitute for some of the practical microbiology currently taught at the bench.

#### **Current Progress Report:**

- ✓ On target

### **Project 2: Revamp Structure and Delivery of Reproduction Practical's During the Urogenital System I Module**

*Dr Robert Abayasekara, Senior Lecturer Veterinary Basic Sciences*

With increased student numbers, the Reproduction practical classes have become increasingly difficult to deliver effectively. Due to shortage of specimens and qualified staff, we propose a new approach which would see a more effective use of scarce resources.

Currently class structures do not appear to meet objectives due to the following reasons:

- Limitations of time – students have 45 minutes to dissect the reproductive tract
- Tendency of students to be overly dependent on staff involvement in examining the fresh/fixed specimens, leading to dependant learning
- Students also tend to cluster around specimens which does mean that NOT ALL students gain access to this material

In order to address the above issues and to make the student experience of practical's a more useful learning experience, the team proposes changes to the structure of the Reproduction practical's as follows.

The students would be split into groups of ~70 and each group would spend 1.5h in the DR (this addresses the most contentious issue of numbers in the DR).

**Anticipated Outcomes:**

4 complete videos of each reproduction practical class. Annotated digital images of urogenital system specimens available on Blackboard.

**Learning and Teaching benefits:**

- A clear comprehensive guide for students available for preparation and reinforcement of core material in the urogenital system encouraging more INDEPENDENT learning
- More efficient practical classes with less overt input from staff
- All students will have access to the same teaching resources thus ensuring a more consistent learning experience for the students
- Reduced requirement for fresh anatomical specimens during unseasonal times

**Current Progress Report:**

- ✓ Start in Autumn 2006, group is on schedule

**Project 3: Developing novel models for teaching of systems anatomy in domestic species and to support vertical integration**

*Dr Raymond Macharia, Lecturer in Veterinary Basic Sciences, Anatomy and Dissection*

The aim of the proposed study is to develop 2D-3D computerised models for teaching the head anatomy. The modelling and simulations of the head will be used in the first instance and will act as a prototype for other body systems. It is planned to use a combination of preserved animal specimens, clinical radiographs, MRI scans and end-stage material to help the student to articulate the structure–function relationships in domestic species. These models can be used within a lecture, dissection classes and for student's private study.

**Intended outcomes and benefits to learning and teaching:**

To provide a computer based anatomical teaching material for use in lectures and practical classes. Presentations will enhance student knowledge retention and reduce lecturer-student contact time during dissection classes.

The teaching material will be availed on VLE thereby enabling students to gain access for private study and revision. This is equivalent to a "virtual laboratory" that that will compliment lecture-room experience.

The involvement in modelling structures by students will encourage them to value ownership of learning and motivate independent study.

Students will engage and develop deeper understanding of basic and clinical anatomy leading to increased clinical integration in later phases of study.

**Current Progress Report:**

- ✓ Dr Macharia started and makes very good progress, almost completed.

## **Project 4: Development of a Computer Aided Learning Package on Cutaneous Neoplasia**

*Professor David Lloyd and further RVC academic staff (Dermatology, Surgery and Pathology)*

*LIVE IT staff*

*External contributors and collaborators:*

*Mr. David Grant (Harmsworth Hospital, London)*

*Dr. Catherine Fournel-Fleury (Lyon Veterinary School)*

*Dr. Ilse Schwendenwein (Vienna Veterinary School)*

The team around Prof Lloyd aims to develop a comprehensive computer aided teaching and learning package which can be used both at the undergraduate and postgraduate level.

It will enable students to learn about the pathophysiology, clinical features, diagnostic procedures and therapy of cutaneous neoplasia.

The team aims to include international and national collaborators who have already demonstrated their abilities as teachers in these areas, and who have excellent teaching and learning material which they can contribute to the project.

The package will be produced in a format suitable for distribution via the Royal Veterinary College intranet and on the worldwide Web.

A version suitable for distribution on DVD will also be produced so that use in areas which are not linked up online will be possible.

An additional benefit will be the ability to extend the relevance of this teaching project to other languages, as contributors will include teachers from France and Austria.

### **Project Structure:**

This computer aided learning package will follow the layered learning format adopted for the very successful "Diagnosis in Veterinary Dermatology" teaching programme developed at the Royal Veterinary College. The format allows great depth in the teaching and learning experience. Undergraduates can focus on first day skills and can revise simple procedures. Postgraduates are able to study in greater depth.

Interactive formative and summative assessment will be built into all components of the learning programme, with a case-based section at the end designed to bring together the skills acquired throughout the package. Feedback will be provided for every assessment process with hyperlinks to relevant parts of the package so as to reinforce the learning process.

### **Current Progress Report:**

- ✓ The team has completed stage 1, the collection of image materials. Phase 2 started with a meeting of the project leader and LIVE staff to discuss the most suitable digital production tool for this new e-learning package. Good progress.

## **Project 5: ASPIRE! – Advanced Scientific Practice In the Research Environment: Enhancing the research experience of undergraduate students**

*Dr Gary Baxter, Dr Rob Fawkes, Dr Charlotte Lawson, Dr Imelda McGonnell, Dr Donald Palmer*

The team's aim is to develop a taught module in Laboratory Research Skills, targeted at 2nd Year BSc students, elective students, and 1st year post-graduate research students. The project has been brought forward in order to maximise the availability of an experiential introduction to the research environment. The module would provide vertical integration between year 1 and year 2 tutorial provisions and importantly, translate theoretical to practical skills. It is hoped that the users of the module could be extended to include new PhD students arriving at the RVC, thereby increasing the portfolio of teaching courses provided by the Graduate School. Similarly, this module could also be given to BVetMed students either as an elective or EMS, with the aim of encouraging these students to embrace concepts of scientific research.

**Intended Outcomes:**

- To improve competency in laboratory skills and research practice
- To translate theoretical concepts of scientific research into practical experience
- To further enhance the research ethos within the College's undergraduate student population

**Current Progress Report:**

- ✓ Planned implementation of the new module was for academic year 2006/07. LIVE needs to contact them.

**Project 6: Diagnostic Imaging Unit – Enhancing the learning experience of undergraduate students**

*Dr Renate Weller, Lecturer in Diagnostic Imaging*

**Intended Outcomes:**

To improve learning of diagnostic examination

**Current Progress Report:**

- ✓ Completed.

## **Projects Awarded in the Year 2006/2007 include:**

### **Project 1: Development of a Computer Aided Learning Tool for Immunology “LIME” – Learn Immunology More Easily”**

*Dr K Allenspach, Lecturer in Small Animal Internal Medicine*

*Dr B Catchpole, Senior Lecturer*

*Mr N Short, Head of eMedia Unit*

*Prof D Werling, Prof in Molecular Immunology (Project leader)*

With the discovery of the importance of the innate immune system and the progress in understanding cell-signalling, immunology has become a field where knowledge has grown significantly recently. Reagents and tools for research into the immune system of companion and farm animals are now being developed which will enable veterinary scientists of the future to better understand diseases and pathogenesis in domestic species. This creates a need to teach our students using the most up-to-date information and materials.

#### **Intended Outcomes:**

- It will enable students to learn about the basic concepts of immunology, independent of the species they study.
- It will enable students to learn/cross-reference immunology in an interactive way, in their own learning-speed, and as lecture-accompanying material.
- The modular structure of its content allows the creation of lectures to cover the latest research topics by ensuring that students have learned the basic concepts in a self-motivated approach.
- Although initially updated by Dr. Dirk Werling, it is envisaged that single components will subsequently be updated by external and internal lecturers, i.e. guest-lecturers participating in the BScVetPath course. These lecturers who have already demonstrated their abilities as teachers in these areas, and who have excellent teaching and learning material which they can contribute to the project. Such contribution can range from animated PowerPoint presentations to video-sequences of immunological reactions in the broadest sense.
- Furthermore, components of already existing lecture-supporting teaching material, such as the content of the CD CellsAlive! (see [www.cellsalive.com](http://www.cellsalive.com)) or teaching material distributed by the Wellcome Trust (i.e., their Topics in International Health series), can be included in the resource. Such teaching material can be used without licensing agreement for teaching purposes.

#### **Current Progress Report:**

No progress to be reported yet

### **Project 2: ‘QMH LIVE Team Vignettes’**

*Dr S Gregory, Senior Lecturer*

*Dr D Connolly, Head of Small Animal Cardiology*

*V Lipscomb, Lecturer in Small Animal Surgery*

*Dr A Hendricks, Lecturer in Veterinary Dermatology*  
*Dr J Eastwood, Head of Small Animal and Internal Medicine*  
*Dr S Corr, Head of Small Animal Orthopaedics*  
*Dr M Pead, Senior Lecturer, Small Animal and Internal Medicine*  
*Dr R Cappello, Lecturer in Neurology*  
*P Bedford,*  
*Dr S Baines, Lecturer in Small Animal Surgery*  
*Dr K Chandler, Lecturer in Neurology*  
*A Boag: Lecturer in Emergency and Critical Care*  
*P Nunn, eLearning Developer*  
*P Mahoney, Lecturer in Radiology*

This project is an aid to guiding a student through the clinical examination of the dog. It is aimed at 3<sup>rd</sup> year BVetMed students who are about to embark on their first clinical EMS placement in small animal practice. If the project is successful, it could be extended to include equine, feline and farm animals.

A selection of small animal clinicians has been asked to examine a part of a dog, and be filmed while they are doing so. Each session will provide a 2-3 minute vignette, which when added together will give the students a video of 20 minute approximate length showing the complete clinical examination of a dog.

#### **Intended Outcomes:**

The end product will be a simple to access and simple to use guide to the clinical examination of a dog, aimed at students who are about to begin their clinical EMS. There is no doubt that the result will be able to be of use to students throughout their Clinical EMS programme, as well as preparing them for their time in the College's small animal hospital, the QMH.

The videos will be disseminated to students via Blackboard, the College's VLE, and will be in such a format that they will be playable on all current hand-held electronic devices, as well as notebook and personal PCs.

If it proves successful, then it could be easily extended to equine, feline & farm animal. If shown to be of value to our students, we could offer this educational product to other veterinary schools.

#### **Current Progress Report:**

✓ Filming has already been carried out in June.

### **Project 3: You and Your Body – Investigating Biological Form and Function**

*Dr Rachel Payne, Lecturer in Veterinary Basic Sciences*  
*Dr Renate Weller, Lecturer in Radiology*  
*Dr Stephen Frean, Lecturer*  
*Dr Thilo Pfau, Postdoctoral Research Associate*  
*Mr Jon Parry, Project Director - Widening Participation*

Veterinary students are typically intelligent, enthusiastic and driven yet these seemingly desirable personality traits can sometimes lead to a rigidity of approach and a fixation on examination performance. New approaches to teaching are needed to engage students early on in their careers, promoting a more holistic understanding of biological systems, automatically integrating basic and clinical sciences.

The study of form and function (anatomy) has fascinated artists and scientists for centuries. In spite of this and in spite of recent advances in biological imaging, human and veterinary anatomy classes are restricted to cadaveric dissection of fixed material (humans **or** animals respectively). As humans, we tend to have a healthy interest in our own bodies and thus human anatomists are easily engaged in the subject area, relatively early on. Veterinary classes however mainly focus on equine and canine anatomy which is completely new to students and thus less easily related to their existing (A' level) knowledge base.

**Intended Aims:**

To introduce students to key concepts in animal design through investigation of their own bodies using novel visualization and quantification technologies.

**Current progress Report:**

✓ The project will be rolled out in two key stages:

October 2007: First class run for BVetMed year 1 (basic version – practical stations only)

October 2008: Final version complete (fully complete stations with VLE and info-cards)

**Project Four: The Development and Implementation of effective multisource feedback in the evaluation of Senior Clinical Training Scholars**

*Mr Adrian Boswood, Deputy Vice Principal in Teaching*

*Ms Virginia Luis Fuentes, Senior Lecturer and MVetMed Course Director*

*Mr Kim Whittlestone, Senior Lecturer in Independent learning*

An **external collaboration** with:

Helena Davies – Consultant in medical education, Sheffield Children's NHS trust

Andrew Anderson - Chief Executive HcAT - Healthcare Assessment and Training

It is proposed that, in collaboration with experts in the practice of collection and delivery of multisource feedback from the medical field, we will design, validate and implement an online system for collation of multisource feedback and production of feedback reports. An assessment tool will be developed based on a rationalisation of the current feedback form used by the graduate school. This will group questions into specific areas of clinical practice similar to those used on the SPRAT assessment tool (as dictated by the five domains of good medical practice (Davies and Archer 2005).

**Intended Aims:**

If successful this assessment should become a necessary part of the annual supervision, assessment and appraisal cycle for each senior clinical training scholar. This would represent the first large-scale assessment of this type in post-graduate

veterinary specialist training and as such the development and validation of an assessment tool of this type would be worthy of report in a medical education journal.

There are also several broader aims of this project. The veterinary profession like the medical profession is going to need to develop mechanisms for revalidation of clinical competence. Specialist organisations like the European Specialist colleges need to develop more robust means of assessment of the “does” of Miller’s pyramid. Within the college we need to engender an environment that recognises and values the collation and delivery of effective feedback. Therefore potential ramifications of this project could be

- Adoption within the profession of similar means of assessment for practicing veterinary surgeons, not just those studying for advanced post-graduate qualifications (similar broadening of the scope of multisource feedback has occurred in the National Health Service).
- Dissemination of good practice through European specialist colleges to provide more valid assessment of clinical competence.
- Broadening the scope of multisource feedback within the institution to include all staff and feeding the results of this feedback into annual appraisal.
- The development of a similar online system for the evaluation of students involved in intramural rotations.

**Current Progress Report:**

No progress to be reported yet.

Davies, H. and J. Archer (2005). "Multi-source feedback: development and practical aspects. ." Clinical Teacher 2(2): p. 77-81.