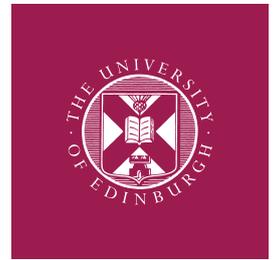


# THE ROYAL (DICK) SCHOOL OF VETERINARY STUDIES



## The Dick Vet Equine Hospital Newsletter

Spring/Summer  
2012

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## Welcome to the Spring/Summer Newsletter

Welcome to the Spring 2012 edition of our Hospital Newsletter. This twice yearly publication keeps you updated on our activities and news as well as describing some of the interesting cases that you have sent us. We hope you find it a useful and interesting read! We'd also like to take this opportunity to thank you for your continuing support of the Hospital. Your referrals are crucial in allowing us to fulfil our three main remits, namely:

- Advancing clinical practice. We aim to offer a high quality clinical referral service that gives you and your clients options when standard diagnostic and/or treatment methods have failed to provide an answer or solution.
- Education of undergraduate vets, post-graduate vets and equine owners. It is essential that vet students get the opportunity to appreciate the new knowledge and techniques available as well as getting exposure to high quality first opinion cases to acquire 'day one skills'. Likewise we see updating practitioners via CPD as a major aim. We are also always happy to talk to your equine clients at practice evenings.
- Equine clinical research. We are rightly proud of the fact that much of our clinical caseload contributes to our published research work. We see publication as an important remit of our Hospital practice, enabling the equine community in Scotland/North England to contribute to worldwide veterinary discussion. Without publication of findings there is no feedback from other specialist opinions and no progression of veterinary practice.

All of these three remits are co-dependant and we are always appreciative of your help in fulfilling these aims.

## Staff News

We are sorry to announce that Sarah Taylor has left the Equine Hospital for a few months. Such was her developing expertise in orthopaedics and especially MRI diagnostics that she has been head-hunted to cover maternity leave for one of the senior vets at Liphook Equine Hospital in Hampshire! All is not lost however as we have an able replacement in Russell Parker. Many of you will know Russell as he spent three years doing his residency with us from 2008. Russell graduated from Bristol University in 2004 and completed an Equine and Small Animal Internship year in a private practice in Essex. He stayed at the practice as an Equine Associate for a further 18 months before moving to a large equine referral centre in Berkshire. Russell has just recently attained the European Surgery Diploma (EVCS Diploma) and so is bursting with knowledge to complement his well-developed practical skills! We are glad to be able to have Russell back; he is an excellent clinician and we hope that you will continue to support him while Sarah is away.

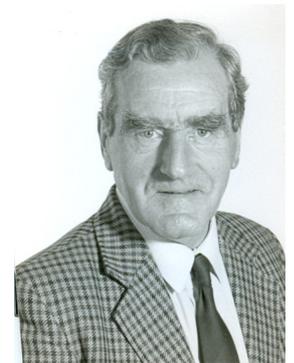
We also have two new residents. Justine Kane-Smyth who hails from Co Carlow in Ireland is our new Orthopaedics Resident. A 2007 graduate of the Dick Vet, Justine worked in mixed practice in Yorkshire for 2 years and then spent 18 months at Liphook as a house-vet (intern) before being asked to carry out an ambulatory job on the Isle of White for the same practice. We managed to prise her away from the sunny South Coast to start her residency in January. Meanwhile we have a new Equine Orthopaedics and Imaging Resident in Lucinda (Lucy) Meehan. Lucy graduated from the University of Liverpool in 2007. Her first job was an Internship in Equine Orthopaedics with Sue Dyson at Animal Health Trust 2007-2009 from where she went on to work in first opinion equine practice in South Yorkshire for 3 years. She continued to develop her strong interest in lameness and imaging whilst in first opinion practice, providing the ideal start to her residency here.

## Joseph Athol (Joe) Fraser BSc DEO FRCVS

1928-2012

Many of you will have heard of the news that our esteemed former colleague Joe Fraser sadly passed away earlier this year. Joe Fraser, a native of Stirling, graduated from The Royal Dick Veterinary College in Edinburgh and gained his MRCVS in 1954. During his undergraduate clinical years, Joe developed a keen interest in surgery and after graduating he joined the staff in the Department of Veterinary Surgery where he went on to devote his entire working life until his retirement due to ill health 40 years later.

We extend our deepest sympathies to his wife Kathleen, daughter Jayne and her husband, Maurice, and grandsons, Cameron and Donald. We remember Joe as a fine man, a great veterinary surgeon, an excellent teacher and a trusted colleague. A full obituary will be published in the next Dick Vet News, to receive a copy, please e-mail [marketing@ed.ac.uk](mailto:marketing@ed.ac.uk) and give your name and address.



## Research focus: Clinical, histopathological and molecular characterisation of Asinine Pulmonary Fibrosis (APF)

Bruce McGorum and Amy Miele, in collaboration with respiratory specialists from the Edinburgh Royal Infirmary and vets from the Donkey Sanctuary, are performing a detailed multidisciplinary (clinical, epidemiological, aetiological, pathological and molecular) characterisation of APF.

APF is a common (~35%) disorder of donkeys which causes progressive restrictive lung dysfunction. As APF is rarely detected early in the disease course, and since there are currently no effective treatments or control measures, this debilitating disease represents a significant welfare concern. Despite this, no detailed study of APF has been undertaken and it is referred to in only 3 scientific publications. Consequently there is a paucity of data regarding its cause, risk factors and clinical manifestations.

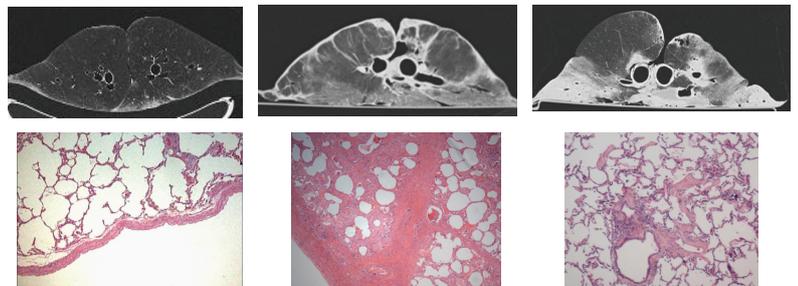


Fig 1: Matched CT and histology images showing healthy asinine lung (left); marked pleural, subpleural and septal distribution of fibrosis in APF (middle); bronchocentric distribution of fibrosis in APF (right).

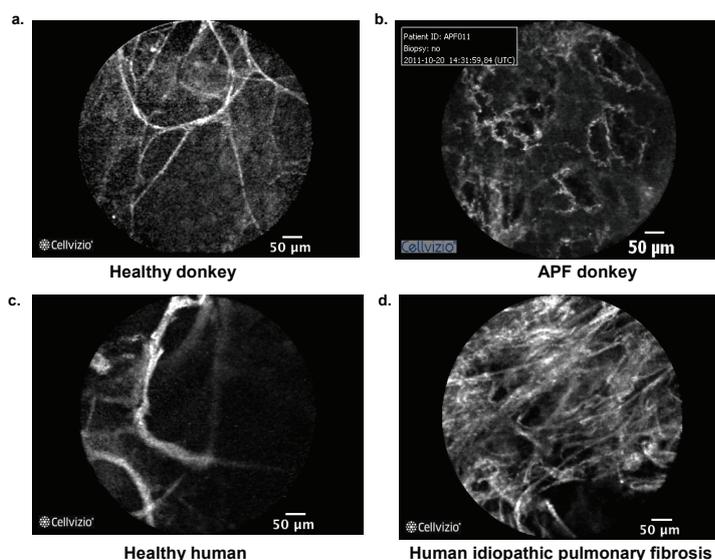


Figure 2: Confocal microendoscopy images of alveoli in asinine (a-b) and human (c-d) lungs. The normal honeycomb alveolar structure is disrupted and obliterated by fibrosis in (b) and (d).

It is hoped that detailed characterisation of APF will inform disease control strategies, thereby enhancing donkey welfare. The study will utilise state of the art imaging techniques including CT (Fig 1) and confocal microendoscopy (Fig 2). The latter facilitates direct real-time endoscopic visualisation of alveolar structure thereby allowing in vivo detection of fibrosis. Aetiological investigations will focus on the roles of inhaled organic and inorganic dusts and asinine gamma herpes virus infection.

APF is also of interest from a comparative perspective, since it represents a potential naturally occurring disease model for human idiopathic pulmonary fibrosis which affects 5 million people worldwide. As there is currently considerable interest in developing effective therapeutics to target the molecular pathways of human pulmonary fibrosis, it is envisaged that the molecular characterisation of APF may provide potential future therapeutic benefit for donkeys.

## Case Study - Seeing Red

'Red', a 17 year-old Welsh Cob gelding was referred to us in March 2011 for examination of 12 day old corneal ulcer which had been poorly responsive to medication. Upon initial presentation there was marked eyelid swelling, blepharospasm, conjunctivitis and epiphora of the right eye consistent with severe ocular pain. A focal deep ulcer was surrounded by diffuse corneal oedema (figure 1), with significant aggressive deep neovascularisation at the ventral conjunctival scleral junction. Closer inspection of the anterior chamber of the eye with a slit-lamp revealed evidence of significant uveitis, with an extensive fibrinous mesh-like network within the anterior chamber (aqueous flare) and a miotic pupil. Fluorescein staining was positive. A corneal scraping revealed large numbers of fungal hyphae and small numbers of cocci. Subsequently, *Aspergillus* spp. were cultured, confirming the involvement of fungus in this ulceration. 'Red' was hospitalised and started on intensive treatment using a sub-palpebral lavage kit to facilitate treatment with frequent (every 2-4 hours) topical medications comprising: enilconazole (anti-fungal), chloramphenicol, serum and EDTA (both anti-collagenases), and atropine. Intravenous flunixin meglumine was also given in the early stages.

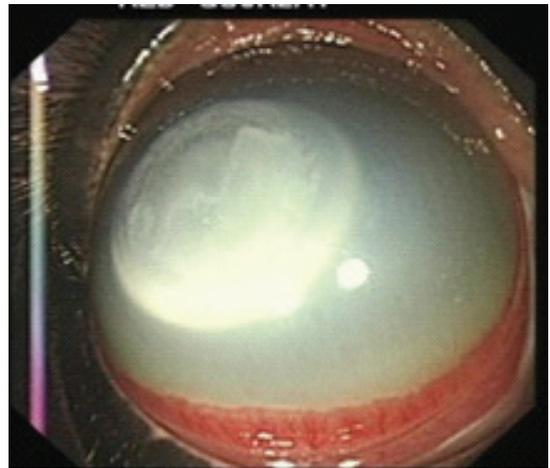


Figure 1: Image of right corneal surface at admission

Treatment was protracted over the following few weeks but there was a gradual improvement in the appearance of the lesion with ingress of healthy stroma circumferentially and increasing neovascularisation. By one month, only a small (2mm) circular descemetocoele remained at the 12 o'clock position within the original area of ulceration (figure

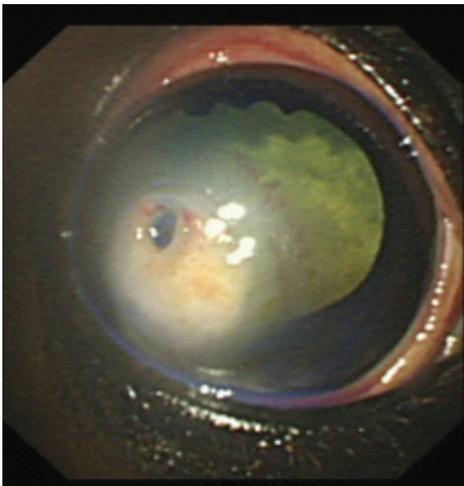


Figure 2: Image of right corneal surface during healing when the lesion had reached a plateau. Note the deeper area at 12 o'clock

2). We placed a contact lens to protect the descemetocoele, as the owners were keen to avoid surgery. The remainder of the ulcer had healed well, leaving a residual circular 'leukoma' of scar tissue. Although the lesion appeared to plateau, causing us to consider surgery to facilitate healing, with time this continued to reduce in size until it filled completely with scar tissue. Red was discharged three months after admission. With the exception of a focal thick scar the overall result is good.

This case demonstrates the aggressive and often protracted nature of fungal keratopathy. As in this case, significant corneal scarring will often remain. Fungal ulceration is thankfully rare in the UK and carries a guarded prognosis due to the affinity of fungi for the deepest layer of the cornea (Descemet's membrane) and their ability to retard neovascularisation which compromises the penetration and thereby efficacy of topical antifungal agents. The fungal agents *Aspergillus* spp. are particularly associated with severe deep ulcerative disease, secondary

stromal abscessation and often a poor visual outcome. In the USA, particularly in humid states like Florida, fungal keratopathy is very common causing a variety of clinical pictures from very mild to more severe ulceration as in this case.

Be on the look-out for fungal keratopathy especially if, despite appropriate medical therapy of an eye, you are having little resolution or you feel the case is going backwards after initial improvement. Performing a corneal scrape is always important in these aggressive ulcers as specific agents, whether they be bacterial or fungal, can be identified and targeted specifically.



Figure 3: End result. Eye pain free with a residual scar. This will have minimal effects on vision

## Computed Tomography: your questions answered!

We've waited a long time for it, but it's here and proving very useful! The Dick Vet Equine Hospital is one of a few hospitals in the world able to perform computed tomography (CT) imaging in the standing horse.

### What exactly is CT and what are its advantages over other diagnostic methods?

CT uses X-ray technology to acquire high definition 1-3mm 'bacon-slice' images through the region of interest. This high definition along with the ability to create computer generated 3-D image reconstruction makes this an extremely valuable diagnostic tool. The standing unit we have at the Dick allows us to image the skull, nasal passages, sinus cavities, teeth and cervical vertebrae of adult horses. These regions have historically been difficult to image effectively with conventional imaging methods, being prone to artefacts and shadowing from overlying structures.



Figure 1: Image of the skull showing the teeth.



Figure 2: Skull fracture over the frontal suture lines.

### How does standing CT work?

The horse stands on a mobile hovercraft-like platform, allowing us to move the head smoothly through the gantry and to acquire the images quickly and efficiently without the need for general anaesthesia (Fig.1). For example, the entire dental arcade can be imaged in around 40 seconds. Horses are sedated as if they were having routine radiography or ultrasonography, and tolerate the procedure very well.

### Is it useful?

Over the past year CT has proved invaluable in some of our numerous dental and sinus cases, allowing unabridged diagnosis and accurate surgical planning. For example it has been decisive in determining whether or not to remove teeth in sinusitis cases with equivocal standard radiography findings. We have also used it to great effect in skull fractures (Fig. 2), middle ear disease, and head shakers.

## Staff Profile - David Pearce, Senior Groom

For our regular horse-owning clients, Davie Pearce may be a more familiar face than some of the vets! Davie has been a groom at the Easter Bush Campus since 1986. He grew up locally, on a farm near Bathgate, and was involved in riding and training ponies from his earliest days. After leaving school he worked on estates on Arran and in Ireland as a gamekeeper before taking up a position as Huntsman for the Buccleugh hunt in the Borders. Injury led him to seek alternative employment and his move to Easter Bush. When he started as a groom at the Equine Hospital in the mid-1980s, the team included such stalwarts as Bruce McGorum and Karen Blissitt, as well as colleagues who have moved on, such as Tina McGregor, and the recently deceased Joe Fraser. His responsibilities include caring for both horses and farm animals being treated at the Dick Vet Equine and Farm Animal Hospitals, transporting some client-owned horses locally and looking after our own small herd of teaching horses. Davie's main interest outside work remains horses, and he is a keen breeder and competitor at horse-shows.



Over the quarter of a century that Davie has worked at the Dick Vet he has seen many changes. As far as students are concerned, the most obvious changes have been in group sizes, gender and accents! Davie's contacts and knowledge of the local equine scene have long been an important part of our service and he enjoys being able to combine his main interest – horses – with his job

The Royal (Dick) School of Veterinary Studies would like to keep you up to date with details of news, events and fundraising activities using the contact details we hold. The data may be used by the University of Edinburgh, or agents of the University to arrange marketing activities, including sending publications, such as this newsletter, offering benefits and services and in our fundraising programmes.

If you would prefer not to be included in any of these activities, please e-mail us at lah@ed.ac.uk and we will record your preferences and confirm these to you.

## Our Clinicians

Dr John Keen  
BSc, BVetMed, MSc, PhD, Cert EM (Int Med), Dip ECEIM, MRCVS

Professor Bruce McGorum  
BSc, (Veterinary Pathology) BVM&S, PhD, Cert EM (Int Med), DipECEIM, MRCVS

Dr Scott Pirie  
BVM&S, PhD, Cert EM (Int Med), Cert EP, Dip ECEIM, MRCVS

Professor Paddy Dixon  
MVB, PhD, MRCVS

Dr Martin Weaver  
BVMS, PhD, DrMedVet, DVR, MRCVS

Safia Barakzai  
BVSc, MSc, Cert ES (Soft Tissue), DESTS, Dipl. ECVS, MRCVS

Russell Parker  
BVSc, MRCVS

## Our Residents

John O'Leary  
BVMS, MRCVS, BSc (Hons)

Claire Stratford  
BVetMed (Hons), MRCVS

Tim Barnett  
BSc (Hons), BVM&S, MRCVS

Justine Kane-Smyth  
BVM&S, MRCVS

Lucinda Meehan  
BVSc MSc MRCVS

## Our Anaesthetists

Eddie Clutton  
BVSc, DVA, DipECVAA, MRCA, MRCVS

Ian Self  
BSc BVSc CertVA DipECVAA MRCVS

Juliet Duncan  
BVM&S, MSc, Dipl ECVAA, MRVCS

Karen Blissitt  
BVSc, PhD, DVA, DipECVAA, MRCVS