

Department of Veterinary Medicine

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### Mike Herrtage Retires

Professor of Small Animal Medicine, Dean of Cambridge Veterinary School MA BVSc DVSc DVR DVD DSAM DipECVIM DipECVDI FRCVSt

With a list of qualifications that read like a Scrabble board, Mike Herrtage's contribution to veterinary medicine is quite legendary. He has been President of just about everything including BSAVA and, until recently, the European College of Veterinary Internal Medicine, he's lectured throughout the world and published over 200 articles in refereed journals. Mike is part of the fabric of Cambridge Vet School – he is the go-to person for help with a diagnosis, the mentor to innumerable residents and an encyclopaedia of veterinary knowledge to pass on to students each academic upar



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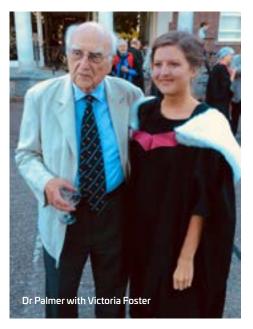
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### A C Palmer Student Prize



Many people in the profession will be aware of Anthony (Tony) Palmer. Tony was one of the founders of veterinary neurology, being the first to describe a number of important conditions, author of many articles and texts, as well as an enthusiastic teacher at Cambridge University Veterinary School.

Earlier this year a fund was created to honour the life and work of Dr Palmer, with the first A.C.Palmer prize being awarded to the final year veterinary student who made the most outstanding contribution to the neurology rotation.

Victoria Foster was named as the first recipient of the prize at this year's Admissions Ceremony held in June.

A huge thank you to all those who contributed to the prize.

I am very pleased and honoured to have a prize named after me — while still alive! I hope it will encourage studies in veterinary neurology, the 'queen of clinical sciences', as well as associated neuropathology.

> The first recipient Victoria Foster was outstanding and I hope she will enjoy the speciality during her professional life.

Dr Palmer

## Tasha: A Tale of Two Kidneys

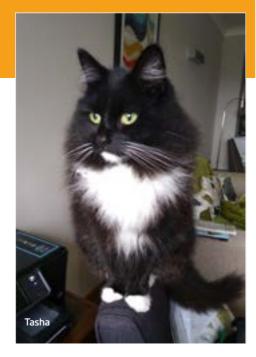
### Katie McCallum Clinical Veterinarian in Small Animal Medicine

Tasha is a 5 year old female (neutered) Domestic Short Haired cat who presented to the QVSH in May 2018 with a history of pollakiuria, dysuria, weight loss, lethargy and inappetence. She was treated symptomatically with a 6 week course of cefovecin which led to a mild improvement in her clinical signs. On examination, Tasha was bright, alert and responsive. She was mildly pyrexic and had a heart rate of 200 bpm. On abdominal palpation, a markedly enlarged right kidney was palpated. On admission, haematology noted a mild left shifted neutrophilia and a mild non-regenerative anaemia. Biochemistry noted a mild elevation in creatinine due to renal azotaemia; there was a mild hupoalbuminaemia in combination with hyperglobulinaemia and elevated serum amyloid A consistent with systemic inflammation. Abdominal radiographs documented bilateral ureteral and renal calculi with marked right kidney enlargement. An abdominal ultrasound was performed which showed mild left renal pelvic dilation due to a partial ureteral obstruction. The right kidney had severe renal pelvic dilation with hyperechoic fluid distension and concurrent ureteral dilation due to ureteroliths. Urinalysis showed suboptimally concentrated urine with evidence of a bacterial urinary tract infection on sediment examination

(bacterial rods, red and white blood cells). Urine culture documented a heavy pure growth of E.coli.

Tasha had evidence of severe hydronephrosis secondary to a right ureteral obstruction; with evidence of a partial left-sided obstruction. Tasha underwent a right ureteronephrectomy. Histopathology of the right kidney was consistent with a severe suppurative fibrinous pyelonephritis and ureteritis and culture of the right kidney also documented a heavy pure growth of E.coli. This was treated with a course of marbofloxacin.

Tasha recovered uneventfully from surgery and was re-examined 2 weeks post-operatively. At this time, the owners had no concerns with her. Biochemistru showed resolution of her azotaemia. Unfortunately, repeat abdominal ultrasound documented progressive renal pelvic dilation secondary to ongoing left-sided ureteral obstruction. In order to preserve renal function. Tasha underwent a left-sided subcutaneous ureteral bupass (SUB) procedure. Placing a SUB device is an interventional procedure commonly being performed by the Soft Tissue Surgery team at the QVSH to treat ureteral obstructions and consists of 2 catheters connected by a port; one catheter is placed in the kidneu and the other in the bladder and this allows urine



to flow through the catheter and bypass the obstructed ureter. Urine culture was negative, confirming resolution of the infection following antibiotic treatment

Currently, Tasha is doing very well and is undergoing 3 monthly routine SUB re-examinations with the medicine team which involve a repeat biochemistry, urinalysis (including culture) and flush of the SUB device with sterile saline and subsequently a urinary antiseptic (taurolidine) to ensure the SUB remains patent. Tasha currently has IRIS stage II chronic kidney disease and is receiving an appropriate diet to manage this.



Fig 1: Ultrasound image documenting severe hydronephrosis of the right kidney



Fig 2: Right ureteronephrectomy procedure

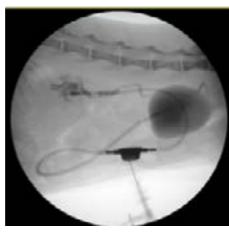


Fig 3: Lateral fluoroscopic image of contrast being injected into the SUB device intra-operatively

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# Mike Herrtage Retires

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So, for the Vet School, Mike's retirement this September will be a huge loss and plans to manage all his various interests and specialties are being put into fruition with several senior recruitments. For Mike though, the change will be less obvious with a busman's holiday to Calgary to locum for a month followed by a series of lectures in South America. Trips in the new campervan might just have to wait a while longer.

It all began back in 1975 when, on graduating from Liverpool and having seen practice (EMS) in the States, Mike applied for the houseman's vacancy at Cambridge. During his time in America he was greatly impressed by the standard of practice which, in his words,

Professor Michael Herrtage has made the most remarkable contribution to the Cambridge Vet School over more than four decades. From his early days, he brought innovative clinical practice to Cambridge; this broadened over time so that his tremendous impact has been far reaching across the Hospital and the Department - not least in his role as Dean of the Veterinary School, which has effectively been for the last 15 years. Massive changes have taken place in Cambridge and around the profession over the time that Mike has been here; he has driven some of the most exciting and important of these on the international stage through his critically important leadership in the field of veterinary specialisation. He has been the longest serving member of RCVS Council for several years and his input into debate and decision making there will likely be obvious. Mike will be sorely missed by everyone here, not least his younger clinical colleagues, a group that he has nurtured for many years, but particularly by me. He has provided wise counsel on a range of different issues and has been a great colleague. We wish him and Julie all the best in his 'retirement'.

Prof James Wood

When my colleague Mr R. Spratling and I interviewed Professor Herrtage in 1975 for his first appointment, we thought we recognised potential. Little did we realise that he would eventually achieve so much in the veterinary profession, both nationally and internationally and later become Vice Master of St Edmund's College. He is very modest and a talented clinician. Over the years I have enjoyed collaborating with him, sharing neurological cases.

Dr Anthony Palmer

set new horizons and changed his goals and aspirations.

The houseman's post was of particular interest as it offered a chance to see mixed practice. Merton Hall was then an active farm and soon after taking up the post Mike found himself covering for Peter Bridges - the farm animal lecturer – who had taken a sabbatical.

In the 1970s, diplomas were limited to either radiology or anaesthesia so Mike opted for the former, studying under Sidney Douglas, a pioneer of veterinary radiology. A six month stint with Arthur Jennings in pathology followed before being offered the post of assistant physician in small animal medicine and, two years later, a lectureship – a rare and great achievement for someone under 30.

Cambridge also offered the chance for Mike to mentor and teach, to be amongst young enthusiastic minds and (on occasion) be challenged by questions



he hadn't thought of! All this against a backdrop of ever advancing technology with game changes including the introduction of CT and MRI scanners and endoscopes enabling minimally invasive surgery.

It's clear that although Mike is retiring as Dean of the Vet School he will still continue to play an active role in veterinary medicine and undoubtedly will still be a regular team member during daily rounds.

Mike was an outstanding mentor to me during my postgraduate clinical training at Cambridge Vet School. His clinical problem solving skills were exceptional and I learnt a huge amount about the medicine speciality under his tutelage. He is a towering figure in the global small animal medicine community and played a pivotal role in ensuring that the European College of Veterinary Internal Medicine was a great success. Cambridge University has been very fortunate to enjoy Mike's services for such a long period and his departure will create a huge void for the vet school.

**Prof Richard Mellanby** 

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# Use of 3D Planning to Improve Surgical Accuracy

### **Case Study**

Rescued by his owner Catharine, Rocco, a handsome male 2-year-old Belgian Shepherd Cross, presented with a shorter right back leg and a slight limp which Catharine had been told was present since birth.

Images taken at his local vet showed an old break in his right femur which had not healed in a normal position and was still not fully healed when we saw him. The break must have occurred when he was a young dog under 10 months old and involved the growth plate (Salter Harris fracture).

Rocco was referred to Richard Whitelock, head of the Orthopaedic Team at QVSH, for further assessment. Although historical, this injury was causing some pain for Rocco as well as limiting the movement of his knee. There was concern that he might need to have the leg amputated if other treatment options were not available.

Richard explained that because the break in the bone had happened when Rocco was still growing, the thigh bone had not grown out to its full length. This meant that Rocco's right back leg was shorter than his left one and this, along with the limited movement in his knee, could have explained his limp. However it was clear to Richard, from listening to Catherine and examining him, that Rocco was sore. The fact that the bone hadn't healed meant that there was still a little bit of movement where it had broken which can be uncomfortable. Richard felt that if we could get the bone to heal, then although Rocco might still have a limp because of the short leg he would no longer be in pain and there would be no need for amputation.

Rocco underwent a CT scan which confirmed that the break in the right thigh bone had only partially healed. The bone had only managed

to re-join with scar tissue so it was not rigidly fixed and this allowed for a small amount of movement when Rocco exercised. A 3-D model built from the CT scan allowed us to fully understand the degree of shortening and twist in the bone.



Fig 1. An illustrative representation of the CT

The CT gave Richard a more complete picture of the challenges that would have to be faced if surgery was to be considered. Using the 3D printing capabilities of the Surgical Discovery Centre (www.surgicaldiscovery. com), the research component of the Small Animal Surgery service at Cambridge, we were able to generate a plastic model of Rocco's femur and Richard was able use this model to demonstrate the fracture



to Rocco's owner and to discuss the potential treatments options under consideration:

- Conservative management –
   although Rocco was exercising
   reasonably well at the time of the
   initial visit, concerns remained that
   he would continue to be sore and
   there was a chance that the bone
   might break again as it was only
   weakly joined together.
- A bone lengthening procedure to try to lengthen and straighten the right thigh bone to match the left one.
- To get the break in the bone to heal.

Richard observed "Once we had the CT scan results I had a clearer idea of what we could and couldn't do. I wanted to do something as Rocco was sore, but the amount of shortening and twist was too severe to correct. There are surgical techniques that allow us to lengthen and straighten bones, but in Rocco's case the muscles were also very short and this meant we couldn't correct the bone to match the other side. I decided that the best thing to do was to operate to get the break in the bone to heal."

# Surgical Discovery Centre www.surgicaldiscovery.com

In collaboration with the Surgical Discovery Centre, the 3D model of Rocco's damaged femur was imported into a suite of medical imaging and computer-aided design software (MIMICS and 3-Matic: Materialise, Inc.) to allow for surgical planning and custom instrument design. The overall goal was to design a surgical guide that was uniquely tailored to Rocco's bone, and to be able to use this to direct the placement of drill holes and screws to stabilise the old fracture. The guide consisted of a curved baseplate to sit on top of the femur and two long drill sleeves through which the surgeon would drill into the bone and across the fracture site.

Once fabricated, the guide was used in a "practice surgery" using a 3D printed model of Rocco's femur. This

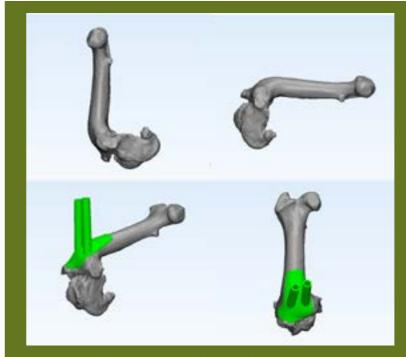
surgical rehearsal was helpful in confirming that the drill guide would fit nicely on top of the bone, and it also allowed Richard to determine the appropriate depths for drilling and screw placement. "The deformity was a real surgical challenge as I didn't have reliable landmarks to work from. I wanted to use screws to compress the gap between the two pieces of bone, but these needed to be placed very accurately to avoid them going into the knee joint. With the specially designed drill guide I was able to minimise my surgical approach and know with confidence that I was placing screws of the correct length, absolutely where I wanted them to be. This is a great example of how modern technology can really improve our ability to do a better job, I really wouldn't have been able to

place the screws so accurately and so safely without the assistance of this guide."

When Rocco was seen after 6 weeks of rest at home, he was doing well. As expected, he was still limping but he seemed comfortable and happy. Ten months after surgery Rocco is running freely and playing without any signs of being in pain – blissfully unaware of the collaboration, advanced technology and surgical expertise that went into his procedure!

For more information on options for patient-specific surgical instruments, implants and 3D surgical planning, please contact QVSH or visit www. surgicaldiscovery.com.

Thanks to Rocco and his owner for permission to share his story.





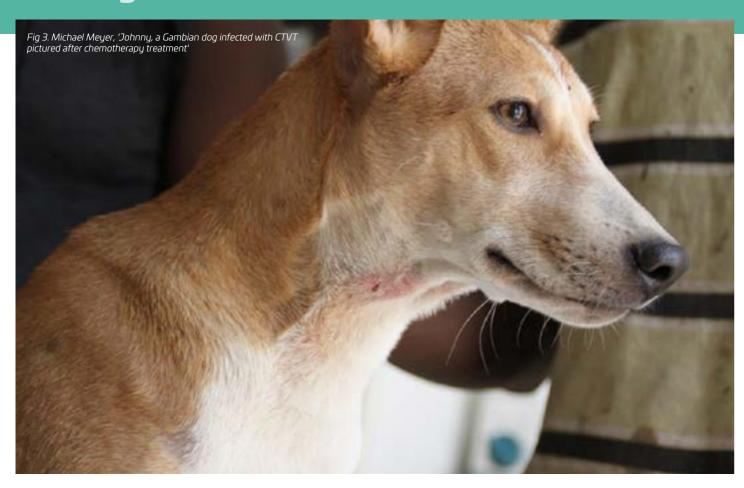




ig 4: X-ray showing the screws in place

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# Digging up the Ancient Origin of a Contagious Canine Cancer



Canine Transmissible Venereal Tumour (CTVT) is a unique type of cancer that is sexually-transmitted between dogs and appears as genital tumours. Unlike most other cancers, CTVT is contagious: the cancer can spread from dog to dog by the direct transfer of living cancer cells during mating. Though this cancer originated from the cells of an individual dog that lived thousands of years ago, it now affects dogs on every habitable continent. At the Department of Veterinary Medicine, the Transmissible Cancer Group (TCG), led by Dr. Elizabeth Murchison, is investigating the origin and evolution of this unusual disease. Through a recent genetic analysis of ancient and modern canids, their research has shed light on the origin of CTVT.

CTVT is a clone: every single tumor carries DNA derived not from the host dog, but from the first dog that developed the cancer. Previous work carried out by the Transmissible Cancer Group showed that the "founder" individual in which CTVT first arose was closely related to modern Arctic dogs, like huskies and malamutes. In a new study published in Science (2018), we compared DNA from CTVT with ancient genetic material

extracted from the archeological remains of 71 dogs all over North America and Siberia, spanning almost 9000 years of dog evolutionary history. Surprisingly, we found that the dog that first contracted CTVT was most closely related to a population of ancient American dogs. In fact, CTVT is the last "living" representative of this lost lineage.

Before the arrival of European colonists in the 15th century, dogs were widespread across the Americas. These pre-contact dogs varied in size and shape and were not domesticated from North American wolves. Instead, they were the descendants of early Siberian dogs that dispersed into the New World from Asia alongside humans over 10,000 years ago. Once they arrived in the Americas, pre-contact dogs remained isolated from other populations of dogs for at least 9,000 years and began to thrive alongside indigenous human populations. Evidence that early dogs were used for sledding even suggests that they may have facilitated the migration of humans into the Americas.

Surprisingly, we found very little evidence that modern dogs share any ancestry with pre-contact American dogs, including village dogs from remote areas in North and South America. Instead, we discovered that the majority of modern dogs in the Americas trace their ancestry to dog populations introduced by Europeans settlers. Altogether this suggests that early pre-contact dogs are now extinct, or at least very rare. Reasons for the continent-scale disappearance of these dogs probably includes infectious diseases brought from Europe, active persecution by European colonists, and changes in cultural preferences. The widespread decline of native American dog populations sadly echoes what we've seen in native American human populations.

Despite its relatedness, CTVT probably did not evolve in the Americas. Previously described patterns of CTVT spread suggests that CTVT may have arisen in an Asian dog related to pre-contact dogs sometime after the land bridge to the Americas flooded and from there, it hitchhiked around the globe. CTVT later arrived in the Americas with European dogs in the 15th century.

### Máire Ní Leathlobhair PhD Student in the Transmissible Cancer Group

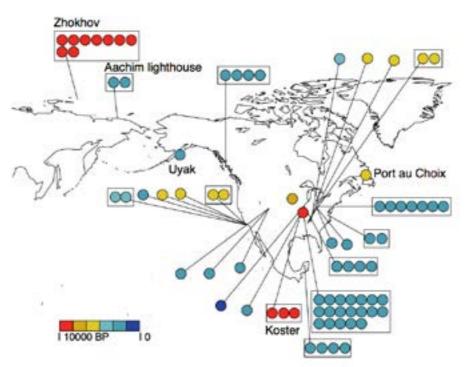


Fig 2. Ní Leathlobhair et al., 2018. 'Map showing locations and ages of archeological dog remains analysed in our study'



Fig 5. Del Baston, courtesy of the Center for American Archeology 'One of the earliest known dog burials in the Americas dated c. 10,000 years ago.



Fig 1. Emma Werner, 'Artistic reconstruction of the CTVT Founder Dog'

Thanks to veterinary collaborators based at the Touray and Meyer Veterinary Clinic in The Gambia, we obtained a unique pair of CTVT samples from a naturally occurring direct transmission. A tenmonth-old puppy was presented at the clinic with CTVT tumours across his belly and chest. This unusual presentation in such a young dog suggested to veterinarians that CTVT may have transmitted from mother to pup during birth. By studying biopsies collected from both individuals, we identified genetic changes that had arisen during the transmission time interval and used these to establish a 'molecular clock'. Based on this clock, we were able to estimate that CTVT first emerged over 8,000 years

Our work reveals the early history of CTVT as well as a detailed evolutionary history of early dogs in the Americas. We hope that future work will help us understand how this remarkable cancer broke free from its first ancient host and has managed to survive for millennia as an infectious cancer.



Fig 4. Michael Meyer, 'Kololi, a Gambian pup infected with CTVT during birth and one of the CTVT cases analysed in our study'

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# A Study of Career Paths of Recent Cambridge Graduates

lain Hutchinson, Final Year Elective

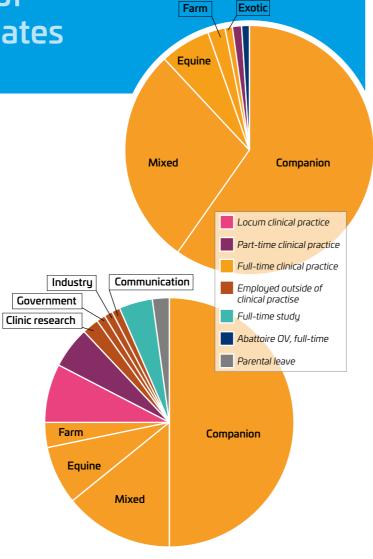
At the end of 2017, Cambridge veterinary graduates from the classes of 2013 and 2014 were surveyed as part of a final-year elective project investigating the career paths of recent Cambridge graduates. A total of 92 alumni responded, making a respectable 74% response rate - thank you to all who participated!

Initially 98% of respondents entered full-time clinical practice (graph 1), defined as working in a veterinary practice for the therapeutic, prophylactic or metaphylactic treatment of patients. By December 2017, three to four-and-a-half years after qualifying, significantly fewer individuals (75%) were working in full-time clinical practice (graph 2). Approximately one-eighth worked as locums or in part-time clinical practice, and one-eighth outside clinical practice (in clinical research, government, industry and medical communication) or in further full-time study. Before applying to university, no individuals had anticipated working part-time by this point after graduation and only one individual expected not to be in clinical practice.

By 3–4½ years after graduation three-quarters of participants had had more than one job; reasons for leaving first jobs were overwhelmingly negative, outnumbering positive reasons fivefold. The most significant issue cited by the cohort was poor working hours and work-life-balance followed, in order, by poor management and lack of support, lack of career progression, and salary. Significant improvements to working hours and rotas (including the duty rota of those remaining in full-time clinical practice) were seen between respondents' first jobs and their current employment; satisfaction with working hours, and with categories of 'management and support' and 'salary', were correspondingly significantly increased. Over four-fifths of respondents enjoyed their current work.

Those in clinical practice were most likely to be working with companion species, both in their first and current jobs - and indeed all participants in part-time or locum roles worked with companion species. A significant shift away from mixed practice was observed with time, but most individuals leaving mixed practice moved into solely companion practice after having previously worked predominantly with companion species. Interestingly, one-fifth of the cohort now spend the majority of their time with a different species group than they anticipated before starting vet school.

Initially nine-tenths of the cohort were employed within the UK, with the remainder in Australia, Belgium, the Channel Islands,



Madagascar, the Republic of Ireland and Sri Lanka. At the time of the survey nine-tenths of participants were working in the UK, with over two-thirds of the remainder working in Australasia; none were working in the USA or Canada, countries where additional examinations are required for veterinary registration.

This is the first time that Cambridge has conducted a survey of its veterinary alumni beyond the first three years of their working life; the results reflect some of the nationally-reported trends and concerns regarding working conditions in practice, and have potential to inform future Cambridge curriculum development. We anticipate running further surveys in the future, so please do participate where you can!

# Advanced Reproductive Techniques in Farm Animals

lan McCrone, MRCVS University Physician (Farm Animal Veterinary Clinical Team Leader)

Thanks to the generosity QVSH's charity Camvet, the farm animal teaching practice now has the facilities and equipment necessary to undertake a range of advanced reproductive techniques for production animals. These services are available to clients of the practice as well as a referral service to neighbouring practices.

These advanced techniques include laparoscopic artificial insemination in sheep and goats, embryo transfer in cattle, sheep and goats, and the collection and processing of semen from farm species. We also have a fully functional mobile laboratory available so that procedures can be undertaken on farm without the need to transport the animals.

These techniques are becoming increasingly popular in animal breeding programmes. For example, using artificial insemination with frozen semen allows the best sires to be used on many more females than would be the case with natural service. Multiple ovulation and transfer of embryos into donors allows females to produce many more offspring in farm species which

would only normally be able to produce 1 or 2 offspring per year. The use of these progressive reproductive techniques can allow the advancement of genetic gains in production animals much faster than could be achieved with conventional breeding - being able to select animals that have both high production traits and which are more suited to the production systems they are in - resulting in improved health and welfare.

Additionally, the techniques can be used in attempts to breed infertile animals, for example dairy cows that cannot conceive naturally may have an embryo implanted that allows it to become pregnant and continue to produce milk following the birth of its calf, enabling them to be retained in the herd and not being culled.

The plan is to develop these services to provide teaching material for students to show what is becoming common in farm animal practice in the UK. Eventually we would like to expand the services to perform more advanced techniques such as IVF.





Figs 1-2: Sheep undergoing laparoscopic artificial Al procedure

# Farm Animal Veterinary Services cambridgefarm@vet.cam.ac.uk

## Pilkington Prize for Teaching Excellence

The Vice Chancellor with Catherine

The Pilkington Prizes, which recognise initiatives promoting excellent teaching, were presented by the Vice-Chancellor at a ceremony in June and formed part of the celebrations to mark 25 years of the scheme.

This is the second time that Veterinary School staff have been amongst the prize winners with Jackie Brearley being recognised two years ago and Catherine Wager, the clinical skills centre facilitator, being named this year.

Catherine has been described by colleagues in the Department as a talented and dedicated member of staff, and one who is an excellent role model for students and colleagues alike.

It was a lovely honour to receive this prize, not only for myself, but as recognition for our Clinical Skills Centre too.
This award highlights the work we do to help our students with their practical skills which wouldn't be possible without all of the support the Centre receives from Camvet.

Catherine Wager

### Advanced Abdominal Ultrasound CPD

We are delighted to announce that we will be running an Advanced Abdominal Ultrasound CPD day on Saturday 23rd February 2019 at the Department of Veterinary Medicine in Cambridge.

The day is designed to be highly practical, with emphasis on small group hands-on practice sessions.

Topics such as localising and scanning adrenals, the pancreas, major vessels and lymph nodes will be covered along with some tips on how to better assess the other main organs. More information to follow.

For any further information, please contact Marie-Aude Genain: mag72@cam.ac.uk

With thanks to IMV imaging who will be providing the ultrasound machines.



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# Extra-Corporeal Shock Wave Therapy

Extracorporeal Shock Wave Therapu (ESWT) uses sound waves to deliver energy deep into the body and can be used to treat a wide range of musculoskeletal conditions. ESWT can be applied by Focused Therapy, using piezo ceramic crystals to generate the shock wave - ideal for joint problems, or Radial Therapy using pneumatics to generate a pressure wave - ideal for soft tissue related

Shockwave has a positive effect on healing and acts on the tissues in a number of different ways. The waves stimulate the body's own healing response by mechanically breaking down calcium deposits, diminishing pain by affecting nerves in the area, and they have an anti-inflammatory effect.

ESWT is used widely in human medicine, particularly for musculoskeletal conditions such as tendinitis, tendinopathy or osteoarthritis and its use is supported by extensive research. It is also widely used on horses, for example in the treatment of suspensoru ligament problems, navicular disease and stress fractures. There is less published data on the results of this treatment in dogs.

With the support of Storz Medical we can now offer ESWT at the QVSH for a wide range of conditions and, in collaboration with the Surgical Discovery Centre, our main research focus is to understand the effects of this treatment for dogs with osteoarthritis.



Courtesy of Storz Medical

Shock wave treatment is given once a week for 6 weeks. It is usually very well tolerated by most dogs, who sit or lie quietly while the treatment is given. This takes about 20 minutes per joint treated. Very occasionally sedation is needed.

The use of validated owner questionnaires and computerised gait analysis allows us to explore how arthritis affects each individual dog and to monitor their response to treatment.

Using either our Kistler Forceplate or our Tekscan pressure-sensitive walkway, we can measure the pressure under each paw and study in detail how the dog is walking. We can then identify any changes in the way they walk in response to treatment. This is a non-invasive objective assessment and simply involves walking a dog over a specialised walkway. Specialised computer software









Fig 2: Murphy having ESWT

Fig 1: Murphy - example gait analysis

Arthritis can be a very real problem and affects so many pets - about 20% of the UK pet dog population. It is a lifelong problem and requires a holistic treatment approach rather than just giving painkilling drugs. Once we have investigated the cause for the arthritis and ruled out surgically treatable conditions, we are left with "non-surgical" options to try and make arthritic joints more comfortable and to reduce the need for prescription medication. Shockwave Therapy is one of these options. It is non-invasive, safe and well tolerated and can be used alongside other treatments so it fits perfectly into our "multimodal" approach to treating arthritis. I have personal experience of the use on shockwave treatment in my own Labrador, Leo, who has arthritis, and found it to straightforward, well tolerated and beneficial.

Richard Whitelock, Head of Orthopaedic Surgery at the QVSH

allows us to analyse a range of parameters including weight distribution by percentage bodyweight, stride length, the different phases of a stride, and the maximum pressure exerted by each limb per stride.

This specialised "kinetic analyses" is an invaluable tool in picking up subtle changes that may not be seen by just watching the dog walk, and it takes away any personal

Gait analysis is integrated into the routine treatment for many patients, to help us to measure the effects of our treatments, to keep owners updated on their animal's progress, and along with the owner questionnaires, to look at the effects of the treatment both subjectively and objectively. We ask owners to fill in a questionnaire periodically to see what influence the shock wave treatment is having, and perform computerised gait analysis before treatment, at the end of treatment and then 4 weeks after the end of treatment.

Murphy was referred to us from Cornwall with chronic osteoarthritis in both shoulders and elbows. He was a star patient. You can see how he even offered his paw so we could treat his elbow!

Video of Murphy having treatment available here

### www.youtube.com/ watch?v=DCcjF7aYsWw

For our ongoing research we are currently recruiting medium size dogs with elbow arthritis to participate in a 6 week course of focused shockwave treatment, with gait analusis.

We work closely with the Orthopaedic service here at the QVSH and perform ESWT for a broad range of orthopaedic conditions in referred patients, not just

For vets wanting to refer a case for shockwave treatment please contact us:

hospital@vet.cam.ac.uk

# eunion News Golden Anniverary Celebration

**Gareth Thomas** 





And now (2018).

Somewhat unusually, there were just 14 students in our year in Cambridge, starting in 1965 at the Vet School, so from the outset we were always in each others' pockets so to speak.

Since graduating we have all kept in touch and each decade after June 1968 (our graduation year) we have attempted to convene as a group to celebrate our qualification.

I can report, with some pride, that each one of us has distinguished themselves in their chosen specialty in a diverse suite of disciplines, some even outside the veterinary field.

We made concerted efforts for all to be present on the 30th and 40th anniversaries and for this special 50th we met at Ayot St Lawrence in Hertfordshire.

On this occasion two of our group were unable to attend but thanks to some technical trickery are present in our reunion photo!

## 2009 Graduates 10 Year Celebration

We are planning a ten year reunion event for all 2009 graduates - if you graduated in that year and would like to take part please get in touch

kb104@cam.ac.uk

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### http://camvet.vet.cam.ac.uk.



# UNIVERSITY OF CAMBRIDGE Banker's Order Form



#### Veterinary School Trust

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Exempt Charity No: XO 979/86

Name(s) of Account Holder(s):	Name and full postal address of your Bank or Building Society:
Personal Account Number:  Sort Code:  Address of Account Holder(s):	Please pay the University of Cambridge Veterinary School Trust, Account No.  10773972, Barclays Bank plc, St Andrews Street, Cambridge (Sort Code 20-17-19),  £ on the (day) of (month)  (year) and on the same date each succeeding year / half year / quarter year / month* for years or until you receive instructions to close
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Using Gift Aid means that for every £1 you give, we can claim back an extra 25p from the Inland Revenue, making your donation go further, at no extra cost to you.	Signature(s) of Account Holder(s):
Please tick this box to Gift Aid your donation.	Date:
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Gains Tax must at least equal the amount we will claim in the tax year.	This donation includes my FRIEND'S SUBSCRIPTION (Please tick if applicable)



#### The Direct Debit Guarantee

THIS GUARANTEE SHOULD BE **DETACHED AND RETAINED BY** THE PAYEE.

- This guarantee is offered by all Banks and Building Societies that take part in the Direct Debit Scheme. The Scheme is monitored and protected by your own Bank or Building Societu.
- If the amounts to be paid or the payment dates change The University of Cambridge Veterinary School Trust must notify you in advance.
- If an error is made by The University of Cambridge Veterinary School Trust or your Bank or Building Society, you are guaranteed a full and immediate refund of the amount paid.
- You can cancel a Direct Debit at any time by writing to your Bank or Building Society. Please also send us a copy of your letter.





Department of **Veterinary Medicine** 

### Queen's Veterinary School Hospital:

Small Animal Hospital: 01223 360908 or 337621 Cambridge Equine Hospital (first opinion): 01223 760535 Cambridge Equine Hospital (referral/emergency): 01223 746571

Farm Animal Veterinary Services: 01223 337647

### Tel: 01223 764475 or 337610 Email: trust.office@vet.cam.ac.uk

University of Cambridge Veterinary School Trust, Madingley Road, Cambridge CB3 0ES.

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Please be assured that we will never share your contact details with any other party. If you no longer wish to hear from us simply let us know by emailing trust.office@cam.ac.uk with your name and address.

