

Animal *Health* Trust News



Issue 80 | Spring 2016

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Give a Dog a Genome

Give a Dog a Genome is a brand new initiative from the AHT which seeks to take our canine genetics research further, to help improve the health of even more purebred dogs.

The Kennel Club Genetics Centre at the AHT, which is run by Dr Cathryn Mellersh, is world-renowned for its genetic research to better understand, and eradicate, inherited diseases in dogs. This is achieved through developing sophisticated DNA tests which help dog breeders make informed breeding decisions that minimise the number of puppies born with known inherited conditions.

Give a Dog a Genome aims to build on this expertise by applying the latest genome sequencing technology to our research to create the UK's largest canine genome bank. This exciting project was launched in January with a grant of £50,000 from the Kennel Club Charitable Trust (KCCT) with the aim of sequencing one genome (all 2.4 billion letters of a dog's DNA) from 50 different breeds. Now, due to the success and popularity of the project, additional funding of £25,000 has been granted from the KCCT to expand this project to an additional 25 breeds.

Sequencing each genome costs in the region of £2,000 so in order to sequence the maximum number of genomes, and create a large and powerful research resource, we used a crowdfunding approach to include as many breeds as possible. Breed communities were invited to donate £1,000, which would be matched with a £1,000 from the KCCT funding. This method has been very successful and enabled the 75 places on the project to be allocated on a first come first served basis.

Dr Cathryn Mellersh, Head of Canine Genetics, said: "The response we've received from breed communities for this project has been amazing. The demand has been really high, so it's great news that we can now include 75 breeds. The more genomes we can sequence and learn from now, the more powerful these data are going to be, and that's good news for all breeds of dog. The main aim of this research is to gain a much better understanding of which DNA changes are neutral compared to those which are likely to have a negative effect on dog health, by looking very closely at all 2.4 billion letters of DNA in a dog's genome.

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Animal **Health** Trust
Lanwades Park
Kentford
Newmarket
Suffolk CB8 7UU

Telephone: 01638 555648
Fax: 01638 555604
Email: info@aht.org.uk
Website: www.aht.org.uk

Registered Charity No. 209642

"We believe this will have profound effects on our ability to identify mutations which cause inherited diseases in purebred dogs, and the rate at which we can develop new DNA tests as tools for breeders in the future. The 75 places have all been filled, however, we have a waiting list for breeds who may want to be involved next year, if we're able to run a 'phase two' of the project." For more information please go to: www.aht.org.uk/gdg

The 75 breeds included in the Give a Dog a Genome project:



*Pug genome has been fully funded by an individual in memory of Biggles, a very special Pug.

New Blood Analyser thanks to Mr Josh

Many individuals have brought their animals to the AHT to try and lengthen their quality of life.

Such was the case with Joshua (Mr Josh), the beloved cat of Mr David and Mrs Sue James, a silver back tabby cat who had two referrals to the AHT Small Animal Centre during his 16 years - one of them for hyperthyroidism and the other for cancer.

Mr and Mrs James' donation for the purchase of a new Point of Care Blood Gas Analyser was in gratitude to the AHT's vets and nurses who tirelessly provided clinical care in the latter stages of his life.



The Blood Gas Analyser gives rapid health assessment from blood testing for cats and dogs in the AHT's Small Animal Hospital.

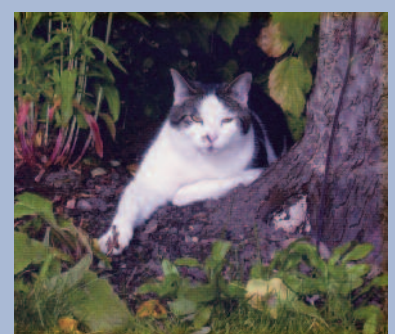
Our previous blood gas machine was old and in need of replacement. The new model requires a much lower volume of blood, making it better for animal welfare. It also runs a wider range of tests more quickly and performs its own quality control, saving our ward staff valuable time.



Mr David & Mrs Sue James, second and third from right with AHT members of staff.

The gift in the memory of Mr Josh, to celebrate his life, will benefit many other small animals who attend the Small Animal Centre at the AHT, in the course of their diagnostic assessment to treat and extend their lives.

Mr James said, "He was, Mr Josh, a wonderful living soul born in an animal form. It was, and will be, impossible to think of him as only just a cat."



New hope for equine skin cancer

Cancer still strikes fear in all of us, but there is new hope for equines that face this diagnosis or could be at risk. We welcomed Anna Hollis, Oncologist and Specialist in Equine Internal Medicine, to the Equine Clinic team at the end of last year. Here at the AHT she will be focusing on our range of cancer treatments; including high dose radiation brachytherapy for aggressive and invasive skin cancers; strontium plesiotherapy for more superficial skin cancers; and a new melanoma vaccine to treat predominantly grey horses at high risk of developing invasive melanomas, thought to be due to their skin pigmentation.

With treatments giving vets and owners alike more hopeful prognoses, Anna is in great demand. One patient who has already benefited from Anna's expertise is Freddie...



Anna Hollis with Teddy



Anna administering strontium radiotherapy treatment to Freddie

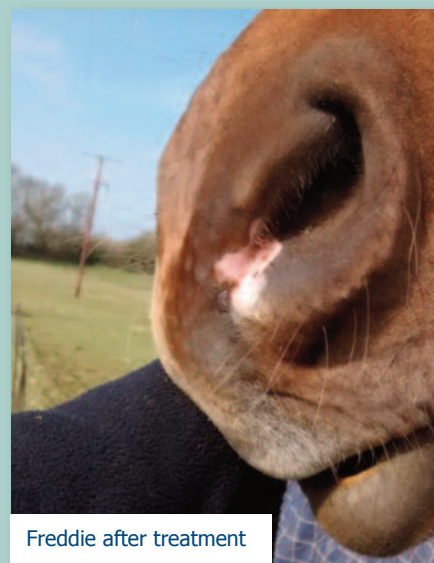
Freddie is a six year old chestnut Warmblood gelding who developed a small area of depigmentation on the inside of his left nostril. Over time a small mass appeared in the same area. This lesion was removed and analysis revealed that this was an unusually located sarcoïd (type of skin cancer). The area is very challenging to treat by most methods, and the decision was made to treat the scar with strontium plesiotherapy.

Strontium is a form of beta radiation therapy which has limited penetration and is therefore especially suitable for the treatment of small, superficial skin and ocular tumours (such as squamous cell carcinoma) and for the treatment of scars where recurrence is a concern. The limited penetration means that unwanted side-effects are uncommon and mild, and the high doses given to the area to be treated are very effective. Most cases can be performed with standing sedation and the treatment is quick and non-painful. As with all forms of radiotherapy, the area will become slightly sore and may have some minor skin sloughing in the early stage, and as it heals, depigmentation is expected. The cosmetic appearance is generally very good and the overall prognosis for appropriate lesions is excellent.

Approximately two weeks after treatment, there were sore areas and more extensive depigmentation developed as would be expected. Now fully healed, Freddie was an excellent patient who now, three months after treatment (five months after the removal of the sarcoïd) has a good cosmetic result with no evidence of sarcoïd recurrence to date!



Freddie before treatment



Freddie after treatment

Gorgeous Graham!

Rob and Sarah rescued Graham when he was only seven weeks old and he soon settled into their family with three new feline friends for company. Graham never strayed too far from his best friend Jiggi when they would go exploring, so when Jiggi returned home alone one day, Rob and Sarah grew concerned about Graham's whereabouts.

Having no luck in finding him themselves, neighbours offered to help to try and find him. Thankfully the next morning a neighbour called to say he had been found, but was very badly injured. Rushing Graham to their local vet their worst fears were confirmed that he had been hit by a car and had suffered serious head trauma. X-rays displayed multiple fractures and Graham was quickly referred to the AHT for specialist assessment and treatment.

Graham came in to see Fui Yap, resident in our small animal surgery team and Daniela Murgia, a European specialist in small animal surgery. "Graham was in a critical state, having several fractures to the head and jaw. He was also having regular seizures" says Fui, "A CT scan revealed more fractures than that shown on the X-rays, as well as a bleed on the brain, which was causing Graham to have these seizures. After consultation with Fabio Stabile, a clinician in our neurology team, he recommended starting anti-seizure medications and close monitoring. He gradually stabilised and the treatment prevented any further seizures."

Graham's jaw needed to be sutured shut to allow the fractures to heal and he was tube fed and cared for by the AHT nursing team for almost two weeks. Fui and the team were amazed by his recovery, "He showed encouraging signs of improvement within a few days and the medication we sent him home with should prevent any further seizures. He also bonded with the whole nursing team and would often run up to the cage door asking for cuddles and food! Everyone was happy, but sad at the same time to see him go on his day of discharge."

Rob and Sarah said, "We are so grateful for all the care given to Graham during his stay. Graham has quickly settled back into life at home and his appetite soon returned once his jaw was unwired!"

Everyone at the AHT is very pleased to hear that Graham has recovered so well and has been reunited with his beloved Jiggi for hopefully many more (safer) adventures!



Graham after surgery



60 seconds with...

...Anita Shea, Senior Clinician in Neurology

How long have you been at the AHT?

I first started at the Animal Health Trust as an intern in Neurology in early 2008. After a brief hiatus back home in New Zealand I returned in late 2009 to start my residency training in Neurology and have been here ever since. So the AHT has been my Neurology "home" from my intern baby-steps through my European diploma exams, and now I am happy to be here as a European and RCVS recognised specialist clinician in veterinary neurology.

Why do you do, what you do? One of my favourite things about being a vet is getting to know my patients and being able to share in their successes. Many of our neurological patients have difficulty walking and that is obviously a scary and frustrating situation that they find themselves in. It is so rewarding to see them get mobility back, to start wagging their tails and come out of their shells and to know that you were a part of making them and their families happy again.

What do you enjoy doing in your spare time? Walking our very energetic cockapoo Ellie is always a nice end to the day, especially now the evenings are longer. As we are fortunate enough to be able to bring our dogs to work there are usually plenty of her doggy friends to go walking with and I love watching them play. I also love to travel and see new places, and anything that involves spending time with my husband.



Anita (pictured with Cockapoo Ellie) is one of our Neurology clinicians and was nominated for PetPlan Vet of the Year!

Redwings' Strangles outbreak one year on

Reflections on how the AHT helped at one of the most challenging times in Redwing's 30-year history and introducing the Strangles Survey.

On 19 February 2015, a resident horse at Redwings Horse Sanctuary was confirmed as having Strangles. Although the charity is highly experienced in managing and treating Strangles in rescue cases, this was the first time in 23 years that the sanctuary had an outbreak in one of its resident herds. To ensure the swift diagnosis and containment of this highly contagious disease, they turned to the AHT for help.

At the height of the outbreak 24 horses at Piggots Farm in Norfolk showed varying degrees of clinical infection and tested positive for Strangles, many more required testing and nine quarantine zones were in operation across the charity's Norfolk farms resulting in an expenditure of over £4,000 a week to contain, manage and treat the disease. Together we combated the disease for eight months, with all tests being processed through our Diagnostic Laboratories Services.

Dr Andrew Waller, Head of Bacteriology at the AHT says, "Through our research we have a greatly improved understanding of *Streptococcus equi*, the bacteria that causes Strangles, which has already enabled us to develop more accurate diagnostic tests that exploit specific genes and proteins. Thankfully we were able to quickly test and report positive cases to the Redwings team to assist in appropriate quarantining of infected horses." He adds, "Samples taken from the herd will ultimately help our continued research into eradicating this terrible disease. A greater understanding of which genes are required by *S. equi* to cause disease will inform and direct our work towards the development of an effective vaccine."



Nasal discharge - one of the clinical signs of Strangles

Supporting Redwings during its Strangles outbreak, Dr Richard Newton, Head of Epidemiology and Disease Surveillance, said: "The AHT has worked closely with Redwings for over two decades on better understanding the persistence of *Streptococcus equi*. This work has been very important in preventing introduction of the infection into many populations of horses and ponies around the world.



Dr Andrew Waller

"The AHT's scientists and diagnostic laboratory staff worked closely with Redwings' vets and staff in 2015 in devising and conducting laboratory testing protocols in order to clear this rare incursion of the disease onto Redwings' own sites, and we have together learned valuable new lessons. The AHT applauds Redwings openness in publicising that it had Strangles and its thoroughness and timeliness in dealing with the problem, returning its population to a Strangles-free status – we think this is a great example for others in the horse sector."

One year on, along with the University of Liverpool and the AHT, Redwings have developed a Strangles Survey, which aims to understand horse owners' perceptions of the disease and their current approach to infectious disease prevention and control. Dr Claire Scantlebury, Research Fellow at the University of Liverpool, said: "I am hugely pleased to be involved in this collaboration; this is an exciting example of putting research into practice, aimed at developing practical advice for the equine sector."

The survey is completed anonymously and all information supplied will be kept on password protected computer databases and not used for any other purpose beyond this study.

The Strangles survey will run until 08 June 2016.

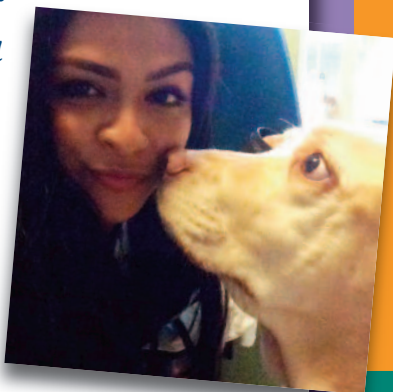
20km Thames Bridges Trek

"We got Jerry almost nine years ago and he was the cheekiest, most handsome green eyed little gem I had ever laid eyes on!

"However last year Jerry started having seizures and I noticed his sight was also deteriorating. Extremely worried, we took him to see a specialist and Jerry was sadly diagnosed with a brain tumour. They couldn't operate as it was located deep within the brain. We could only try and control the seizures with medication but there was nothing we could do to remove the tumour. From then on we wanted him to live his life and have the most amazing memories. Jerry strongly battled the tumour for nine months but sadly passed away.

"He has truly inspired me and that's why I am raising money for the Cancer Research Group at AHT. I took part in a 20km trek which crosses 16 bridges in London and raised more than £800. I want to help contribute and support the remarkable work against canine cancer so other dogs won't have to suffer like Jerry did. He was an incredible part of my life and always will be, so raising money to support a wonderful charity in his honour is the least I can do."

Anisha Mohammedunny



Focus on Fundraising

In memory of Meg

"The AHT treated our beloved Cocker Spaniel, Meg. Meg developed Cushing's Disease and then a much rarer secondary condition which affected her muscles.

"Meg would have been 12 years old in October 2015 and although the AHT couldn't help her further, she enjoyed a few weeks of being more comfortable. Meg was a very brave little dog and I wanted to organise something in her memory and to raise vital funds for AHT research to help other dogs. So in October I organised a three mile beach walk at Skegness with a group of my dog-loving friends. I was blown away by the support. Everyone, including all the dogs involved, had a great day and we managed to raise in excess of £1,100 for the AHT.

"I hope to repeat the event again to raise more money for the AHT and the great work they do."

Joanne Herbert



Queen's Birthday Book

As this year marks **Her Majesty The Queen's 90th Birthday**, we are delighted to be working with The Online Book Company who have provided a wonderful Online Book for people from all around the world to wish The Queen a very Happy 90th Birthday. This book is **free** and open throughout 2016 for you to send your personal birthday wishes to Her Majesty.

Additionally you have the choice to purchase an exclusive commemorative medal, beautifully produced by The London Mint Office, for £19.95, of which all proceeds up to **£5 will be donated to the Animal Health Trust** when you select our charity at checkout.

We hope you leave a lovely birthday message for The Queen and choose to support us by purchasing a commemorative medal.

To write your message and purchase your medal, go to: www.TheQueensBirthdayBook.com



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www.TheQueensBirthdayBook.com

Codie's Campaign

"On Sunday 22nd of November, my family and I said goodnight to our beautiful dog Codie of 11 years, to a fast growing and spreading cancer of the spleen. It took us all by a total surprise as she deteriorated from a lively, active and healthy dog to something we never thought she would become in a matter of days.

"There was an option for an operation but due to how fast the cancer had spread, it was not guaranteed to be successful. If it was, it would have only increased her life by a matter of a month or two, she would have still been suffering and would not be the same dog she once was. As much as we wanted her to stay with us, we did what was best for her and let her go to doggy heaven.

"We are not the only family to have lost a pet to cancer and unfortunately we won't be the last. The loss of Codie has motivated me to raise money and spread awareness of cancer in dogs in order to help other animals and owners who have been affected by cancer. I do this in the hope that they do not suffer like Codie and other countless animals do every day.

"My goal was to raise at least £250 for the AHT by climbing Mount Snowdon & Cadair Idris in one weekend, the equivalent of Mount Kilimanjaro (5895m), together with friends and family.



"The weekend went well and we managed to climb both mountains over the weekend. It was very difficult for some of us as a few had to turn back but most powered through to the top! Unfortunately it was too cold at the top of both mountains to take our coats off to show the AHT shirts but we took one at the bottom of Cadair Idris!"

Brad Edginton

Corgi Grotto and Fundraising Fairies!

"As Corgi lovers we all know that Corgis don't come from breeders – you know, those humans with their Corgi door knockers, Corgi jumpers, NO! They are mythical, enchanted creatures, born in the forests and used by fairies as the steeds for their warriors! All of them are bulging with character and could very well fit the job profile!

"In an effort to show the fun loving side of the breed, my Corgi Teddy and I decided to gather up some Corgis and celebrate their magic at the annual Chiswick House & Gardens Dog Show. Teddy had won Best in Show in 2014 and he had found himself very popular in the Gardens after that!

"In 2015, Teddy was invited to enter again but we decided we would prefer to flood the event with Corgis instead, in the form of a Corgi Grotto lit-up and decorated with butterflies and Corgi art to attract and delight visitors, with fairies circulating to raise funds for a good cause. It took two months of planning but the final result was a really fun day!

"The fairies did a fabulous job collecting change from the crowd, raising over £350 for our good cause, the Animal Health Trust."

Cynthia Brown



£58,000 raised for cancer research in dogs by unstoppable campaigners

Initiated in January 2015 by Jayne May after her 13-year-old Golden Retriever, Zoe, was given the all clear from lymphoma, more than 600 Golden Retriever lovers have united to fight cancer in their beloved pets under the Zoe's Journey UK fundraising campaign.

In just over a year, more than £58,000 has been raised and the committed group show no signs of slowing down. In the words of the founder, they want to "Kick canine cancer's butt".

A cheque for £58,000 was presented to the Animal Health Trust by Zoe's Journey UK members and celebrity guest, Mark Labbett, from ITV's *The Chase*, on Monday 25 April at a special celebration event at the AHT to mark the milestone.

Zoe's Journey UK has formed a supportive online community through Facebook for dog owners battling the disease, determined to make a difference through their fundraising efforts which include: an on-going online community auction, merchandise sales, raffles, monthly direct debits and events.



Jayne May said: "Initially, I set out to raise £5,000 for the AHT. I never could have dreamt that the campaign would achieve £58,000 in just over a year. It's been absolutely crazy but everyone is 100% committed to this cause.

"On our Facebook group, it seems as if dogs are dying of cancer every week. It's devastating. Losing a dog is never easy but if it's a young dog who has lost its life to cancer, that's just not right and we need to do something about it. My Zoe survived cancer, and it's only through research that we can find out what makes some dogs different and harness this to one day protect more dogs from this horrible disease. That's what we're fighting for."

The Animal Health Trust is the only UK charity with a dedicated canine cancer research team and it is putting the Zoe's Journey UK funds towards a new research project into lymphoma, the

cancer Zoe had, which is the most common canine cancer. The donation has also supported on-going research at the charity to develop a new prognostic test for vets treating dogs with mast cell tumours, the most common type of skin cancer in dogs.

Sadly, Zoe, Jayne's inspiration behind the campaign, passed away of old age at the beginning of April. She was almost 15 years old and free from cancer. Zoe remains the inspiration for many and leaves a lasting legacy behind her - helping to improve the lives of several other dogs in this important fight against cancer.

Zoe has helped to pave a brighter future for all dogs fighting cancer through increased awareness and funds generated by the amazing campaign, Zoe's Journey UK. Her bold personality, naughty streak and endless energy will be missed by many.

Dr Mike Starkey, Head of Molecular Oncology Research at the AHT, said: "Cancer affects one in four dogs, and as dogs make up such a big part of people's families, losing a dog to cancer can be a really hard thing to deal with. We're really grateful, and humbled, that Zoe's Journey UK has chosen us as the beneficiary of this fundraising campaign. Sadly, cancer research in dogs is quite poorly funded so the Zoe's Journey UK campaign is a huge boost to our research, especially when you consider that any advancements made in cancer research in dogs could have benefits for people too."

Mark Labbett, celebrity supporter of Zoe's Journey UK, added: "I've had my Golden Retriever, Baloo, now for the best part of a year and it changes your life. It's really inspiring what Jayne and this team of people have been able to achieve and I'm happy to be here to help, in any way that I can, something that could potentially help improve the quality of life for Baloo as well as other dogs, and their families."

If you would like to take on a challenge on behalf of our charity, or simply want to support the fantastic work that we do, then please visit www.aht.org.uk/fundraise



www.facebook.com/animalhealthtrust



www.twitter.com/ahtofficial