# GOdogs

Investigating the Genetics of Obesity in Dogs

## Welcome to the GOdogs newsletter!

Read on for news of exciting results, new team members, life as a vet student, and cancer detection dogs.

## First Results Out

Thanks to many of you who got involved by taking the Dog Obesity Risk Assessment (DORA) questionnaire last summer, the first official GOdogs results are out. Over 600 surveys were analysed to develop a robust set of questions which allow us to put a number your dogs' attitude to food – a 'greed score'. We showed that Labradors' reputation for always thinking about food was borne out by comparison to other breeds. We found that owners of more highly food-motivated dogs exerted more control over their dogs' food intake than those of less food-motivated dogs – you really are working hard to try to keep those food-obsessed dogs slim.

The results were published in a peer reviewed journal. You can access the full paper here if you are interested. We have also submitted another report about some exciting genetics results. We'll let you know more about those as soon as the paper is out.

## Canine Behaviour Specialist Joins the Team

We are delighted that Gabi Lakatos, an ethologist (expert in animal behaviour), joined the team in the summer.

We know that the way dogs approach their food varies, but it is not clear how that relates to their genes, or to whether they become obese or not. Gabi's task is to develop a new set of dog-friendly tests to measure how much dogs care about food.

**Gabi says:**

*"For the past 14 years dog behaviour has been my focus. I've studied dogs' social behaviour and cognitive skills, with particular interest in how dogs communicate with humans.*

*"One recent study looked at whether and how dogs understand pointing – actually a fairly sophisticated thing that few non-human species understand. I found that dogs don't get the meaning of the pointing index finger, instead they rely on a common simple rule: follow the direction indicated by the protruding body part. So if you point to the right with your hand on your belly but your bent elbow sticks out from the left of the body, a dog is likely to look left instead of right!*

## Help our research and find out more about your Labrador - Call for research participants!

We are looking for enthusiastic Labrador owners who would like to participate in our new exciting test series as part of the research we are working on to investigate Labradors' feeding behaviour and its genetic background.

In a set of playful experiments, which are fun for the dogs and interesting for the owners, we will test dogs food motivation and food preference. First we will let dogs manipulate a spinning wheel in order to get small food rewards. Secondly, they will be offered the choice of two different test foods in order to assess their food preference. Third, we will video record and analyse their response to tasty and unpalatable foods.

We think owners and dogs will find the tests rewarding and would love it if you would take part with your Labrador. Look over the page for more practical information.

**What's involved?**

The tests will be conducted at the Department of Veterinary Medicine, University of Cambridge. The research room is separate from the hospital and is a welcoming environment for you and your dog. Taking part is a reasonable time commitment since you will be asked to visit the Vet School for about an hour on two separate days. We can be flexible about when you come, and will pay reasonable travel expenses.

To volunteer or just find out more (with no commitment), please email Gabi gl405@medschl.cam.ac.uk

## The Nose Knows - Cancer detection with the help of dogs

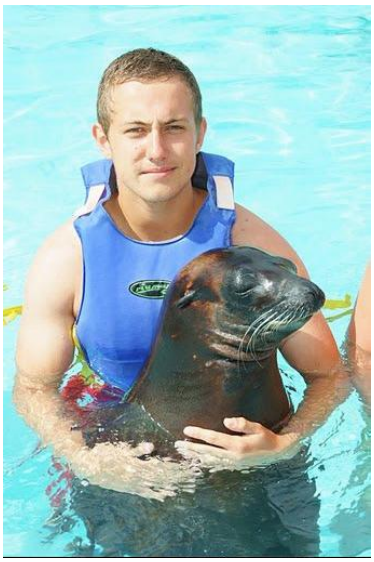
Cancer is a leading killer worldwide and late diagnosis is a big obstacle in way of successful treatment. But how can we diagnose cancer early?

Well, dogs can help: Recent has shown that dogs can use their amazingly sensitive noses to detect various forms of cancer. It works because some cancer types release chemicals which dogs recognise as abnormal.

Dogs have been shown to detect breast and lung cancers by smelling a patient's breath, and to spot patients with cancer of the bladder, prostate, or ovaries by sniffing urine.

And even ordinary family dogs with only basic behavioural "puppy training" have been trained to accurately sniff out tumours too. These amazing findings suggest canine scent detection may be new diagnostic tool in cancer - just another way that dogs are man's best friend.

## Meet the Team: James Henderson, final year vet student



James has gotten involved with GOdogs as part of his elective project (an opportunity for final year students to study a part of veterinary medicine that particularly interests them). He's been investigating whether there are differences in 'greediness' between different breeds of dog. If so, we can use that to inform vets and owners about which breeds require particularly pro-active weight management. Moreover, breed differences in greediness would clearly have a genetic component, and thus would help us find out how genes affect dogs' tendency to become overweight.

But how does research fit in with training to be a vet? **James says:**

*"For me the transition into the final year has been extremely rewarding. Much of the earlier part of the Veterinary Medicine course has been lecture and lab based. mnIn contrast, this year is lecture free and we spend 90% or more of our time in the hospital meeting clients and treating animals. I've really enjoyed taking responsibility for cases, and it's been extremely satisfying to see the hard work of the past 5 years finally coming to fruition.* [Editor's note: it's clearly not been all books – the picture shows James on placement with 'exotics' vets!]

*"Working on the GOdogs Project has been a particularly enjoyable part of the year as I've not had an opportunity to be involved with research of this kind before. Aside from the fun I've had collecting the data, I'm also excited for the data analysis part of the project, where we can hopefully begin to get some clear cut answers on whether some breeds truly are greedier than others."*