



The Dog Aging Project

Dear Friends of the Dog Aging Project,

It has been some time since our last newsletter, and I know that many of you have wondered how things have been going and, more importantly, when your dog can start participating. There have been some exciting developments in our research, which I will describe further below. In particular, the initial results from our rapamycin short-term trial are quite encouraging. This has resulted in significant excitement and attention for the project. As many of you may have seen, the Dog Aging Project was featured on local television news programs in some cities and also on the front page of the [New York Times](#) (see image at right) in May. In addition, several other media stories have been written about the project. You can find links to many of these articles on our website or on the Dog Aging Project [Facebook page](#).

Rapamycin intervention trial update

As you may have heard, the first phase of the Dog Aging Project rapamycin intervention trial has been completed. This trial successfully enrolled 40 dogs in the Seattle area into the study, of which 24 dogs completed the study. Several dogs were unfortunately excluded after the first visit (prior to receiving either placebo or rapamycin) due to pre-existing health conditions, generally asymptomatic heart valve disease that was detected by the echocardiogram. Although we did not expect this, it may provide important information to the veterinary community about the incidence of heart disease among the older population of companion dogs.

We are currently finishing the analysis of the data for the dogs that completed the phase 1 study and hope to submit the results for publication within the next few months. The key findings are that there were no significant side effects associated with the rapamycin treatment, and there were statistically significant improvements in heart function in the dogs that received rapamycin relative to those that

received the placebo, similar to what has been observed in older laboratory mice.



It is important to keep in mind that this is a small study that requires replication before we can be confident in these results. It is also important to recognize that we don't have any evidence that the improvements in heart function indicate overall improvements in health or slower aging in these dogs or even what the long-term effects of rapamycin will be. We view these initial results as highly encouraging, however, and feel that this phase 1 study provides a strong justification for the next phase of the intervention trial which will follow dogs for three to five years.

I realize that many of you have nominated your dog to participate in the Phase 2 rapamycin trial, and that you have been waiting patiently to get more information. We are unable to give you a definite timeline for when this study will start or where the centers will be located, due to the fact that the study is not yet funded (see below). As soon as

we have funding, we will be able to move forward with formal enrollment.

Longitudinal study of aging update

The Dog Aging Project Longitudinal Study of Aging aims to enroll more than 10,000 dogs and follow them throughout life in order to define the genetic and environmental factors that affect healthy aging and disease in dogs and, ultimately, in people too. There are no age, size, or breed restrictions for participation in the longitudinal study. As the goal of this study is to understand the normal aging process, these dogs will not receive rapamycin or other interventions beyond routine veterinary care.

The Longitudinal Study will consist of several cohorts of dogs. The largest cohort, also known as the Global Cohort, will be enrolled first and will simply involve providing a copy of your dog's veterinary records and completion of an initial on-line survey that will collect information about your dog's history, lifestyle, and environment. We hope to begin formally enrolling this cohort within the next three months. As additional funding is obtained (see below), the Longitudinal Study will be expanded to include more comprehensive surveys and assays of health for a subset of dogs in the Global Cohort. These assessments will include annual veterinary visits, spontaneous activity via GPS tracking, cognitive assessments, and in some cases genotyping or even full genome sequencing.

Fundraising Progress for the Dog Aging Project

With the goal of starting the full-scale Dog Aging Project as soon as possible, and with as many dogs as possible, we have moved into the next exciting phase of fundraising. I have described below the several different approaches we are taking to raise the necessary funds that will allow us to take the next steps toward our shared goal of enhancing the health and longevity of our pets.

Federal funding. The majority of biomedical research in the United States is funded by the federal government through the National Institutes of Health (NIH). In May, the Dog Aging Project team submitted a grant proposal to the NIH that would fund a significant portion of our research for a period of 5 years. While this grant won't allow us to do everything we ultimately plan to do, it will represent a major step forward and will fund major components of both the Longitudinal Study of Aging and the

Rapamycin Intervention Trial. The proposal will likely be reviewed sometime in October or November and, if selected for funding, will allow us to move forward in mid-2017. The current funding level for NIH grants is competitive (about 10% get funded), so while there is no guarantee of success the first time around, we are cautiously optimistic.

Individual giving. As many of you are aware, we accept donations to the project through the Dog Aging Project website. The link on the website will take you to a dedicated fund on the University of Washington Foundation webpage. All donated funds are tax deductible, and 100% of the funds go to support the Dog Aging Project. A huge thank you to all of you who have already donated. Even if you can only donate a small amount, every bit helps.

Corporate giving programs. Many large companies have charitable giving programs for their employees and, in some cases, even provide matching gifts. We are very excited to report that the Dog Aging Project has partnered with Microsoft such that Microsoft employees are now able to donate to the Dog Aging Project through their charitable giving program. If you work for a company with similar programs, we encourage you to ask your human resources or charitable giving coordinator about having the Dog Aging Project added to your company's charitable giving program.

Foundations. There are several charitable foundations and organizations that support biomedical or veterinary research. We have had discussions with representatives from different foundations about supporting aspects of the Dog Aging Project, and we are grateful to the Irish



Wolfhound Association of New England for supporting a post-doctoral scientist on our project, Dr. Silvan Urfer (see image above). Dr. Urfer has been analyzing data from the Phase I rapamycin trial as well as collecting and analyzing data on disease incidence in dogs.

Fundraising and Informational Events. We held our first Dog Aging Project fundraising and informational event in New York in May. The event was co-hosted by our friends at the American Federation for Aging Research and the University of Washington School of Medicine and served as an informational meet-and-greet for both foundation representatives and individuals in the New York area. We are hoping to hold additional similar events in the future. In addition, Dr. Promislow, Dr. Creevy, Dr. Urfer, and I often give presentations about the Dog Aging Project for various groups, including breed interest groups. Please contact us if you would like to explore the possibility of hosting a Dog Aging Project event in the future.

Website update

The Dog Aging Project website has recently undergone a major design renovation. We have creating a new modern look and feel, and we also plan to institute a blog feature that will allow us to update you more frequently. All of the prior information is still be available on the website. Check out the new design and let us know what you think!

As always, thank you for your continued support. Know that all of us at the Dog Aging Project are working hard to improve the quality and quantity of life for our beloved pets. Although progress feels slow sometimes, especially when our dogs continue to age so quickly, we are more optimistic than ever about the future.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Matt Kaeberlein', with a long horizontal flourish extending to the right.

Matt Kaeberlein, Ph.D.
Director, Dog Aging Project