



The Dog Aging Project

Dear Friends of the Dog Aging Project,

As we begin to plan ahead for a busy 2017, it seems an appropriate time to look back on the successes and lessons of 2016. The past year has been one of amazing progress for the Dog Aging Project. We completed our first clinical trial, obtained important preliminary data for the next steps of both the Longitudinal Study and the Rapamycin Intervention Trial, received some amazing media attention, and made lots of new friends. It has been truly humbling and inspiring to receive so many messages of support from all of you.

Rapamycin intervention studies update

The goal of our rapamycin intervention studies is to determine how effective the drug rapamycin is at extending healthy longevity in pet dogs. As I described in our [August newsletter](#), our first veterinary clinical trial (Phase I) has been completed. You can find more information about that trial there or on our website.

I am pleased to report that the first peer-reviewed paper from that study has been accepted for publication in the journal [Geroscience](#) (formerly AGE). We anticipate that this will be published in the *Geroscience* print and on-line journal within the next month or so and deposited into the Open Access Pubmed Central after that. This paper describes the cohort of dogs who participated in the Phase I study and some unexpected observations that came from the initial heart exams.

The second manuscript from this study has been submitted for consideration at a top tier scientific journal. This manuscript describes the major results of the study, including the positive effects of rapamycin on heart function and the lack of significant side effects.

The most exciting news, however, is that we are now able to confirm that we will soon be formally enrolling dogs into Phase 2 of the Rapamycin Intervention Trial. This will be a longer trial to further establish the effects of rapamycin on cardiac function in older dogs over about a one-year period, as well as to begin looking at the impact on cognitive function. This study was funded by a generous donation from the Donner Foundation (more on this

below), and we will be providing more information on the site for this study soon.

Our long-term goal with rapamycin remains a five-year study to really determine how effective this treatment is at increasing longevity and preventing diseases of aging in dogs. Pending funding of a large grant proposal being submitted later this month, we hope to formally enroll about 300 dogs into that study toward the end of 2017. We are now referring to this larger, longer study as our Phase 3 Rapamycin Intervention Trial. This trial will be held at multiple sites around the United States. If you have previously nominated your dog to participate in the Phase 2 rapamycin trial, you will be automatically considered for Phase 3 if you are not able to participate in the Phase 2 trial. As always, the timing for Phase 3 will depend on securing sufficient funding for this study (also discussed further below).

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. We are submitting a large NIH grant to fund a majority of this study later this month. In the interim, we are recruiting dedicated sponsored cohorts of specific dog breeds. These dedicated cohorts will rapidly become the most comprehensively characterized dogs ever, and will provide a rich source of data for scientists around the world. We hope to have more information on these efforts for you soon.

Fundraising Progress for the Dog Aging Project

Funding for research is the rate-limiting step in our progress at the Dog Aging Project. We know what needs to be done. We have an outstanding team who are ready, willing, and able to do the work.

Federal funding. The majority of biomedical research in the United States is funded by the federal government through the National Institutes of Health (NIH). Due to reductions in inflation-matched government funding for biomedical research and prioritization of other research areas, funding for

research on the biology of aging is extremely competitive.

The Dog Aging Project team submitted a large NIH grant in May to fund the bulk of our planned studies over the next 5 years. Unfortunately, this proposal was not selected for funding. While this was certainly a disappointment, we are not deterred from our mission. The reviewers made several good points that will allow us to submit an even stronger new application later this month. We now anticipate that general enrollment for the Longitudinal Study of Aging and the larger (now Phase 3) Rapamycin Intervention Trial will begin toward the end of 2017.

We are also happy to report that we have had ongoing conversations with staff at the National Institute on Aging (the NIH Institute dedicated to aging-related health). They are highly supportive of this project and enthusiastic about our approach.

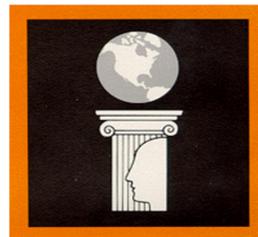
Foundations. During 2016, non-profit Foundations were our greatest supporters. We continue to be grateful to the Irish Wolfhound Association of New England for supporting a portion of Dr. Silvan Urfer's effort on this project. Dr. Urfer is a lead author on both papers we have submitted from the Phase I Rapamycin Intervention Trial, and he continues to be a key contributor to our ongoing work. We would also like to recognize the Glenn Foundation for an award to Dog Aging Project co-Director Daniel Promislow that is being used to study epigenetic changes in dogs. This work will lay the foundation for more extensive analyses of the epigenome in the Longitudinal Study of Aging.

We are also extremely grateful to the Donner Foundation for a major gift to the Dog Aging Project that has allowed us to move forward with the Phase 2 Rapamycin Intervention Trial described above. This generous gift fully funded this study and promises to have an enormous impact on the health of all dogs. Thank you, Donner Foundation!



Individual and charitable giving. To accomplish all of our scientific goals, we will need support not only from NIH, but also from other sources. Individual donations and charitable giving through the University of Washington and Microsoft continue to be critically important sources of funding to keep our current projects moving forward. Please

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*When we build
let us... build forever
Let it not be for present delight
nor for present alone
let it be such work
as our descendants
will thank us for*

consider a donation to the Dog Aging Project through the University of Washington Foundation dedicated [Dog Aging Project fund](#). 100% of the donated funds go directly to research on the Dog Aging Project and are tax-deductible.

Dog Aging Project in the News

The Dog Aging Project received a truly amazing amount of media attention in 2016. Among the major media outlets to feature the Dog Aging Project were the New York Times, CNN, NPR, the Seattle Times, Reuters News, CBS News, Smithsonian Magazine, several local television and radio outlets, and a variety of news websites covering scientific and veterinary topics. We appreciate the efforts of all of the members of the media and the freelance writers and reporters who have covered our work. Links to many of these stories can be found [here](#).

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 and are confident that 2017 will be a great year!

Sincerely,

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