

## **Interview with Donald Ingram Biomarkers**

KYLE JENSEN: Welcome to SAGE Crossroads, the premier online forum in issues of human aging. These podcasts feature lively discussion with the experts on the ethical, political, economic, scientific, and societal implications of aging related science. Thank you for listening.

I'm joined now with Dr. Donald K. Ingram. Dr. Ingram is a professor at the Pennington Biomedical Research Center for the Louisiana State University system.

Dr. Ingram, in your mind, what would the discovery of biomarkers of aging accomplish?

DONALD INGRAM: It could accomplish many positive things. We have the opportunity now from research done in pre-clinical studies, different animal model systems from vertebrate to in-vertebrate models, showing that specific manipulation of genes and of different environmental interventions, particularly diet and components of the diet, can markedly affect the lifespan and health span of animals. We have this opportunity then to apply this knowledge gained from pre-clinical work to actual clinical work to evaluate this in long term studies of humans to determine whether such interventions increase healthy life spans for humans. The need then for measures to assess the success of such interventions is absolutely necessary. We can't do lifespan studies in humans obviously. There is such a time and money invested in that effort, so we need to substitute markers, specifically what we call biomarkers of aging, to evaluate the success of such interventions.

KYLE JENSEN: How high of a priority has the search for biomarkers become at the NIA?

DONALD INGRAM: It's gone through various times of when it was a high priority and then given a lack of success in identifying biomarkers, it lost some its priority, but I see a resurgence now given what I said in response to the previous question that we are at an important state in gerontological research where there are specific interventions that can be evaluated.

KYLE JENSEN: Are there any type of public-private collaborations that are existing in the search for biomarkers of aging, or is this all government funded research?

DONALD INGRAM: Well, it's not a government program at the moment, and the only concerted effort that I'm aware of is that which has been spearheaded by the Alliance for Aging Research in putting together in the same room groups of investigators to focus on these pre-clinical studies as well as investigators that specialize in clinical research along with other very administrative, particularly government regulators who are interested in seeing this concept come to fruition.

KYLE JENSEN: Do you think that's the right way to move it forward?

DONALD INGRAM: I think the conversation...I also didn't mention the symposium that was put together by the American Federation for Aging Research last September 2007 in which the topic of biomarkers of aging was addressed, so again, that just shows that there is increasing interest in the area, and the level of discussion that needs to be increased, that is more scientists interested in the concept need to be brought together. There has to be somewhat of a consensus that emerges from these discussions on how best to chart a future course of progress in this area.

KYLE JENSEN: Do you predict a breakthrough in the field in the next 5 years?

DONALD INGRAM: That I don't know. I really don't know. Breakthroughs...I don't think they will occur unless some of these higher level discussions emerge.

KYLE JENSEN: The audience of SAGE Crossroads is made up of scientists, policy makers, and curious consumers. If there is one last statement that you could make to them about biomarkers of aging, what would it be?

DONALD INGRAM: Well as I think we mentioned, we are at a very important juncture in gerontological research where there is really a lot of excitement in the field for the potential of increasing healthy life span, and that will only move forward with the application of these interventions to human studies. There is a lot of extrapolation that can be done in terms of whether our success in pre-clinical studies will translate to clinical studies, but this can only be proven by the format that is accepted in the scientific world and that's well-controlled clinical studies. These well-controlled clinical studies can only move forward when there's consensus on what a biomarker of aging is and how it can be applied to such clinical studies.

KYLE JENSEN: Thank you. On behalf of SAGE Crossroads, I'm Kyle Jensen.