

# GENETICS OF AGING

## HOW TO MODULATE LONGEVITY HAWAII STYLE



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**日時 : 平成30年7月25日 (水)**

**18 : 00~19 : 30**

**場所 : 大阪大学大学院人間科学研究科**

**1Fインターナショナルカフェ**

**Date: July 25, 2018 (Wed) 18:00~19:30**

**Location: Osaka University Graduate School of Human Sciences,  
1F International Café**



※この講演は英語で開催されます

※This seminar will be presented in English

The aging process is complex, being influenced by both lifestyle choices and our individual DNA or genetic makeup. I will discuss 2 genetic factors that have been shown to influence aging- telomeres and the FOXO3 gene. Both of these factors have been shown to affect the rate of aging in a number of different species. Telomeres are genetic factors that protect the ends of chromosomes. The length of telomeres decreases gradually as we age, putting the stability of our DNA at increasing jeopardy. The FOXO3 gene encodes a protein that plays an important regulatory role in response to a number of different forms of stress that we are exposed to. Ten years ago we identified a rare version of the FOXO3 gene that protects against aging, and increases the odds of living to 100 by 2-3 fold. We now know that this protective version of the FOXO3 gene promotes longevity primarily by decreasing incidence of death due to cardiovascular disease. More recently, we have shown that these 2 genetic factors which influence aging – telomeres and the FOXO3 gene – do not interact independently. Specifically, carriers of the protective version of the FOXO3 gene do not show signs of telomere shortening during aging.

遺伝子の末端に位置するテロメアは、加齢状態を知るバイオマーカーとして知られています。近年ではテロメアと長寿に関わる遺伝子との関係が徐々に分かってきました。講演では、Allsopp先生が関わっているホノルルエイジング研究での最新の知見について、分かりやすくご紹介してもらいます。



Telomeres by AJC1, available under a Creative Commons Attribution License 2.0 at <https://flic.kr/p/gneVur>



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