LiMe
Institute for Life and Medical Sciences
Kyoto University

1st Aging and Infection Control Seminar

2026 March 19th, 3:00-4:00 p.m.

Conference Room (Room 134), 1st Floor, Bldg. No.1

https://www.infront.kyoto-u.ac.jp/en/access/

Zoom link

Live fast die young: the role of epigenetics in stress and aging

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Abstract: Psychosocial and other forms of environmental stress - especially when chronic or excessive - have been repeatedly associated with accelerated aging and increased disease risk. With rapid aging of the world population, the need to elucidate the underlying mechanisms is pressing, now more so than ever. Among candidate mechanisms, this interactive talk will present evidence on the role of epigenetics, biochemical processes that can be set into motion by stressors and in turn influence genomic function and complex phenotypes, including aging-related outcomes. The talk will first provide a background and rationale for examining the role of epigenetics in stress and aging. It will then synthesize and contextualize interdisciplinary, published and unpublished studies from our group and others, spanning three research themes: (i) The impact of psychosocial stress on epigenetic aging in humans; (ii) Epigenetic interplay between stress and immune function at the cell-type level; (iii) Insights from modeling the epigenetic and cell states of chronic stress. The talk will conclude with future directions, take-home messages, and open discussion with the audience.

Biography: Following his MD and clinical training, Anthony completed a master's on the Science of Stress at Athens University in Greece and trained as a psychiatrist at Duke University in the US. He then did a PhD and postdoc in Molecular Biology at the Max Planck Institute and Ludwig Maximilian University in Germany. His interdisciplinary research program aims to elucidate the epigenetic and other molecular mechanisms linking environmental stress with accelerated aging and disease risk. His lab combines bench and computational methods across human cohorts, cell experiments, and model organisms. His work comprises more than 80 peer-reviewed publications and has been awarded multiple private and federal fellowships and grants.

Host: Eriko Kage-Nakadai, nakadai@infront.kyoto-u.ac.jp