

# FUNDING PROGRAM FOR NEXT GENERATION WORLD-LEADING RESEARCHERS

**Project Title:** The study for realization of healthy aging and longevity by elucidating the common molecular mechanisms of lifestyle diseases and cancer

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## 1. Background of research

Lifestyle diseases, including cardiovascular disease and type 2 diabetes, and cancer cause disturbance of healthy daily living. Because lifestyle changes, such as inactivity and overnutrition increase the development of lifestyle diseases and cancer, it is increasingly prevalent medical and social problem. Therefore, it is important to understand the molecular basis of lifestyle diseases and cancer in order to develop effective preventive and therapeutic approaches against these diseases. Recently, it is noted that dysregulation or dysfunction of homeostatic response lead to the induction of persistent low-grade inflammation, which is a common pathogenesis of lifestyle diseases and cancer. However, the detailed molecular mechanisms underlying persistent low-grade inflammation are poorly understood.

## 2. Research objectives

We originally identified angiotensin-like protein (Angptl) and showed that it plays roles in the homeostatic response. We focus our investigation on roles of Angptl2 and AGF/Angptl6, which are Angptl family members, in the homeostatic response and the common molecular mechanisms underlying lifestyle diseases and cancer.

## 3. Research characteristics (incl. originality and creativity)

Elucidation of Angptl2 and AGF/Angptl6 functions contributes to understanding of molecular mechanisms underlying lifestyle diseases and cancer.

## 4. Anticipated effects and future applications of research

We believe that elucidation of common molecular mechanisms underlying lifestyle diseases and cancer leads to development of novel and effective diagnostic and therapeutic approaches against these diseases.

