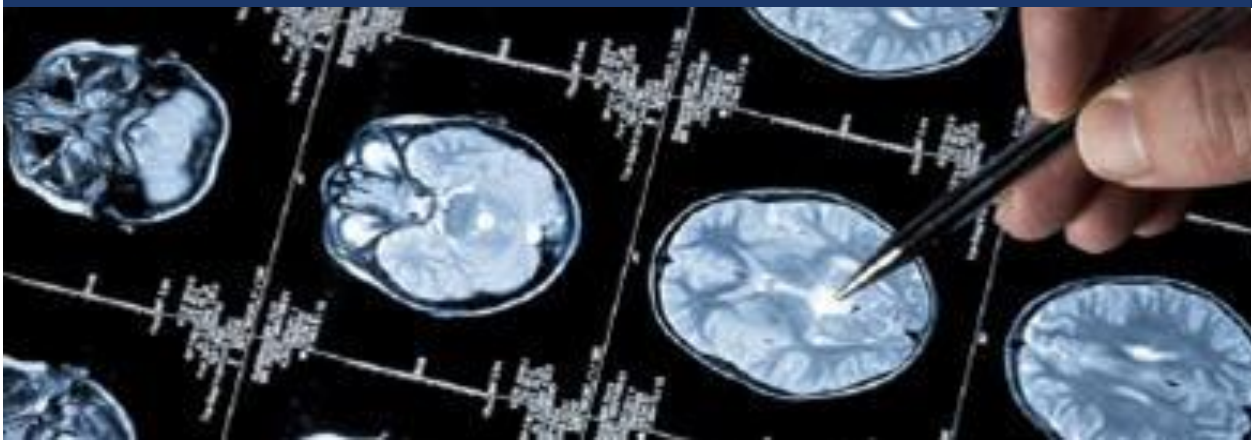
Alzheimer's Disease Research Center (ADRC)



Newsletter 21

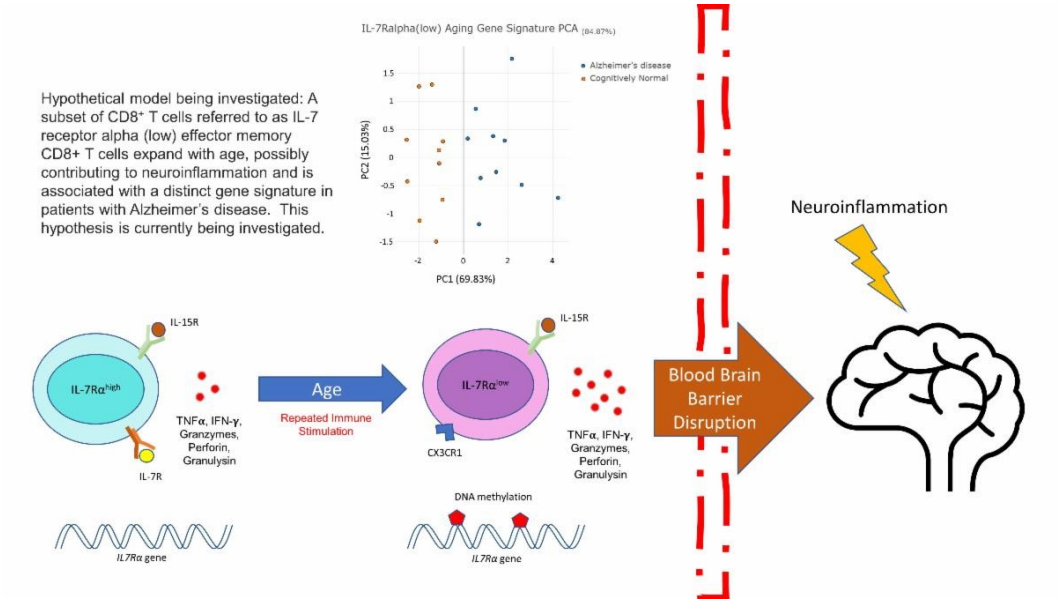
We are pleased to highlight the research of Insoo Kang, MD who is a Professor of Medicine (Rheumatology, Allergy and Immunology) and the Director of Allergy and Immunology.

Research

Our laboratory is interested in understanding how the immune system works in healthy and disease states by using human biological samples, clinical data, and animal models. In particular, we study different types of white blood cells including T cells and monocytes, focusing on immune aging, autoimmunity, immunodeficiency and inflammation.

We also investigate how aging and inflammatory conditions affect the proportion and function of such cell subsets. Of note, we found an expansion of a subset of human CD8+ T cells with low levels of the receptor for the cytokine IL-7 (i.e., IL-7 receptor alpha chain) in older adults and individuals with various inflammatory conditions such as lupus (see Figure 1). This CD8+ T cell subset, which potently induces inflammation and cell damage, has a unique gene signature that overlaps with a set of age-associated genes.

In our recent study, we have observed the possible presence of this gene signature in the blood samples of individuals with Alzheimer's disease. Currently, we are investigating how different subsets of CD8+ T cells can interface with other immune and non-immune cells, such as neuronal cells, especially in the context of neurologic and inflammatory diseases, contributing to the development of conditions associated with aging.



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Thank for your interest in the Yale ADRC. For more information on our studies or to participate in studies please call or visit our website.

203-785-5526

http://medicine.yale.edu/adrc/

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