

STRATEGIES TO OVERCOME THE AGE-OLD PROBLEM OF IMMUNOSENESCENCE

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Immunosenescence, which is the deterioration of the immune system that comes with age, hampers the development of protective immunity to vaccine antigens. The molecular underpinnings of this process remain poorly understood. Given that systems immunology approaches have been successfully applied towards identifying important molecular features driving productive innate and adaptive immune responses to different vaccines, our goal was to use these approaches to understand, predict, and eventually overcome immunosenescence. To this end, we coupled these systems immunology approaches with highly sensitive in vitro human immune assays to gain insights on specific gene targets that could be modulated to restore the age-dependent decline of immune function.