National Institute of Allergy and Infectious Diseases:

Multicenter AIDS Cohort Study (MACS)

The Multicenter AIDS Cohort Study (MACS) is an ongoing prospective study of the natural and treated histories of HIV infection in homosexual and bisexual men conducted since 1984 by sites located in Baltimore, Chicago, Pittsburgh, and Los Angeles. The MACS is also one of the only cohorts that enrolled HIV-negative men who have sex with men to serve as controls. The broad scientific agenda of the MACS includes sub-studies on aging issues such as immune function, cardiovascular disease, brain structure and function, frailty, and hearing loss.

Lead Agency:

National Institute of Allergy and Infectious Diseases (NIAID)/
National Institutes of Health (NIH)

Agency Mission:
The mission of the National Institute of Allergy and Infectious Diseases is to conduct and support basic and applied research to better understand, identify, treat, and prevent infectious and immune-related diseases.

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Partner Agency:

National Cancer Institute
National Heart, Lung, and Blood Institute
National Institute on Deafness and Other Communication Disorders

General Description:

Multicenter AIDS Cohort Study (MACS)
The MACS is one of the oldest longitudinal cohorts of HIV-infected men in the world that includes the natural and treated histories of HIV-1 infection in 6,973 homosexual and bisexual men conducted by sites located in Baltimore, Chicago, Pittsburgh and Los Angeles (4,954 men from April 1984-March 1985; 668 men from April 1987-September 1991; and 1,351 men from October 2001-August 2003). In addition to a blood sample, more than 8,500 individual pieces of information are collected on each man during the biannual study visits. The more than 1 million deposited specimens and corresponding data form a rich dataset that describes the clinical outcomes, treatment responses, and behavior of these HIV-infected gay men over a 25-year period. The MACS is also one of the only cohorts that enrolled HIV-negative men who have sex with men to serve as controls. Finally, more than 650 initially HIV-negative men have become HIV-infected during the course of the study and their clinical and behavioral information and specimens form a very valuable subset of data in the MACS. MACS data and deposited specimens are available to outside investigators conducting research on HIV/AIDS.

The broad scientific agenda of the MACS includes sub-studies on aging issues such as immune function, cardiovascular disease, brain structure and function, frailty, and hearing loss.

1) Supply a three line summary of the research project using terms reasonable for an educated lay audience:

   The Multicenter AIDS Cohort Study (MACS) is an ongoing prospective study of the natural and treated histories of HIV infection in homosexual and bisexual men conducted since 1984 by sites located in Baltimore, Chicago, Pittsburgh, and Los Angeles. The MACS is also one of the only cohorts that enrolled HIV-negative men who have sex with men to serve as controls. The broad scientific agenda of the MACS includes sub-studies on aging issues such as immune function, cardiovascular disease, brain structure and function, frailty, and hearing loss.

2) Respond to the following questions in a narrative about the research project using terms reasonable for an educated lay audience:

Excellence: What makes this project exceptional?

The more than 1 million deposited specimens and corresponding data form a rich dataset that describes the clinical outcomes, treatment responses, and behavior of these HIV-infected gay men over a 25-year period.

Significance: How is this research relevant to older persons, populations and/or an aging society?

With a significant number of HIV-infected individuals now advancing toward old age, it is vital to examine the effects of the many years of HIV infection and HIV-treatment on the aging process. The median age of the men in the MACS is 52.7 years and the oldest participant is 82.2 years old. The MACS is mining its 25 years of data to evaluate how these HIV-infected men are aging in relation to their HIV-negative counterparts.

Effectiveness: What is the impact and/or application of this research to older persons?

This research will describe the impact of long-term HIV infection and treatment on the aging process and potentially identify clinical outcomes that could be prevented or treated to extend longevity and ensure a better quality of life for HIV-infected persons.

Innovativeness: Why is this exciting or newsworthy?

HIV-infected persons now live far longer than ever anticipated when the AIDS virus was first identified. As these individuals live into older age, the HIV community recognizes the need for more information on HIV and aging.