AIDS RESEARCH at the NATIONAL INSTITUTES OF HEALTH

The AIDS Research conducted at the National Institutes of Health (NIH)
Research on HIV -- the virus that causes AIDS -- and on the opportunistic infections that actually cause people infected with HIV to sicken and die is conducted at all 24 Institutes, Centers and Divisions (ICDs) of the NIH including the Office of the Director and the Institute of Medicine. This is because HIV affects all the body's systems, ranging from the lungs and circulatory system, researched at the Heart, Lung and Blood Institute, to AIDS-related lymphomas, studied at the National Cancer Institute. Thus, unlike most diseases such as cancer and heart disease, there is no one ICD dedicated solely to the study of AIDS. Instead, the Office of AIDS Research is responsible for coordinating the AIDS research effort across all of the NIH.

AIDS research focuses on the study of the Human Immunodeficiency Virus (HIV) itself and its effects on the immune system, as well as on potential treatments to fight HIV and the hundreds of opportunistic infections that actually kill people whose immune systems are ravaged by the virus.

In its first 15 Years AIDS Research has led to:

- a doubling of the survival time of people with AIDS.
- the development of new and powerful drugs for the treatment of HIV infection including the reverse trascriptease inhibitors (RTIs), the protease inhibitors, and non-nucleoside reverse trascripters. Protease inhibitors, when taken in combination with other anti-viral RTIs, can lower viral load -- the amount of HIV in the blood -- to undetectable levels in many people for extended periods of time, cutting death rates significantly and greatly reducing the rates of opportunistic infections.
- tremendous advances in the treatment and prevention of AIDS-related opportunistic infections such as CMV retinitis, pneumocystis pneumonia, and toxoplasmosis, improving the quality and length of life.
- the discovery that treatment with anti-virals can reduce the chances of perinatal transmission – the transmission of HIV infection from mother to fetus -- from 25% to 8%.

AIDS research has had major cross-over benefits for other scientific disciplines and diseases as well. AIDS research has led to:

- accelerated investigation into viruses, particularly retroviruses. The first human retrovirus was discovered just two years before the discovery of HIV. AIDS research has enhanced scientific understanding of all retroviruses, which may play important roles in other human diseases.
- the development of a new drug for hepatitis B, the leading cause of liver cancer worldwide, and for hepatitis C, a rapidly emerging additional cause of chronic liver disease.
- new insight into the treatment of other conditions. Several drug companies are developing protease inhibitors for use in treating bone loss, or osteoporosis; and in limiting the heart muscle damage that results from a heart attack
- increased understanding of the mechanisms by which infectious agents spread into the nervous system through the blood/brain barrier, which has valuable implications for research on

Alzheimer's disease, dementia, encephalitis and meningitis.

- The use of treatment and prevention medications developed to combat the opportunistic infections which attack people living with AIDS fight these same conditions in individuals with advanced breast cancer as well as people who are immune-suppressed because of organ transplants, or other autoimmune conditions.

The Office of AIDS Research

Congress first established the Office of AIDS Research at the NIH in 1988 to oversee the AIDS research effort. The NIH Revitalization Act of 1993 further strengthened the authority of the office to more effectively plan and coordinate the AIDS research program at the NIH, which had grown to a budget of over $1.0 billion, by charging the OAR Director with developing a strategic plan and consolidated budget for all AIDS research at the NIH. The strategic plan and budget is crafted in collaboration with the individual ICDs and the OAR advisory council. The consolidated budget allows the OAR to implement the strategic plan across institutes which, in fact, reduces bureaucracy and eliminates duplication of effort. The OAR has no responsibility for conducting research nor does it review grants. These efforts continue to be generated, appropriately, by the scientists at the NIH institutes.

Why the Consolidated Budget as Administered by the OAR is Important to AIDS Research

A consolidated budget administered by the OAR is required to guide the over $1.5 billion NIH research budget and is essential to implementing the NIH-wide strategic plan for AIDS research in a manner designed to avoid waste and duplication. The consolidated budget for AIDS research is a long-term planning mechanism which provides the stability required to support the scientific effort needed to develop powerful treatments, safe and effective vaccines, and to create a cure. To ensure that the strategic plan is successfully implemented, it is essential that OAR develop a consolidated budget request and in turn receive a consolidated appropriation from Congress which reflects the priorities set-out by the strategic plan. This is additionally important to ensure that the important recommendations of the Levine Committee, which conducted the first comprehensive review of AIDS research at the NIH, are implemented.

Why We Need an Increase in AIDS Research Funding

While both a cure for HIV disease and a vaccine to prevent new infections remain elusive, AIDS research has experienced significant achievements in the last year. The most important of these range from the discovery of the surface proteins employed by HIV to infect cells, to the approval of two important new classes of drugs to treat HIV -- the protease inhibitors and the non-nucleoside reverse transcriptase inhibitors. These and other therapeutic advances have more than doubled the productive life span of Americans diagnosed with HIV since 1987. The recent advances in basic research coupled with the new drugs may easily double it again.

In order to keep up this remarkable rate of progress, our country needs to recommit itself to the support of vital health research conducted at the National Institutes of Health. As important, Congress must ensure that the nation continues to receive as large as possible a return on its investment in research. This demands that all research be conducted in the most scientific and efficient manner possible. For AIDS research, this means supporting a consolidated budget administered by the Office for AIDS Research is critical. It is only by continuing to support the integrity of this funding mechanism that the resources our nation spends on AIDS research will be allocated to the most promising areas of medical and scientific

exploration.

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AIDS Action
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