

The House Committee on Government Operations, Subcommittee on Human Resources and Intergovernmental Relations asked the Office of Technology Assessment (OTA) to document the extent to which federally funded research on AIDS/HIV has contributed to advances in other fields including biomedical and behavior research, prevention, patient care, and health care financing. In response to this request OTA conducted a survey of distinguished biomedical and social scientists. This Staff Paper reports on the results of that survey.

In February 1990, OTA mailed a questionnaire to a multidisciplinary group of scientists that asked them to rate the contributions of federally funded AIDS/HIV research to advances in 42 different fields that comprised five broad areas: basic sciences, medicine, applied medical sciences, epidemiology, and public health and health services research. OTA also asked the scientists to express their opinions about the current level and allocation of federal funds for research. Thirty-seven percent of 400 scientists asked to complete the questionnaire completed it.

According to OTA survey respondents, significant benefits from AIDS/HIV research have flowed to a wide variety of fields. More than one-half of respondents indicated that AIDS/HIV research had contributed substantially to the basic science fields of virology, immunology, microbiology, and molecular biology. An increased understanding of gene expression, the immune system, viral

evolution, and disease susceptibility were among the specific examples of contributions to advances in the basic sciences cited by respondents.

Infectious disease, oncology, neurology, hematology, and pulmonary medicine were medical disciplines cited by at least 40 percent of respondents as having benefited greatly from AIDS/HIV research. Increased insights into mechanisms of dementia and multiple sclerosis, and improved understanding of the development of children's immune systems are among the contributions of AIDS/HIV research to advances in medical research cited by respondents. More than one-third of respondents felt that AIDS/HIV research had contributed substantially to advances in diagnostics, drug development, other therapeutics, and vaccine development.

In the areas of public health and health services research, OTA survey respondents indicated that AIDS/HIV research has led to improved epidemic-modeling techniques, has furthered the development of new methods for the conduct of clinical trials, has stimulated research on health behavior change, and has provided prototype programs for targeting health education to high-risk populations. Furthermore, AIDS/HIV research was cited as having stimulated research on community-based models of care, clarified routes and mechanisms of sexually transmitted disease, provided insights into the effectiveness of drug treatment programs, and improved our understanding of social stigma and prejudice.

2- *How Has Federal Research on HIV Disease Contributed to Other Fields?*

Nearly one-half of respondents indicated that Federal spending for AIDS/HIV research was about right and nearly one-third felt that spending was too low. A near equal proportion agreed as disagreed (48 vs. 44 percent) that too much of available research funding has been diverted to AIDS/HIV research from other fields. Not surprisingly, opinions about the level of Federal spending for AIDS/HIV research vary according to whether the respondent had received Federal funds, and whether those funds were for AIDS/HIV or non-AIDS/HIV research. As those not in receipt of any external funding (nearly one-half of OTA survey respondents) are more likely to be “unbiased” in their opinions regarding funding, their responses are of special interest. Over 80 percent of respondents without external support felt that AIDS/HIV funding is about right or too low, and while more than one-half did not

agree, nearly one-third agreed that too much research funding has been diverted to AIDS/HIV research from other areas.

In conclusion, results from the OTA survey indicate that, in the opinion of the scientific community, AIDS/HIV research has made many important contributions to advances in the biomedical and behavioral sciences. This finding is especially noteworthy given that substantial lead time is needed for advances to influence other fields. The dominant sentiment of survey respondents supports current or augmented Federal AIDS/HIV research spending levels. At the same time, opinion was divided on the question whether too much research funding has been diverted to AIDS/HIV research from other fields. The results raise for continued consideration the appropriate allocation of research funds among HIV, other targeted areas, and basic science.