



Public and Philanthropic Investments in Preventive HIV Vaccines and Microbicides: 2000 to 2005

Preliminary Report
May 2006

HIV Vaccines and Microbicides Resource Tracking Working Group¹

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Alliance for Microbicide Development (AMD)
International AIDS Vaccine Initiative (IAVI)
Joint United Nations Programme on HIV/AIDS (UNAIDS)

INTRODUCTION

More than twenty years since the start of the AIDS epidemic, over 14,000 people are infected each day with the HIV virus. Undoubtedly, more needs to be done to expand access to treatment and existing prevention methods – but there is also an urgent need to simultaneously develop additional methods to prevent HIV infection.

While significant research progress has been made, the development, licensing and widespread use of safe, effective HIV vaccines and microbicides are still a number of years away. However, the time to these important new products being developed and widely used could be reduced significantly with increased and more efficient research and development (R&D) spending, accompanied by greater and sustained political commitment and action.

This summary presents data on public sector investment in HIV vaccine and microbicide R&D between 2000 and 2005. These data have been collated to track levels of funding over time and to monitor progress in the implementation of the Declaration of Commitment on HIV/AIDS, adopted at the United Nations General Assembly Special Session (UNGASS) on HIV/AIDS in 2001. The second UNGASS global commitment and action indicator focuses specifically on the amount of public funds available for research and development of microbicides and for preventive HIV vaccines. This preliminary report has been prepared upon the occasion of the third UNGASS meeting, to be held in May of 2006.²

More information on HIV vaccine and microbicide investment is available at www.hivresourcetracking.org, including the reports “Tracking Funding for HIV Vaccine Research & Development: Estimates of Annual Investments and Expenditures, 2000 to 2005” and “Tracking Funding for Microbicide Research & Development: Estimates of Annual Investments, 2000 to 2005”. In August 2006, this working group will publish a final report on

¹ In 2002, UNAIDS established a Global Resource Tracking Consortium for AIDS composed of international experts. In October 2004, the HIV Vaccines and Microbicides Resource Tracking Working Group was formed, drawing on the members of the Consortium, to generate better information on investments in research and development for preventive HIV vaccines and microbicides.

² This report is preliminary because although figures for public sector investment in 2005 have been finalized, full-year figures for philanthropic and commercial investment are in the process of being finalized. Current figures for those sectors reflect commitments and disbursements as of April 2005. Final figures for philanthropic and commercial investment will be included in the full report on HIV vaccine and microbicide development to be published in August of 2006.

global investments in HIV vaccines and microbicides from 2000 to 2006, including full-year estimates of public and philanthropic investment levels in 2005, current commitments for 2006, and data on investments by pharmaceutical and biotechnology companies.

METHODS

In this study we used a broad definition of HIV vaccine and microbicide R&D, and have included information not only on product development efforts, but also on support for clinical trial preparations; community education; and advocacy and policy efforts directed at accelerating HIV vaccine and microbicide development and use. We did not, however, include research that was not directed primarily at HIV vaccines or microbicides but that may have benefits or links to these products (e.g., platform technologies).

Investment figures were based on estimates of the level of funds disbursed each year between 2000 and 2005 and were generated from the perspective of the funder. In other words, funds were allocated to the year in which they were disbursed irrespective of whether the funds were expended by the recipient in that year or in future years. All figures are reported here in current US dollars and have not been adjusted for inflation; funding information provided in other currencies was exchanged into US dollars using the appropriate IMF annual average exchange rate (available at www.imfstatistics.org).

Public sector data collection efforts focused at the national and international level (i.e., multilateral agencies, national governments, and the European Union); therefore, information on state- or provincial-level funding was not included in the estimates. Investment by the public sector was estimated by contacting each agency known to fund HIV vaccine and/or microbicide R&D and requesting data on funds disbursed each calendar year by grant or project. Data collected were reviewed against a common set of criteria for inclusion and cross-checked.

For the philanthropic sector, a list of organizations funding HIV vaccine and microbicide R&D was collated based on our previous estimation analyses, supplemented by a review of the field to identify new funders. Included in this category, for example, are not-for-profit organizations, non-governmental organizations, and corporate or individual donors. Data on funding levels were obtained directly from the funders and/or from recipient organizations, and reviewed against the project inclusion criteria, as done for public sector funding data.

RESULTS – HIV VACCINES

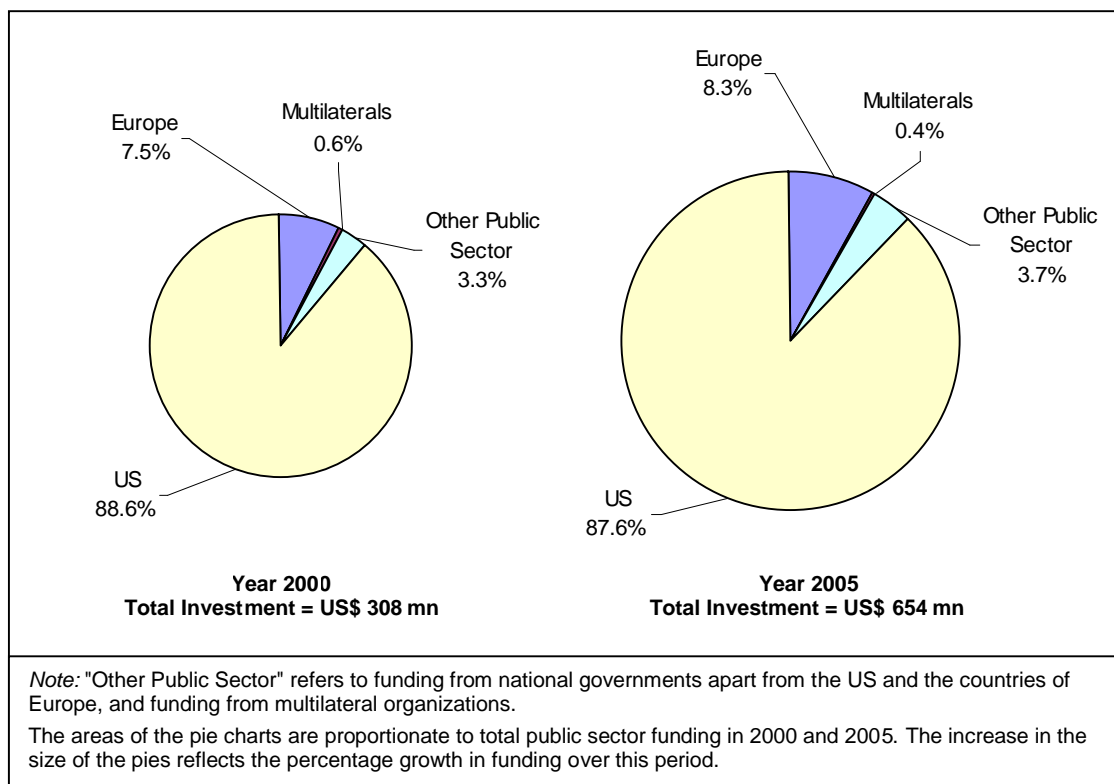
Over the last six years, funding for HIV vaccine R&D from the public sectors has more than doubled, rising from US\$ 308 million in 2000 to US\$ 654 million in 2005. In addition, the most recent data collected by the Working Group estimates that in the year 2004 an additional US\$54 million to US\$82 million was invested by the commercial sector. While significant, this total level of global investment falls far short of the US\$ 1.2 billion per year that the Global HIV Vaccine Enterprise estimates will be required annually to accelerate the search for a safe and effective vaccine.³

While public sector funding has grown each year since 2000, funding from philanthropic sources has varied considerably over the period studied – from a low of US\$ 7 million in 2001 to a high of US\$ 112 million in 2002. The variability observed in philanthropic funding reflects, in part, the choice of some donors to forward-fund a project, i.e., disburse funding in one year which is intended to be expended over a number of subsequent years.⁴

³ <http://www.hivvaccineenterprise.org/plan/financing.html>.

⁴ The majority of this \$112 million represents a \$105 million grant from the Bill and Melinda Gates Foundation in that year.

Figure 1. Public Sector Investment in HIV Vaccine R&D by Geographic Origin, 2000-2005



The breakdown of public sector funding by geographic origin of the donor between 2000 and 2005 is shown in Figure 1. The US public sector provides the majority of HIV vaccine funding, but over time their relative share has decreased very slightly. In 2000, the US accounted for 88.6% of total public sector funding; by 2005 this share had decreased to 87%. Over the same period, European-origin public funding grew from 7.5% to 8.3% of total public sector resources provided. Within the US, the main funder of HIV vaccine R&D continues to be the National Institutes of Health (NIH), which accounted for approximately 89% of US public sector funding in 2005, or 87% of global public sector investment.

RESULTS – MICROBICIDES

Over the last six years, non-commercial funding for microbicide R&D has more than doubled, rising from US\$ 65 million in 2000 to US\$ 139 million in 2005. And while this study did not estimate biopharmaceutical and biotechnology company investment for each year over the period, the most recent data collected by the Working Group estimates an additional US\$ 3 million to US\$6 million was invested by the commercial sector in 2004. While significant, this total level of global investment falls far short of the US\$ 280 million per year that the International Partnership for Microbicides and the Alliance for Microbicide Development estimate will be required over each of the next five years to accelerate the search for a safe and effective microbicide.⁵

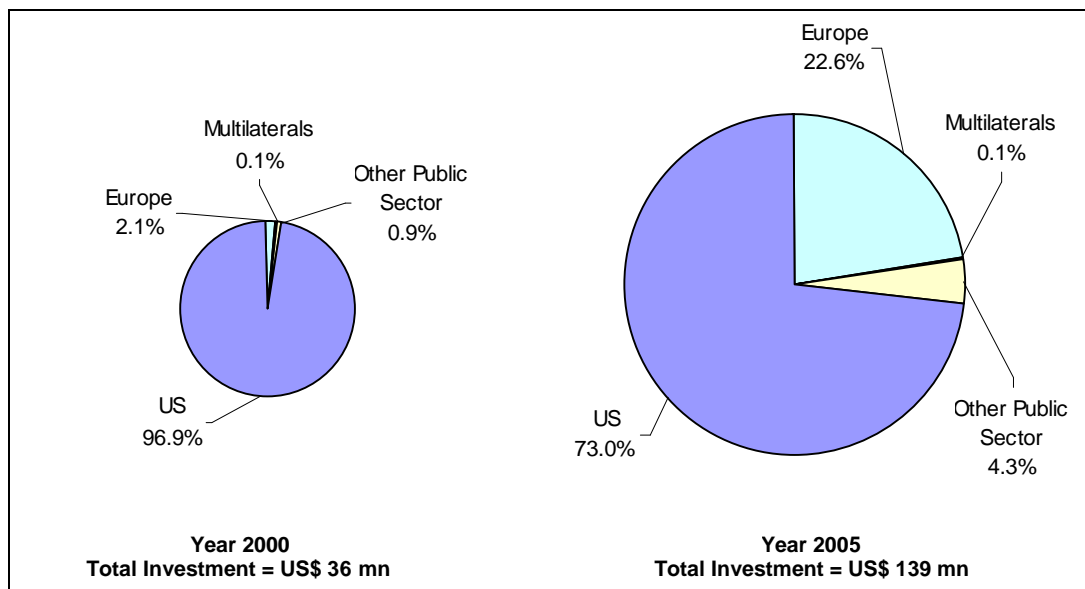
⁵ See "Microbicides: An Essential HIV Prevention Strategy for Achieving the Millennium Development Goals". International Partnership for Microbicides. September 2005.

Total investment by the public and philanthropic sectors in microbicide R&D increased more than two-fold between 2000 and 2004. In 2000, investment by these two sectors totaled about US\$ 65 million; by 2004, it had increased to an estimated US\$ 142 million

Public sector funding alone increased nearly four-fold, from about US\$ 36 in 2000 to almost US\$ 139 million in 2005. While public sector funding has grown each year since 2000, funding from philanthropic sources has varied considerably over the period studied – from a low of US\$ 3 million in 2001 to a high of US\$ 29 million in 2000. As observed with HIV vaccines, variability in philanthropic funding from year to year is in part attributable to forward-funding by donors.⁶

The breakdown of public sector funding by geographic origin of the donor for 2000 and 2005 is shown in Figure 2. The US accounted for around 97% of total funding from the public sector for microbicide R&D in 2000, but by 2005 accounted for only 73%, with Europe increasing its share of public sector funding from 2% to almost 23%. Within the US, the main funder of microbicide R&D continues to be the National Institutes of Health (NIH), which accounted for approximately 65% of US public sector funding in 2005 – and about 48% of global public sector funding.

Figure 2. Public Sector Investments in Microbicides, 2000-2005



DISCUSSION

This paper presents information on annual public sector investment in HIV vaccines and microbicide R&D for the period 2000 to 2005 generated through a collaborative project involving AMD, AVAC, IAVI and UNAIDS. This project has produced a considerable body of information on funding flows for both microbicide and preventive HIV vaccine R&D which are being used to monitor levels of effort and may be useful in identifying trends in investment, spending and research focus over time.

Over the six-year period 2000 to 2005, funding from the public sector for R&D efforts directed at developing HIV vaccines and microbicides increased significantly, and

⁶ The relatively high levels of investment in 2000 and 2002 reflect multi-year awards by the Bill & Melinda Gates Foundation to CONRAD and the Population Council that were disbursed in full in the years in which they were awarded. The expenditures of these funds by the recipient, however, were spread over several subsequent years.

preliminary data suggest that investment levels in 2006 will be higher than those in 2005. This increase in funding represents both greater contributions from existing public donors as well as a growth in the total number and geographical distribution of funders supporting HIV vaccines and microbicide R&D.

There are, nonetheless, a number of scientific challenges ahead. Ensuring that HIV vaccines and microbicides are developed in a timely fashion requires increased global collaboration and coordination, as well as political support.⁷ It will also require the investment of significantly more resources. Given the many uncertainties in developing these new technologies, it is impossible to say exactly how much money will be required to produce an effective microbicide. The targeted investment of significantly more resources, however, should increase the likelihood of success. The Coordinating Committee of the Global HIV/AIDS Vaccine Enterprise has estimated that an accelerated search for a safe and effective HIV vaccine would require about US\$ 1.2 bn a year, and an analysis by the International Partnership for Microbicides and the Alliance for Microbicide Development suggests that annual funding for microbicide R&D needs reach US\$ 280 million a year over the next five years, to ensure that key developmental tasks are carried out.⁸

The significant increases in funding for both technologies over the six-year period have coincided with a dramatic increase in the overall financial commitment to the HIV/AIDS field in general. And while the HIV Vaccines and Microbicides Resource Tracking Working Group has not collected data on overall financial commitments to HIV/AIDS, it does appear that funders have increased funding for the development of new technologies in addition to – not at the expense of – their commitments to expanding access to the prevention and treatment tools that are already available. The dramatic increase in global resources committed to the HIV/AIDS field is encouraging, and must be met with action to ensure a truly comprehensive response to the epidemic; one which accounts for treatment, care, and prevention needs today while working to develop the prevention tools of the future.

⁷ At their summit in Gleneagles (UK) the Group of Eight (G8) expressed support for “increasing direct investment and taking forward work on market incentives, as a complement to basic research, through such mechanisms as Public Private Partnerships and Advance Purchase Commitments to encourage the development of vaccines, microbicides and drugs for AIDS...” See <http://www.g8.gov.uk> for the full G8 summit communiqué.

⁸ African Microbicides Advocacy Group, Alliance for Microbicide Development, Global Campaign for Microbicides, International Partnership for Microbicides. (8 July 2005). “Global Health Leaders React to G8’s First-Ever Call for More Investment in Microbicides to Protect Women from HIV”. Press release.

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For more information on HIV vaccines, please contact the AIDS Vaccine Advocacy Coalition (avac@avac.org) or the International AIDS Vaccine Initiative (publicpolicy@iavi.org).

For more information on microbicides, please contact the Alliance for Microbicide Development (info@microbicide.org).

