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Jugend, Lebensperspektiven und HIV-Prävention

Join forces to advocate for a comprehensive and long-term agenda

An AIDS vaccine is possible

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"We're losing three million people a year. Treatment will slow, but not eliminate the carnage. There are 14,000 new infections daily. If we're five to ten years away from microbicides or vaccines, there's a desperate human toll to be faced between now and then. At least let the world rally to the prospect of bringing this cataclysm to an end sooner than later. And that means working on every front, on emergency footing simultaneously: care, prevention, treatment, microbicides, and vaccines." Stephen Lewis, UN Special Envoy on HIV/AIDS (1)

Why does the world need an AIDS vaccine? - The global scourge of AIDS calls for immediate action to save lives through significant expansion and strengthening of HIV prevention programs and access to AIDS treatment. Yet even if treatment reaches millions more, the steady toll of around 14.000 new infections every day places the goal of universal access increasingly out of reach. Much wider implementation of existing prevention strategies could control the epidemic to a certain degree. However, even if fully realized, a variety of challenges suggest that the impact of current responses will be limited and extremely costly to sustain.

In September 2000, 189 governments from around the world signed the United Nations Millennium Declaration and committed to significantly reducing extreme poverty globally by 2015. Although each Millennium Development Goal is tracked separately, it is clear that AIDS represents a major threat to achieving most of these goals. Likewise, in 2001, the UNGASS Declaration of Commitment on HIV/AIDS recognized that only support for a comprehensive and sustained response to the epidemic can begin to reverse the unprecedented global impact of HIV and AIDS.

Immediate actions must therefore be balanced with long-term efforts to develop far more effective tools to better meet the needs of people at risk of transmitting or contracting HIV. Widespread availability and use of safe and effective AIDS vaccines would dramatically increase the impact of HIV prevention efforts and help stem the HIV/AIDS epidemic. Recent work by

some of the top AIDS epidemiologists and modelers suggests that even a modestly effective AIDS vaccine could decrease the number of new infections over a decade by one-third, saving tens of millions of lives.

Challenges for HIV vaccine research

The potential dividends of AIDS vaccine research and development (R&D) are enormous, extending well beyond a single individual, country or generation. Despite this, the commercial returns on an AIDS vaccine are uncertain, particularly one designed for developing countries. Consequently, large pharmaceutical and biotechnology companies have generally invested little capital in this field. This must change and opportunities to encourage greater private sector contributions, such as incentives to make investments less risky, are needed. Still, in all cases, public sector support will be fundamental to the successful development of new technologies and to their future introduction and use, particularly in developing countries.

Today more than 30 preventive AIDS vaccine candidates are in early stages of human clinical trials in approximately two dozen countries around the world. While this is encouraging, even greater research efforts, including work on improved vaccine candidates and new approaches, are necessary to make an AIDS vaccine a reality in the shortest possible timeframe.

IAVI: Working Together

The International AIDS Vaccine Initiative (IAVI) is a global not-for-profit organization committed to accelerating the development of AIDS vaccines suitable for use in the developing world. Founded in 1996, IAVI and its wide network of public and private sector partners in both industrialized and developing countries research and develop vaccine candidates. Together with its civil society and governmental partners, IAVI also advocates for a vaccine to be a global priority and works to assure that a future vaccine will be accessible to all who need it.

Currently, IAVI is conducting AIDS vaccine trials in Kenya, Rwanda, South Africa, Uganda, Zambia, India and the United States, while collaborating with communities to build awareness about AIDS vaccine research and advocating for increased political support. IAVI also works to ensure the attainment of the highest ethical standards in AIDS vaccine research and clinical trials. To support its effort, IAVI has regional offices in India, East Africa and Europe, and is opening another in southern Africa.

IAVI manages a portfolio of research and development projects, prioritizing vaccine concepts and candidates based on the latest scientific findings. IAVI is the world's only organization focused solely on the search for an AIDS vaccine and has already invested more than US\$200 million towards this effort.

Over the past six years, IAVI's work with R&D partners has resulted in the development of six vaccine candidates from the concept stage to human clinical trials, and it is currently preparing other candidates for testing. In the past 14 months alone the partnerships have supported the

development and placement of two novel candidate vaccines in international trials. IAVI has also entered into a multi-partner, multi-country trial of a prime-boost combination of two vaccines. The trials currently involve small numbers of healthy volunteers who demonstrate full understanding of the study.

From the outset, IAVI has been committed to working with scientists in Africa and Asia to study how an AIDS vaccine can be safe and effective. In Africa and India, capacity for small-scale vaccine trials is being established by building clinics and laboratories and training staff. IAVI is also conducting a range of studies to determine AIDS incidence and prevalence, which will be valuable information for all AIDS research in these regions.

Community involvement and attention to ethical issues are also central to IAVI's work. In vaccine trial areas, IAVI works to educate community members about the research process, and Community Advisory Boards provide input into the organization and conduct of IAVI-sponsored research.

IAVI has done pioneering work, in partnership with diverse civil society and other stakeholders, in highlighting the importance of ethical considerations in trials, informed consent, gender issues, and the highest quality clinical and laboratory practices in clinical research. It also supports local partners advocating for the development of national AIDS vaccine plans to provide vaccine research and development guidelines. Some examples of how this is done are outlined in the description of our recent work in Uganda that follows.

IAVI actively promotes AIDS vaccine awareness among political, community, financial, and scientific leaders. One new initiative is bringing together leaders from developing countries to advocate with a stronger voice for a vaccine. Another set of activities involves partnerships with other organizations to analyze how public policy could help accelerate vaccine research and development, as well as speed the approval, manufacture, and use of a future vaccine. Through its IAVI Report and VAX newsletters, IAVI also tracks the latest news in the vaccine field, and produces an AIDS Vaccine Blueprint that offers comprehensive updates on progress in the field.

Focus on Uganda

IAVI partners with the Uganda Virus Research Institute (UVRI) under an agreement with the Government of Uganda signed in August 2001. A Phase I trial of two candidate vaccines began in Entebbe in February 2003, enrolling 50 healthy volunteers. The two vaccines were developed in a partnership between IAVI and research teams at the University of Oxford and the University of Nairobi. In February 2006, IAVI, UVRI, and Targeted Genetics Corporation announced the start of a Phase II trial to test the safety and immunogenicity of tgAAC09, another preventive HIV/AIDS vaccine candidate.

In the past few years many activities to prepare for trials and for an eventual vaccine have been sponsored by the UVRI-IAVI HIV Vaccine Program, such as:

- Gender workshops and training on ethical issues related to AIDS vaccine trials
- Community Advisory Boards to mobilize and involve communities
- Strengthening of regulatory process
- Access to healthcare services and HIV counseling and testing

For example, in 2005, workshops were held to gather information about the barriers to the participation of women in AIDS vaccine trials and to begin to discuss some of the potential challenges in introducing an AIDS vaccine to women. The UVRI-IAVI program partnered with a local NGO, the Uganda Women's Network (UWONET) to conduct two consultative workshops: the first with local leaders and civil society institutions and the second with NGOs and government institutions concerned with women's issues, HIV/AIDS and human rights. The meetings resulted in gender sensitization workshops in trial communities that provide women directly with information about HIV/AIDS, existing prevention and AIDS vaccines.

IAVI has also supported an effort involving the National Foundation for Research and Development to review and update Uganda's "Guidelines for Conducting Research on Human Subjects" based on current international standards. This effort has resulted in stronger and more comprehensive guidelines for the entire research community in Uganda.

IAVI's collaboration with the Uganda Research Institute has been very successful in demonstrating the capacity of developing country staff and institutions to implement high-quality clinical research. The most significant research-related event of 2005 was the UVRI-IAVI program's award of international certification in Good Clinical and Laboratory Practice (GCLP), a system to ensure the quality of data generated from laboratory handling of clinical trial samples. This accomplishment is the outcome of investments in upgrading clinics and labs as well as training local medical personnel. Uganda was the first clinical research site in sub-Saharan Africa (besides South Africa) to achieve such honors.

A powerful means to reduce transmission rates

In addition to existing prevention technologies, an AIDS vaccine would provide a powerful means to significantly reduce HIV transmission rates, thus providing valuable support for both treatment and care. Moreover, IAVI is proving that the active involvement of developing countries in the search for an AIDS vaccine can not only speed its delivery in countries where the pandemic is taking the largest toll, but can contribute to shorter-term goals such as improved ethical standards, increased AIDS awareness and access to VCT, the empowerment of communities and the strengthening of clinical research.

The vaccine field, however, still faces significant challenges, including increasing global awareness and adequate financing for R&D, developing human resource capacity and infrastructure to conduct large-scale clinical trials, generating a richer pipeline of products so that strong low-cost candidates can be identified and developed, and giving particular attention

to gender equity when it comes to access and use. Only by joining forces to advocate for a comprehensive and long-term agenda, including prevention technologies such as vaccines, can we hope to one day see the end of the HIV/AIDS pandemic.

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Note

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