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Dr David Ho delivered a keynote lecture on 18 June 2010 entitled "The AIDS Epidemic and Prospects for Control" and concluded that the ultimate control of the global epidemic will depend on preventive measures. The full extract is reproduced below:

The AIDS virus, human immunodeficiency virus (HIV) has already spread extensively, infecting about 70 million individuals worldwide. Of those about 25 million have died. Yet, the epidemic continues to worsen in developing countries, particularly in Africa and, more recently, in Asia. Each day approximately 7,000 individuals become newly infected by HIV. In certain regions of Africa, it is not unusual to find about a third of the adult population affected by the virus, and AIDS can account for up to 90% of the death in young adults. The social and economic impact of the epidemic is simply devastating for the severely



affected countries. HIV infection is now spreading the fastest in Asia. With the large populations in India, Southeast Asia and China, a critical battle line with HIV must be drawn in this region.

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The full extract of Dr David Ho's keynote lecture on 18 June 2010 entitled "The AIDS Epidemic and Prospects for Control".

Fortunately, the news on HIV is not all gloom and doom. Much has been learned about the virus, including its genome, structure, life cycle and essential proteins and enzymes. In fact, more is now known about HIV than just about any other virus. Scientists have also unraveled a great deal of what HIV is doing in the context of an infected person. Over the past decade, a picture of a highly dynamic viral replication in vivo has been firmly established. Despite a prolonged period required for HIV to cause the destruction of the human immune system, the virus is never dormant. Instead, its replication is continuous and at a high level. The dynamic viral replication is coupled to a constant destruction of the immune system, which in turn requires constant regeneration. AIDS ensues when the regenerative process falls behind.

The new knowledge gained over the past decade has also allowed scientists in the field to make important advances in HIV therapy. Basic understandings of the virus have resulted in the development of many drugs that target four principal steps of the HIV replication cycle. Both are absolutely essential for the continuous replication of HIV. The understanding of the pathogenesis of HIV has led to the development of treatment strategies employing a combination of these drugs. These drug combinations can now consistently control HIV growth well enough that the virus is no longer detectable in the blood. Although not a cure, these therapies can stop the growth of the virus, halt the destruction of the immune system, and improve the clinical status of the treated patients. In fact these therapies have caused the mortality rate of AIDS in the US and Europe to go down considerably since 1996. Millions of patient-years have been saved by combination antiretroviral therapy in the US alone.

Sadly, the new therapies are largely unavailable in developing countries where the epidemic is most devastating. Thus, the ultimate control of the global epidemic will depend on preventive measures. Education and campaigns to prevent the further spread of infection must be carried out. In addition, it is likely that the eventual control of the pandemic will depend on the development of an efficacious vaccine to protect susceptible individuals from HIV infection. Considerable amount of the basic science research effort on AIDS is now focused on the development of such a vaccine. It will require a concerted effort among the scientists for the years to come, and hopefully successful vaccinations will be possible within the next decade.



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More Photos for

ACA 20th Anniversary Seminar cum Reunion













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