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NEW STUDIES SHOW MOMENTUM IN HIV CURE RESEARCH, DRIVEN BY NEW TOOLS AND APPROACHES

Vancouver, British Columbia, Canada (21 July 2015) – New research into cure strategies for HIV infection, generally considered unachievable just a few years ago, was discussed in an official press briefing today at the 8th IAS Conference on HIV Pathogenesis, Treatment and Prevention (IAS 2015) in Vancouver.

“Increasingly sophisticated insights into the virus, its progression and the body’s response to HIV are helping to narrow and concentrate the focus of the HIV cure research agenda,” said Nobel Laureate and former IAS President **Françoise Barré-Sinoussi** of the Pasteur Institute. “Today, we now know to focus our efforts on developing better tools to measure HIV infection, boosting immune responses to HIV and understanding what individual cases of HIV remission can teach us about more broadly applicable strategies for the long-term control of HIV infection.”

Throughout the IAS 2015 conference programme, researchers have noted that similar scientific pathways may bring us to both a vaccine and a way to achieve long-term remission of HIV. A number of studies have begun to produce mutually reinforcing discoveries.

Studies featured in the briefing include:

Case of a perinatally HIV-infected adolescent in long-term remission many years after ART discontinuation: Researchers reported the case of a perinatally HIV-infected adolescent who shows unprecedented virological remission more than 12 years after discontinuing antiretroviral therapy. The child was born to a mother with a high viral load. Following discontinuation of prophylactic treatment, the child was found to be HIV-infected and had a very high viral load. She was treated with a four-drug ART regimen and her infection was well controlled until approximately age 6, when her family took her off therapy. Her HIV-RNA has remained <50 copies/ml through 18 years of age except for one increase (515 copies/ml) and her CD4+ count has remained stable throughout. After 12 years of control off therapy, this individual’s HIV-RNA remains below 4 copies/ml. **Asier Saez-Cirion** of the Pasteur Institute presented this case as the first evidence that long-term HIV remission is possible in a perinatally infected child who received early treatment. While these data are compelling, the field continues to look for ways to translate individual cases of long-term remission into research that is applicable to a broader population.

Abstract: HIV-1 virological remission for more than 11 years after the interruption of early initiated antiretroviral therapy in a perinatally-infected child

Session: Persistently Seeking Virus (Room 118-120; Monday 20 July, 11:00 – 12:30)

First-time findings on the potential role of gene therapy in the search for a cure: Little has been known about whether the approach of gene editing in stem cells would be feasible in large animal models. **Christopher Peterson** of the Fred Hutchinson Cancer Research Center explained how he and his team deployed Zinc Finger Nuclease genome editing techniques to

edit the CCR5 “Trojan horse” receptor that HIV uses to infect the immune system’s vital CD4 cells. The ground-breaking study is the first successful long-term multilineage engraftment of Zinc Finger Nuclease-edited, CCR5-deleted hematopoietic stem cells in a non-human primate transplantation model. This model enables the evaluation of novel therapeutic approaches not only in the context of acute HIV exposure, but also in the clinically relevant setting of pre-existing latent HIV infection.

Abstract: Zinc finger nuclease gene editing for functional cure in a nonhuman primate model of HIV/AIDS

Session: Hammer and Tickle: Targeting the Virus (Room 211-214, Tuesday 21 July, 14:30 – 16:00)

Promise of broadly neutralizing antibodies in developing both a vaccine and a cure for HIV: John Mascola of the U.S. National Institutes of Health provided an overview of his latest research on broadly neutralizing antibodies. In his study, the HIV-1 monoclonal antibody was administered to eight HIV-1 infected subjects with detectable plasma viremia, and plasma viral load was followed for 90 days. After a single antibody infusion, plasma viral load decreased by approximately 10 to 50 fold in six of eight subjects, with maximal effects seen between one and two weeks after infusion. The two subjects with minimal response to the antibody infusion had circulating virus that was resistant to the VRC01 antibody. This study provides evidence that an HIV-1 neutralizing antibody can lower plasma viremia and that the effect may be associated with pre-existing viral sensitivity to the antibody.

Session: Injectable Options and Preventable Confusion: An Update and Interactive Discussion on the Pipeline of Antibodies, Long-acting ARVs and Vaccines (Room 121-122, Sunday 19 July, 14:45-16:45)

The International AIDS Society (IAS) launched its *Towards an HIV Cure* initiative at the International AIDS Conference in Washington, DC in 2012. The initiative facilitates global efforts to accelerate scientific research towards a cure for HIV and advocates for increased investment in HIV cure research. The annual *Towards an HIV Cure* symposium, held 18-19 July in the lead-up to IAS 2015, attracted more than 300 participants worldwide, and provided a unique setting to showcase the latest research in HIV cure and create a fertile ground for dialogue with the broader community.

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About IAS

Founded in 1988, the International AIDS Society (IAS) is the world’s largest association of HIV professionals, with members from more than 180 countries. IAS members work on all fronts of the global response to AIDS and include researchers, clinicians, policy and programme planners, and public health and community practitioners.

About IAS 2015

The 8th IAS Conference on HIV Pathogenesis, Treatment and Prevention (19-22 July, Vancouver) is the leading scientific meeting on HIV. IAS 2015 brings together a broad cross section of more than 6,000 HIV professionals from around the world, with a focus on moving science into practice.

IAS 2015: Join the Conversation

Get the latest conference updates and share your thoughts and ideas through the IAS 2015 Social Media channels.

- We are tweeting – [@IAS_conference](#) and [@iasociety](#) – and hope many of you will tweet along with us, using **#IAS2015** to keep the conversation going.
- Like IAS 2015 on [Facebook](#) – and stay in touch with the latest conference updates and developments.
- Check us out on Instagram to see photos as they are happening! <https://instagram.com/iasociety/>
- Tell us why you're following IAS 2015 and what matters most to you. Join the IAS Conference on HIV Pathogenesis, Treatment and Prevention group on LinkedIn. You are welcome to start new discussions and add your comments to existing threads.

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