Research priorities for an HIV cure: the science in context: a community perspective

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Disclosure

No personal financial conflict of interest
Impossible dream...

Activist focus on a cure.

38m adults & children.
6m not yet diagnosed.
28m on ART, 1.5m new cases.
0.7m people died.
Limited ART and monitoring.

Global need…

>85% in global south.

~50% are women.

65% from key populations: sex workers; people who are trans; gay and bisexual men; people using drugs etc.

Issues of poverty, housing, healthcare.

Link to aid: $30b a year. “I don’t want to worry about who is the next US President” – Moses Supercharger.

Profiles for a cure...

Safe = low risk.
Affordable in all settings.
Effective for all populations.
Permanent – no reinfection.
Easy to deliver and use.

Profiles for a cure...

Minimal dosing... long duration: maybe every three years?
No risk to partners + easy monitoring for rebound.
Timeline: 10 years – in stages LA-ART > bNAbs > 1\textsuperscript{st}/2\textsuperscript{nd}/3\textsuperscript{rd} cures > single shot.

IAS 2021 roadmap


• Summary for medical journalists (English, French, Portuguese, Spanish).


1. IAS, Nature Medicine (1 Dec 2021), 2. i-Base.info
Community highlights

• Real people who have been cured. *Each one brings hope.*
• Advances in understanding the *reservoir* – in context of ART.
• That researchers are working collaboratively and internationally.
Current cures and/or remission

- Loreen Willenberg, Esperanza patient.
- Visconti cohort (control without ART).
- IAS 2022: City of Hope, Barcelona pt.

Photos: Timothy Ray Brown, Adam Castillejo, Loreen Willenberg.
Diverse reservoir

Smaller reservoir - but not small.

10^{10} viral DNA after years of ART – even if 99% might be defective.

Community asks.1

- **Broaden awareness**: to 40 million people living with HIV and engagement beyond advocates and CABs.
- **Inclusive research**: balance for race / sex / gender / age / country – and in entry criteria.
- **Include social research** – in clinical studies.

Include women and all ages

- Including women in cure research is essential and achievable. …on principle AND supported by biological differences in viral load and reservoir dynamics (including hormone exposure and immune differences.

- Expand age criteria to include children and much older adults.

Ref: Eileen Scully, "Ready for a Cure: Where are the Women and Children?, July 2022.
Community asks.2

- **Ethics** - disconnect between participants and researchers: “I might be cured”.
- **Global research** – involve and fund research site in different countries and all regions.
- **Use community-preferred language**.
- **Extend follow-up on reported cases**.

Ref: AVAC: Community preferred language for an HIV cure.
Timeline...

An HIV cure, like a vaccine, is always 10 years away...

But, even being cautious, the 10 years now feels closer than it has ever been …
Summary

• Broader community inclusion and participation in research and consent.
• Expand sites to fund countries globally.
• Care over language and reporting.
• Including cure as part of treatment literacy.
• Optimism and hope – for treatment, a vaccine and a cure.
Thanks

Investigators and funders for cure-related research.

Participants in cure-related studies.

And for comments on slides: Lynda Dee, Richard Jefferys, Cissy Kityo, Udom Likhitwonnawut, Michael Louella, Moses Supercharger, Jeff Taylor and community members of the IAS writing group.
Back-up slides
Future cure…?

Increasing focus on cure research.
International networks.
Either
(i) Eradication (cure) or
(ii) Remission (where viral load stays undetectable without need for ART).