

# SCIENTIFIC COMPLEXITY AND ETHICAL UNCERTAINTIES: THE IMPORTANCE OF COMMUNITY ENGAGEMENT IN HIV CURE RESEARCH

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## Introduction

The past decade has seen a major expansion of the research effort to develop a cure for HIV infection. The U.S. National Institutes of Health (NIH), the world's largest biomedical research funder, has identified the pursuit of a cure as one of five primary priorities for HIV.<sup>1</sup> Total global financial support increased substantially in the period 2012–2017, from \$88 million to \$288.8 million.<sup>2</sup> In 2014, TAG launched an online listing of cure-related clinical research drawn from registries (primarily ClinicalTrials.gov). The list initially contained less than 50 entries; it currently includes 98 clinical trials and 34 observational studies that are ongoing.<sup>3</sup> Over 7,000 people are expected to enroll in these studies.

As with other areas of HIV research, engagement of the community of people living with HIV and their advocates is vital for ensuring that the conduct of cure-related studies is ethical, appropriate, and responsive to community priorities. Dissemination of clear, understandable information is also essential for imbuing participants with knowledge about what they are getting into, so that their consent is truly informed.

## Seeds of Hope

The seed for the blossoming of HIV cure research was Timothy Ray Brown, the first person considered cured of HIV. Brown's case was first described in 2008 in a little-noticed poster presentation at the Conference on Retroviruses and Opportunistic Infections (CROI). Notably, one of the only people to draw attention to the report at the time was community activist Martin Delaney, founder of Project Inform.<sup>4</sup>

Brown was cured of HIV after receiving stem cell transplants as part of a series of treatments for a life-threatening cancer diagnosis.<sup>5</sup> He has now been off antiretroviral therapy (ART) for 12 years without any sign of a return of the virus.

Recent presentations at the March 2019 CROI indicate that two additional people may have joined Brown,<sup>6,7</sup> but follow-up is far shorter: One of the individuals has been off ART without evidence of HIV rebound for 18 months, while the other is at about four months.

## Translating to a Wider Community

These additional cases of possible cures are encouraging, but the method used to achieve this outcome cannot be used in most people with HIV, who do not require stem cell transplants for cancer (the high mortality risk associated with transplantation precludes its use outside of this setting).

In the absence of any known safe alternatives for obtaining similarly robust depletion of HIV from the body, investigators are evaluating a broad array of interventions. In some cases, the aim is to ascertain if the immune system can be manipulated to control HIV replication in the absence of ART, as opposed to eliminating the virus entirely.

The early, exploratory nature of the HIV cure research field raises difficult issues for study participation and community engagement.

## Understanding Risks and Benefits

The current early stage of the research means that there is little to no prospect of any health benefits to participants, and risks can be significant. Sources of risk include side effects of experimental interventions, invasive study procedures (e.g., tissue sampling), and the conduct of analytical treatment interruptions (ATIs—a temporary stoppage of ART). In the case of ATIs, the potential risk applies to not only study participants but also sexual partners, because HIV viral load rebound is



IAS scientific conferences and the recently initiated Advocacy-for-Cure Academy, a three-day training and development course for people in resource-limited settings. The first was held in May 2018 in Uganda, and the second is taking place at the end of April 2019 in Botswana. Moses “Supercharger” Nsubuga, a Ugandan activist involved in the initiation of these academies, has set up one of the first advocacy coalitions on the African continent, the Cure Research Advocacy Group (CRAG).

The National Association of People with HIV Australia has long been involved in cure research advocacy and collaborates closely with researchers at the Doherty Institute on the community-oriented website [hivcure.com.au](http://hivcure.com.au).

Many other community-based organizations with a history of working to increase research literacy, including (but not limited to) AVAC, the European AIDS Treatment Group, HIV i-Base, NAM, Project Inform, TAG, and the Well Project, have expanded their coverage to include the cure field. The Well Project’s Women’s Research Initiative on HIV/AIDS is addressing the issue of the involvement of women by hosting discussions and publishing an issue brief on the topic.<sup>16</sup>

## Conclusion

The dauntingly complex science underpinning the search for an HIV cure makes it challenging to develop accessible strategies for educating and engaging community stakeholders. But many individuals, organizations, and advisory bodies have begun to address the need. Compared to the longer history with HIV treatment and prevention research, we’re in relatively early days, and there is room for advocates in these different silos to share information and learn from each other.

As HIV cure research expands globally, the need for international information-sharing mechanisms will grow. The listing of community engagement mechanisms and activities in this article is far from exhaustive, and this speaks to an information gap: It could be beneficial to have a central resource listing from which to work as advocates strive to expand and improve the extant landscape.

## Endnotes

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