

# Don't believe the hype – we are a long way from an HIV cure

December 16 2014, by Timothy P Lahey

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HIV has infected [over seventy million people](#) but only one of them has been cured: Timothy Ray Brown.

An HIV-positive resident of Berlin, Germany, Brown developed relapsed leukemia in 2006. To treat the leukemia, he underwent special [bone marrow transplants](#) that also rendered him genetically resistant to HIV. Brown's HIV medications were stopped in 2007 and several years later he remains free of HIV.

Brown is historically unique but in recent years scientific journals and the popular press alike have published multiple claims of HIV cures.

In 2012, French scientists announced a "[functional cure](#)" of HIV when 14 patients who were treated within months of initial HIV infection remained clinically stable after treatment stopped. Similarly mild cases of HIV disease had been reported even in untreated patients, and unlike Brown the French patients still have detectable HIV in their bodies. Thus the French researchers likened a fairly common piece of good clinical fortune to a historically important cure, and added little more than confusion in the process.

The same year Boston researchers [announced](#) that two HIV patients with cancer had undergone standard bone marrow transplants on HIV therapy, and afterward had unusually low levels of HIV in their blood.

Preeminent scientists said it was "[conceivable and maybe even likely](#)" the Boston patients' HIV was gone, HIV medications were stopped, the

virus [rebounded](#), and several months after it started the Boston celebration came to an end.

In March 2013, doctors [announced](#) that an HIV-exposed baby from Mississippi who was treated within hours of exposure was considered cured as once-detectable HIV could no longer be found off of therapy. Scientists speculated HIV never gained a foothold in vulnerable immune cells. In July 2014 it was reported that the Mississippi baby [relapsed](#), most likely because the virus had been lurking all along in those self-same cells.

Echoing the Boston experience, this year two Australian patients were called "HIV-free" and ["cleared" of HIV](#) after very low levels of the virus were detected in the blood after stem cell treatments. Both men remain on HIV therapy "as a precaution" so there is no definitive proof of anything more than highly effective therapy and an intense hunger to claim something approximating a cure.

None of these patients, with the exception of Brown, was cured of HIV. Yet in each case a cure has been claimed or the words used to describe the story were so similar to "cure" as to be indistinguishable to the untrained reader.

## **Why?**

Desperation, for starters. HIV has killed over [39 million people](#) so far and every year more than a million more are infected. There is no more urgent public health priority than the discovery of an HIV cure. As a result, when new and exciting HIV findings emerge scientists and journalists can abandon their usual caution and succumb to the temptation to use words like "cure" loosely.

Even coolheaded researchers are keenly aware that generating buzz can

be the difference between generous funding or the closure of their labs. Salesmanship can devolve into exaggeration as the press conference begins. Journalists and editors, too, are tempted to generate more clicks and sell more papers by freeing the results they report from the scientists' humdrum caveats.

Desperation and salesmanship aside, even the brightest and most cautious scientists and journalists can get fooled. Many honestly believed, for instance, that the Mississippi baby was free of HIV.

Whatever their motivations, premature intimations of a cure can be dangerous.

The credibility of the HIV research effort is undermined when retractions follow each exciting new announcement of a cure (or whichever phrase like "cleared" is that day's facsimile). The confusion and skepticism created by repeated retractions can dampen research subjects' enthusiasm to enroll in studies and even weaken research funding.

The intimations of a cure can also lead to complacency about HIV. Reducing HIV risk behaviors is always challenging, and it is harder when the potency of HIV treatments or the near-availability of an HIV cure make HIV infection seem like, as one newly-diagnosed man told me, "no big deal." Modern treatments for HIV do keep millions alive for decades and we are closer to a cure than ever before but nonetheless HIV is most definitely a very big deal.

To preserve our scientific credibility, and support our prevention efforts, we should put the word "cure" on a shelf and let it gather a little dust. Someday, when we finally find a cure, a real-life, honest to goodness, checked and double-checked [cure](#), then we can dust off the "C" word and let Timothy Ray Brown know at long last he can have some

company in the world's most elite club.

Until then, we should remember Margaret Heckler. As the Secretary of Health and Human Services, she helped announce Robert Gallo's discovery of the HIV virus in 1984. Famously she concluded by [predicting](#) that we would develop an HIV vaccine within two years. Thirty years later our patients still don't have an HIV vaccine, or a [cure](#). The next time the lights go up and the microphones click on, let us remember that the way we celebrate progress today cannot forget the unfinished work we take up first thing tomorrow.

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