

Round 2: Science

He made beer that's also a vaccine. Now controversy is brewing

A scientist's unconventional project illustrates many challenges in developing new vaccines



Chris Buck takes a sip of a vaccine beer he brewed in his kitchen using yeast he engineered in a tiny lab in his dining room.

Farivar Hamzeyi

By [Tina Hesman Saey](#)

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Chris Buck stands barefoot in his kitchen holding a glass bottle of unfiltered Lithuanian farmhouse ale. He swirls the bottle gently to stir up a fingerbreadth blanket of yeast and pours the turbulent beer into a glass mug.

Buck raises the mug and sips. "Cloudy beer. Delightful!"

He has just consumed what may be the world's first vaccine delivered in a beer. It could be the first small sip toward making vaccines more palatable and accessible to people around the world. Or it could fuel concerns about the safety and effectiveness of vaccines. Or the idea may go nowhere. No matter the outcome, the story of Buck's unconventional approach illustrates the legal, ethical, moral, scientific and social challenges involved in developing potentially lifesaving vaccines.

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Buck isn't just a home brewer dabbling in drug-making. He is a virologist at the National Cancer Institute in Bethesda, Md., where he studies polyomaviruses, which have been linked to various cancers and to serious health problems for people with weakened immune systems. He discovered four of the 13 polyomaviruses known to infect humans.

The vaccine beer experiment grew out of research Buck and colleagues have been doing to develop a traditional vaccine against polyomavirus. But Buck's experimental sips of vaccine beer are unsanctioned by his employer. A research ethics committee at the National Institutes of Health told Buck he couldn't experiment on himself by drinking the beer.

Buck says the committee has the right to determine what he can and can't do at work but can't govern what he does in his private life. So today he is Chef Gusteau, the founder and sole employee of [Gusteau Research Corporation](#), a nonprofit organization Buck established so he could make and drink his vaccine beer as a private citizen. His company's name was inspired by the chef in the film *Ratatouille*, Auguste Gusteau, whose motto is "Anyone can cook."

Buck's body made [antibodies against several types of the virus](#) after drinking the beer and he suffered no ill effects, he and his brother Andrew Buck reported December 17 at the data sharing platform Zenodo.org, along with colleagues from NIH and Vilnius University in Lithuania. Andrew and other family members have also consumed the beer with no ill effects, he says. The Buck brothers posted a [method for making vaccine beer](#) December 17 at Zenodo.org. Chris Buck announced both publications in his blog [Viruses Must Die](#) on the online publishing platform Substack, but neither has been peer-reviewed by other scientists.

A second ethics committee at the NIH objected to Buck posting the manuscripts to the preprint server bioRxiv.org because of the self-experiment. Buck wrote a rebuttal to the committee's comments but was loathe to wait for its blessing before sharing the data. "The bureaucracy is inhibiting the science, and that's unacceptable to me," he says. "One week of people dying from not knowing about this is not trivial."

Buck's unconventional approach has also sparked concerns among other experts about the safety and efficacy of the largely untested vaccine beer. While he has promising data in mice that the vaccine works, he has so far reported antibody results in humans from his own sips of the brew. Normally, [vaccines are tested in much larger groups of people](#) to see how well they work and whether they trigger any unanticipated side effects. This is especially important for polyomavirus vaccines, because one of the desired uses is to protect people who are about to get organ transplants. The immune-suppressing drugs these patients must take can leave them vulnerable to harm from polyomaviruses.

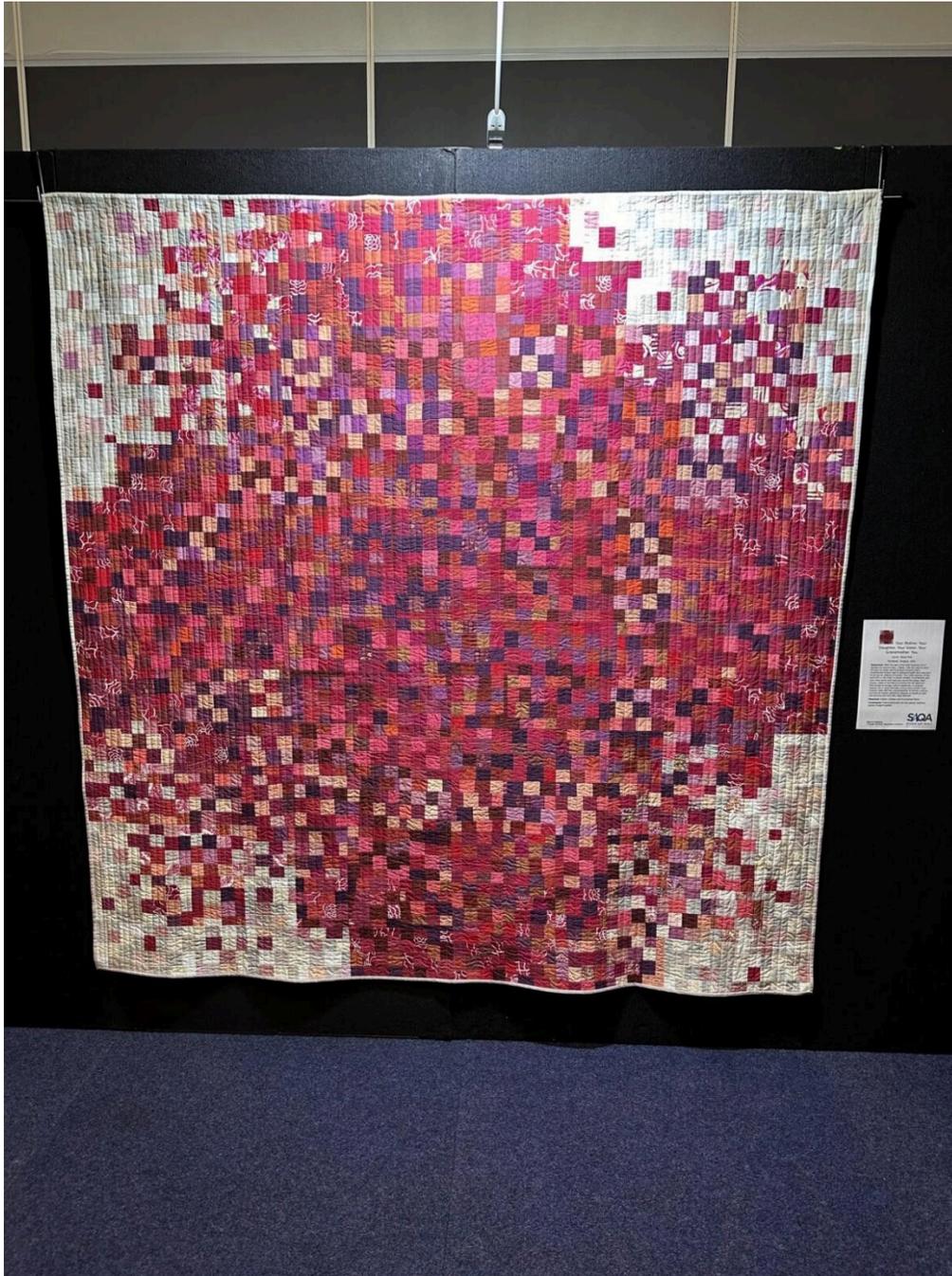
Michael Imperiale, a virologist and emeritus professor at the University of Michigan Medical School in Ann Arbor, first saw Buck present his idea at a scientific conference in Italy in June. The beer approach disturbed him. "We can't draw conclusions based on testing this on two people," he says, referring to Buck and his brother. It's also not clear which possible side effects Buck was monitoring for. Vaccines for vulnerable transplant patients should go through rigorous safety and efficacy testing, he says. "I raised a concern with him that I didn't think it was a good idea to be sidestepping that process."

Other critics warn that Buck's unconventional approach could fuel antivaccine sentiments. Arthur Caplan, who until recently headed medical ethics at the New York University Grossman School of Medicine, is skeptical that a vaccine beer will ever make it beyond Buck's kitchen.

"This is maybe the worst imaginable time to roll out something that you put on a Substack about how to get vaccinated," he says. Many people won't be interested because of [antivaccine rhetoric](#). Beer companies may fear that having a vaccine beer on the market could sully the integrity of their brands. And Buck faces potential backlash from "a [national administration that is entirely hostile to vaccines](#)," Caplan says. "This is not the place for do-it-yourself."

But the project does have supporters who say it could instead calm vaccine fears by allowing everyday people to control the process. Other researchers are on the fence, believing that an oral vaccine against polyomavirus is a good idea but questioning whether Buck is going about introducing such a vaccine correctly.

Round 3:



Artist statement from Laura Shaw, Quilter:

Started in the spring of 2022, after the leak of the draft Supreme Court decision to overturn *Roe v. Wade*, I felt the need to work through my anger and frustration knowing that this fundamental human right to essential health care was soon to be lost for millions of women.

When seen from a distance, the more than 3,000 squares of this quilt form a red cross that swirls and fractures around the edges, eroding just as reproductive rights are eroding across America. Viewed up close, each square, made up of red fabrics that cover the full spectrum from purple to orange, solid to patterned, is uniquely shaped, a visual reminder of how each woman must uniquely cope with the unpredictability of having a uterus—from miscarriage to infertility, failed birth control to traumatic birth and delivery—and how all women collectively depend on and benefit from access to safe, legal reproductive care and safe, legal abortion.

As I cut and stitched up each block, I thought about how this disastrous decision, rendered by five men and one woman, will impact us all—women most directly, our families by extension.

The red cross is an internationally recognized symbol of protection and care offered to all in times of conflict and disaster. I can think of no better symbol to represent this unfolding calamity for American women, for those they love, and for those who love them.

Round 4:

January 31, 2026

Inside the record crowd that powered an Unrivaled night in Philadelphia

By [Rob Knox](#)

Temple's Diane Richardson: 'This shows that Philly is a women's sports town. The support is here'

PHILADELPHIA — [Natasha Cloud](#) showed love the Philly way: up close, personal and real. She hugged kids, traded high-fives, lifted them up high and posed for photos. She signed posters, shirts and caps, transforming a few pregame minutes into something that would last far longer.

Along the sideline, [Sabrina Ionescu](#) met Cloud with a long embrace. Cameras clicked as Ionescu, dressed in a green sweater, waited patiently while a young girl sprinted back to her family to grab a phone. The selfie, when it came, made the night feel complete before the ball was tipped for [Unrivaled](#)'s first-ever game in Philadelphia.

Following shootaround, Cloud reflected on Philadelphia's basketball culture and the history that shaped the moment. She understood the opportunity existed because of those who came before her, and she did not take it lightly. While attending Philadelphia 76ers games growing up, Cloud had quietly dreamed of one day playing in the same building as her idol, [Allen Iverson](#).

"We've had so many greats come before us that I'm standing on the shoulders of now," Cloud told reporters after shootaround. "All of us are standing on the shoulders of others. When I walked onto the court today, I looked up at the rafters and had this distinct memory of coming here with my school, sitting in the suite watching the Sixers play. How crazy is it that I'm about to play professionally in my hometown for the first time? That's a blessing I'm really grateful for."

From the moment Cloud was greeted with an ear-splitting roar during team introductions, Xfinity Mobile Arena crackled with electricity. It never let up. The building throbbed during Philadelphia-native hip-hop star Lay Bankz's between-game performance, then rose again when [Marina Mabrey](#) scored the final basket of her Unrivaled single-game record 47-point night at 11:03 p.m. Eastern time.

The thunderous ovation sealed what the record crowd of 21,490 already knew: This inaugural tour stop was historic, and Philly is indeed Unrivaled. Throughout the evening,

the buzz carried a homecoming feel, especially for Cloud and [Kahleah Copper](#), a native of North Philadelphia.

“I think it was awesome to see them come out and support us like that,” Mabrey, a New Jersey native, told reporters postgame. “I don’t know what I expected, but I didn’t realize it was going to be so much hype around it and so much support. ... We’re going to look back and say that we were the first to play in Philly when Unrivaled traveled.”

They also have the distinction of being part of a night like no other.

Unrivaled set the all-time attendance record for a regular-season professional women’s basketball game, according to the league. It surpassed the previous mark of 20,711 for a game between the Indiana Fever and the Washington Mystics on Sept. 19, 2024, at Capital One Arena. The game also set the attendance record for an event of any kind at Xfinity Mobile Arena, eclipsing 21,424 for a Backstreet Boys concert on Sept. 29, 1999.

Philadelphia, Pa., on Jan. 30, 2026. May fans brought signs with them. (Photo credit: Rob Knox | The IX Basketball)

That the Phantom beat the Breeze, 71-68, and the Lunar Owls defeated Rose BC, 85-75, won’t necessarily be remembered years from now. This night belonged to the fans, who enthusiastically showed up and showed out.

“This is lit,” said Morgan Parish, a Philadelphia native and Emmy Award-winning Fox 29 news anchor sitting along the baseline. “I mean, it just shows you how big the WNBA has become. It’s sold out. Everybody’s in here. The energy is good. ... You walk in and it’s just good vibes.

“I never imagined a night like this in Philly for women’s basketball. To be at something like this and see how big it is, I’m just so grateful to be here.”

Philadelphia royalty from South Carolina head coach [Dawn Staley](#) to former NBA guard [Jameer Nelson](#) to former Little League World Series baseball star Mo’ne Davis sat close to the court. Staley sat in the front row, eating popcorn and drinking water.

For Davis, who spoke to The IX Basketball on the concourse after talking with one of her middle school teachers, this night was a long time coming. Davis reflected on the significance of WNBA players’ one and only stop in Philadelphia. Growing up, she never saw a women’s basketball team in the city, so this moment was deeply personal and symbolic of women’s sports’ rising popularity.

“You get to see just the love that the city has for their sports teams and for the WNBA team that’s going to come here [in 2030 as the league’s 18th franchise],” Davis said.

“There are so many people here, and I just know that I’m going to have a great time. ...

“I watched all these players growing up. I was inspired to be just like them, seeing everything that they’ve done off the court as well, just to help the game grow. I’m really excited to be here.”

Celebrity actresses Leslie Jones and Wanda Sykes posed for plenty of selfies. Jones and Good Morning America anchor Robin Roberts shared a heartfelt hug between games. Philadelphia 76er forward [Andre Drummond](#) and guard [Kyle Lowry](#), along with Philadelphia Eagles defensive end Jaylx Hunt, also took in the action courtside.

With the City of Brotherly Love and Sisterly Affection hosting its first professional women’s basketball game since the Philadelphia Rage played in the now-defunct ABL in 1998, the arena felt like a revival, a family reunion and a never-ending house party all at once. The energy moved through the building like a current, vibrating from seat to seat and row to row.

A crowd of 21,490 set the all-time mark for attendance at a regular-season professional women’s basketball game at Unrivaled’s tour stop at Xfinity Mobile Arena in Philadelphia, Pa., on Jan. 30, 2026. (Photo credit: Rob Knox | The IX Basketball)

“This was an amazing environment,” [Aaliyah Edwards](#) told reporters postgame. “Shoutout to Unrivaled for putting this beautiful event together and giving these players, coaches and all women’s basketball fans the opportunity to be a part of where women’s basketball is going and moving in a great direction.”

The hunger and excitement of the crowd were on full display during media timeouts. The in-house DJ blared tracks from Philadelphia artists Eve, Meek Mill and Freeway; Sephora merchandise parachuted from the ceiling; and long merchandise lines snaked throughout the concourse.

Clustered together, fans waited patiently — some for close to 30 minutes — to buy hoodies, jerseys and T-shirts from merchandise stands. One fan was sent to another vendor in search of a [Paige Bueckers](#) jersey and found one.

The line became a symbol of cultural momentum in real time: a crowd willing to stand, wait and commit just to wear the message and be a part of a monumental evening. It was proof that Unrivaled and women’s basketball in Philadelphia are here to stay.

“This night has been amazing so far,” Jade Boone, a content creator and editor at NFL Films, told The IX Basketball. “Just seeing the energy, the crowd and how many people really care about women’s basketball, it’s truly unmatched. If people say they’re not watching women’s sports, they’re lying. Visibility matters.”

This night mattered.

Just ask Temple University head coach Diane Richardson. Her team flew to New Orleans later that night for a Saturday evening game, rearranging its travel plans to attend Unrivaled. Tulane University adjusted the game's start time to make it possible. The Owls enjoyed the event from a suite before hustling to the airport.

"When Unrivaled announced the date, we were like, 'That's got to change,'" Richardson said courtside pregame. "We asked our opponent for flexibility and told them how special this was for us because we've literally been boots on the ground for Unrivaled. This shows that Philly is a women's sports town. The support is here. When the WNBA gets here, these seats should be full. It meant a lot for our program to experience this. Some of them couldn't even sleep Thursday night."

That detail was confirmed by junior guard [Kaylah Turner](#), who [leads the American Athletic Conference in scoring](#) at 17.4 points per game. For Turner and her teammates, the night carried a deeper purpose.

"It's a little surreal being here with so many stars around," Turner said. "I hope I'll play in this league one day. We're fans of these players. [Rickeya Jackson](#) is a popular one for our team. We were watching closely — how they communicate, how much they talk on defense. We took notes on things we can bring back to our own team."

The IX Soccer is here!

In case you missed it, The IX Sports introduced a new women's soccer-specific vertical called [The IX Soccer!](#)

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[Read The IX Soccer](#)

That sense of inspiration stretched throughout the building, reaching well beyond the college players. It followed fans into the concourse and lingered long after the final buzzer, especially for those who once imagined moments like this from afar.

Among them was Chanelle Harris, the head girls' basketball coach at Penn Wood High School outside of Philadelphia. Harris played at Lincoln University from 2007 to 2010. When she played in high school, the WNBA was less than 10 years old.

"The vibes are indescribable," Harris told The IX Basketball on the concourse.

"Everywhere you turn, you see a WNBA jersey. You see someone wearing an 'Everyone supports women's basketball' shirt or a UConn jersey. You couldn't have told me growing up that women's basketball would be here. It gives me chills seeing all of this."

Harris paused, then smiled.

"I feel like a kid watching all my favorite players right now," she said. "I wish I were in high school again so I could have all the opportunities these young girls have today. We didn't have this growing up. It's just amazing to be here."

Philadelphia was the first of what Unrivaled president Alex Bazzell believes will be a blueprint for the league moving forward. He told assembled media covering each team's shootaround earlier in the afternoon, "We will be doing more of these in the future."

For Cloud, the night was bigger and brighter than the dream she'd carried into this building as a child. This time, she wasn't looking up at the rafters. She was responsible for creating something lasting, alongside a record crowd that would remember the night long after it ended.

"The city of Philadelphia came out and showed love," Rose BC head coach Nola Henry told reporters postgame. "It was sold out and a crazy environment. Just what women's basketball deserves."