

# He Jiankui's Germline Editing Ethics Article Retracted by The CRISPR Journal

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Twelve weeks after publishing a perspective on the ethics of gene editing by He Jiankui, PhD, the scientist reportedly responsible for the first gene-edited humans, the editors of *The CRISPR Journal* have decided to retract the article, *GEN* can exclusively report.

In late November, the shocking news of the genetically edited twin girls broke out on the eve of the second international Human Genome Editing Summit in Hong Kong. The creation of germline-edited humans was unprecedented and not something that the scientific community had prepared for.

Most of the attention focused on the actions of 34-year-old He, formerly a professor at the Southern University of Science and Technology (SUSTech) in Shenzhen. He's decision to ignore advice from prominent members of the scientific community and serious questions over the technical and ethical procedures prompted an immediate investigation by Chinese authorities while he was held under house arrest, culminating in his dismissal by SUSTech last month.

But the story also spotlighted the decision of *The CRISPR Journal*, a multidisciplinary journal launched one year ago by Mary Ann Liebert Inc. (which also publishes *GEM*), to publish an ethical commentary by He and colleagues. The journal's chief editor is Rodolphe Barrangou, PhD, distinguished professor of food science at North Carolina State University.

On Monday, November 26, 2018, the journal published online a perspective article first-authored by He, entitled "Draft Ethical Principles for Therapeutic Assisted Reproductive Technologies."

In the article, He and colleagues outlined five general principles to be followed when performing human gene editing, summarized as follows: mercy for families in need, only for serious disease never vanity, respect a child's autonomy, genes do not define you, and everyone deserves freedom from genetic disease.

The publication of He's "draft guidelines" at a time when the world was scrambling for details on the reported live births raised eyebrows. Journalist Carl Zimmer tweeted, "Puzzling... *The CRISPR Journal* has just published "Draft Ethical Principles for Therapeutic Assisted Reproductive Technologies" by none other than He Jiankui. Did he follow his own principles?" Author Michael Specter cited them in his November 27 article for *The New Yorker*. Specter noted that "these are admirable guidelines" before adding, "if only He had spent more time reading them over, he might have skipped this stunt, which will do little to advance human health and perhaps open the way to harming it."

"We decided to publish this commentary after peer review in expedited fashion because we felt it added an unusual and interesting viewpoint from a Chinese research team, in contrast to the dozens of official guidelines and reports grappling with germline editing issued over the past few years," said Kevin Davies, PhD, executive editor of *The CRISPR Journal*. "Once accepted, we wanted it to be available in time for the Hong Kong Summit. But like virtually everyone else in the scientific community, we had absolutely no idea the authors were actively conducting clinical studies or had engineered and implanted human embryos."

### **Conflicts of interest**

In the original commentary, the authors did not disclose any conflicts of interest in the obligatory author disclosure statement. This omission was flagged by several scientists including bioethicist Alta Charo, JD, who voiced her disappointment during the Hong Kong Summit that the perspective "did not include information about his own experiments nor about his financial involvements."

*The CRISPR Journal* contacted He by email shortly after his appearance in Hong Kong to request a full and transparent updated disclosure statement. Through multiple email exchanges over the following weeks, while he was being detained with his family in a SUSTech guest

house, He provided the journal's editors with information about funding sources, a clinical trial registration, and a patent application. But this did not fully satisfy chief editor Rodolphe Barrangou.

"It turns out they have conflicts of interests, with a plural "s" attached to it," said Barrangou, many of which are "quite substantial." Not only was there ongoing involvement in the controversial clinical work but also the authors' financial conflict of interests in multiple companies, and the funding that was used to carry out the work. Despite several rounds of email exchanges with He, Barrangou was not certain he had a full picture of all the pertinent conflicts.

Lack of full disclosure by authors is a prevalent problem in science publications. Last year, oncologist Jose Baselga, MD, resigned his post as chief medical officer at the Memorial Sloan Kettering Cancer Center in New York following a *New York Times/ProPublica* report that he had failed to disclose relevant corporate funding and compensation in multiple peer-reviewed articles. (Baselga recently joined AstraZeneca as head of Research & Development, Oncology.)

But the He case went beyond financial ties. "The authors intentionally hid from us the fact that they were conducting clinical research on germline editing, and that babies had been born," said Barrangou. "We could not let that breach of trust stand."

*GEN* did not receive a response from He when contacted for a comment on the retraction.

## **Decision time**

Barrangou weighed his decision for some time, taking advice from senior members of the journal's editorial board. On the one hand, the perspective article provided some historical value for the scientific community on a dubious scientific chapter. "It is a mesmerizing gaze into the psyche of the authors before the news came out and how misguided they were," Barrangou told *GEN*. He added that what the piece captured is how the authors had no big picture assessment of the consequences of their announcement and an inability to ponder any potential backlash.

However, Barrangou noted that the historical value does not counterbalance all the other issues. "The fact that their clinical work is contravening their own criteria is just unacceptable." Not only does it not make sense, but Barrangou concluded it renders the perspective unpublishable—because the authors did not even believe in their own opinions.

"If the authors cannot stand by their own manuscript, how can we keep that in the scientific record as a journal?" Barrangou asked. "It is just unacceptable. You can't have it both ways. It is important for the journal and the editorial board and the community to act when concerning issues arise and unacceptable work is done."

Specter told *GEN* he was not surprised by news of the retraction. “It’s hard to take an essay on ethics seriously when it is written by someone who proceeded to violate nearly every rule of scientific research.”

Barrangou and *The CRISPR Journal* editors had no prior knowledge about He’s clinical work. (STAT recently reported that He submitted a manuscript to *Nature* on the germline edited babies co-authored by his PhD supervisor, Rice University professor Michael Deem PhD, but it was rejected.) Barrangou said he was aware of a 2010 paper He co-authored with Deem and suspected he might even have cited that paper in his own publications.

The ethics manuscript was submitted to the journal on November 5, 2018. The editors sought expedited review of He’s manuscript and another ethics commentary submitted around the same time, from Eric Juengst, PhD, and colleagues at the University of North Carolina. After the authors made several revisions to the article, the manuscript was accepted on November 19 and scheduled for publication on Monday, November 26. By then, the world had learned of He’s work on gene editing humans. The official retraction notice was posted on *The CRISPR Journal’s* website on Thursday, February 21.

Beyond the retraction, questions remain regarding how He could publish a set of ethical guidelines while concurrently engaging in work that actively dismissed them. How He could overstep the line of ethical behavior that he himself drew for all to see is something that the newly announced World Health Organization ethics committee and the broader scientific community will be left grappling with for some time.