Researchers retract paper that suggested Chinese CRISPR twins might die early

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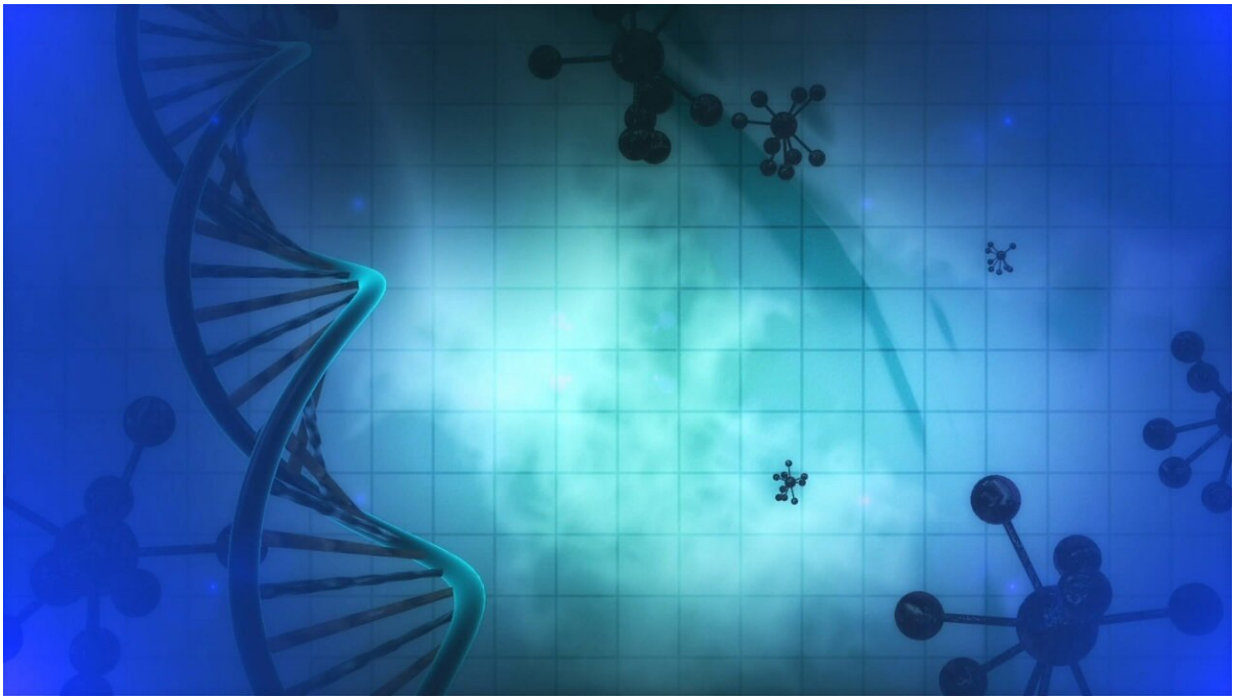

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A pair of researchers from the University of California has retracted a paper they had published in the journal *Nature Medicine* in which they claimed to have found evidence that the Chinese CRISPR twins might die early. In their retraction, Xinzhu Wei and Rasmus Nielsen report that the reason for the retraction was genotyping bias in UK Biobank data that they used to conduct their research.

Last year, a team of researchers in China announced that they had used the CRISPR gene-editing technique to disable the CCR5 gene (the result is known as delta-32, found naturally in some people) in twin babies who were described as "healthy" when they were born. The team disabled the gene in the twins as part of research toward improving resistance to HIV. The news made headlines, with critics denouncing the use of gene editing on human embryos.

The news also led other research efforts to determine if disabling the CCR5 gene in humans might lead to previously unknown side effects. One of those efforts was carried out by Wei and Nielsen—their study involved filtering data from the U.K. Biobank. In so doing, they found evidence that they claimed showed that people with dual copies of delta-32 were slightly more likely to die before reaching the age of 76 than the rest of the population. They also reported finding that the database had fewer people with dual copies of delta-32 than there should be based on evolutionary theory.

The paper by Wei and Nielsen, which was published just four months ago, attracted immediate attention from people both in and outside of the field. Other researchers began searching the U.K. Biobank to see if they could replicate what Wei and Nielsen had found, but were unable to do so. Another team at Harvard Medical School found a discrepancy in the way dual copies of delta-32 were counted by Wei and Nielsen—a discrepancy that had led to undercounting many people in the U.K. Biobank with dual copies of delta-32. Wei and Nielsen acknowledge their false result in their retraction, though they continue to refer to it as a genotyping error in the database. They also admit there were tests they could have conducted to verify their results, but neglected to do.

More information: Xinzhu Wei et al. CCR5-Δ32 is deleterious in the homozygous state in humans, *Nature Medicine* (2019). DOI: 10.1038/s41591-019-0459-6