An international group of 11 organizations with genetics expertise has issued a policy statement on germline genome editing in humans, which recommends against genome editing that culminates in human pregnancy; supports publicly funded, in vitro research into its potential clinical applications; and outlines scientific and societal steps necessary before implementation of such clinical applications is considered.

Published August 3 in *The American Journal of Human Genetics*, the statement was jointly authored by the American Society of Human Genetics (ASHG), the Association of Genetic Nurses and Counsellors, the Canadian Association of Genetic Counsellors, the International Genetic Epidemiology Society, and the National Society of Genetic Counselors. It was also endorsed by the American Society for Reproductive Medicine, the Asia Pacific Society of Human Genetics, the British Society for Genetic Medicine, the Human Genetics Society of Australasia, the Professional Society of Genetic Counselors in Asia, and the Southern African Society for Human Genetics.

“While germline genome editing could theoretically be used to prevent a child being born with a genetic disease, its potential use also raises a multitude of scientific, ethical, and policy questions. These questions cannot all be answered by scientists alone, but also need to be debated by society,” said Derek T. Scholes, PhD, ASHG Director of Science Policy. After considering these issues and the current state of the science in germline genome editing, the statement authors agreed that:

- At this time, it is inappropriate to perform germline gene editing that culminates in human pregnancy, and
- There is currently no reason to prohibit in vitro (outside of a living organism) germline genome editing research, with appropriate oversight and consent, or to prohibit public
funding for such research.

Further, they agreed that before any future clinical application of germline genome editing takes place, there should be:

- A compelling medical rationale to use this approach
- An evidence base to support its clinical use
- An ethical justification, and
- A transparent and public process to solicit and incorporate stakeholder input

"As basic science research into genome editing progresses in the coming years, we urge stakeholders to have these important ethical and social discussions in tandem," said Professor Ormond.


Provided by American Society of Human Genetics

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