

## **Germ-line editing: A time for reason, not emotion**

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Edward Lanphier, Fyodor Urnov and colleagues, warn of the dangerous of heritable mutations and call on scientists not to modify human embryos, even in research (Lanphier, E. et al. *Nature* 519, 410–411 (2015)). The reasoning used to justify this moratorium is seriously flawed.

The authors state that germline editing will *have unpredictable effects on future generations*, and that *such research could be exploited for non-therapeutic modifications*. However, many technologies, including reproductive technologies like IVF, have unpredictable effects on future generations when they are introduced. Similarly many technologies, like lasik eye surgery, can be used non-therapeutically. Neither of these points alone justifies restrictions on new technologies.

While the author's concerns about the safety risks of germline editing are valid, there is already a moratorium on unsafe research thanks to existing research ethics protocols. Pointing to safety risks with germline editing explains why such research may not get approved, it does not justify why this technology should be treated differently to others.

A key fact noticeably absent from the commentary is that many other human activities cause germline modifications such as smoking tobacco and delaying paternity. Why are the risks associated with germline modifications so great that they justify restrictions on potentially life-saving research, but do not justify restrictions on parental age, or the lifestyle habits of potential fathers?

Germline editing is a revolutionary technology, which potentially offers the next generation an enormous range of benefits. It is important that bad arguments, empty rhetoric and personal interests do not cloud rational thinking and deny the next generation the enormous benefits on offer. It is a time for reason, not emotion.