



The American Association of Anatomists is deeply concerned about scientific and ethical issues raised by recent reports of nuclear genome manipulation and mitochondrial genome mixing in human embryos, performed in China, and the UK and United States respectively. Procedures that genetically modify human embryos are outlawed in several countries, but the latter approach has been approved in the UK and is under consideration for clinical therapies by the United States Food and Drug Administration. These experimental manipulations of the inherited content of human embryos can result in germline alterations that could be transmitted to subsequent generations. Scientific investigation in model organisms indicates that such manipulations could carry a high level of risk for undesired and unforeseen consequences and the possibility of negative multi-generational repercussions in humans. Moreover, the biomedical and bioethical communities have not been afforded adequate time to fully process and address the serious ethical concerns raised.

Therefore, the American Association of Anatomists urges the National Institutes of Health, Food and Drug Administration, and other federal science funding bodies in the United States and in other countries, to issue a moratorium of all manipulations of human germline and embryos involving genome editing, nuclear transfer, or remixing mitochondria and nuclear genomes. Our organization encourages scientific progress and the investigation of these genome-engineering technologies in model organisms. We acknowledge the ethical concerns and responsibilities that come with this area of research in humans and support voluntary moratoriums pending development of safeguards and limitations at many levels. Until these safeguards are in place, our journals and meeting programs may decline publishing or presenting results emanating from such research.

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