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RESEARCH ARTICLE

CRISPR/Cas9-mediated gene editing in human tripronuclear zygotes

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ABSTRACT

pressing need to further improve the fidelity and specificity of the CRISPR/Cas9 platform, a prerequisite for

International committee convened by the U.S. National Academy of Sciences (NAS) and the National Academy of Medicine (2017)

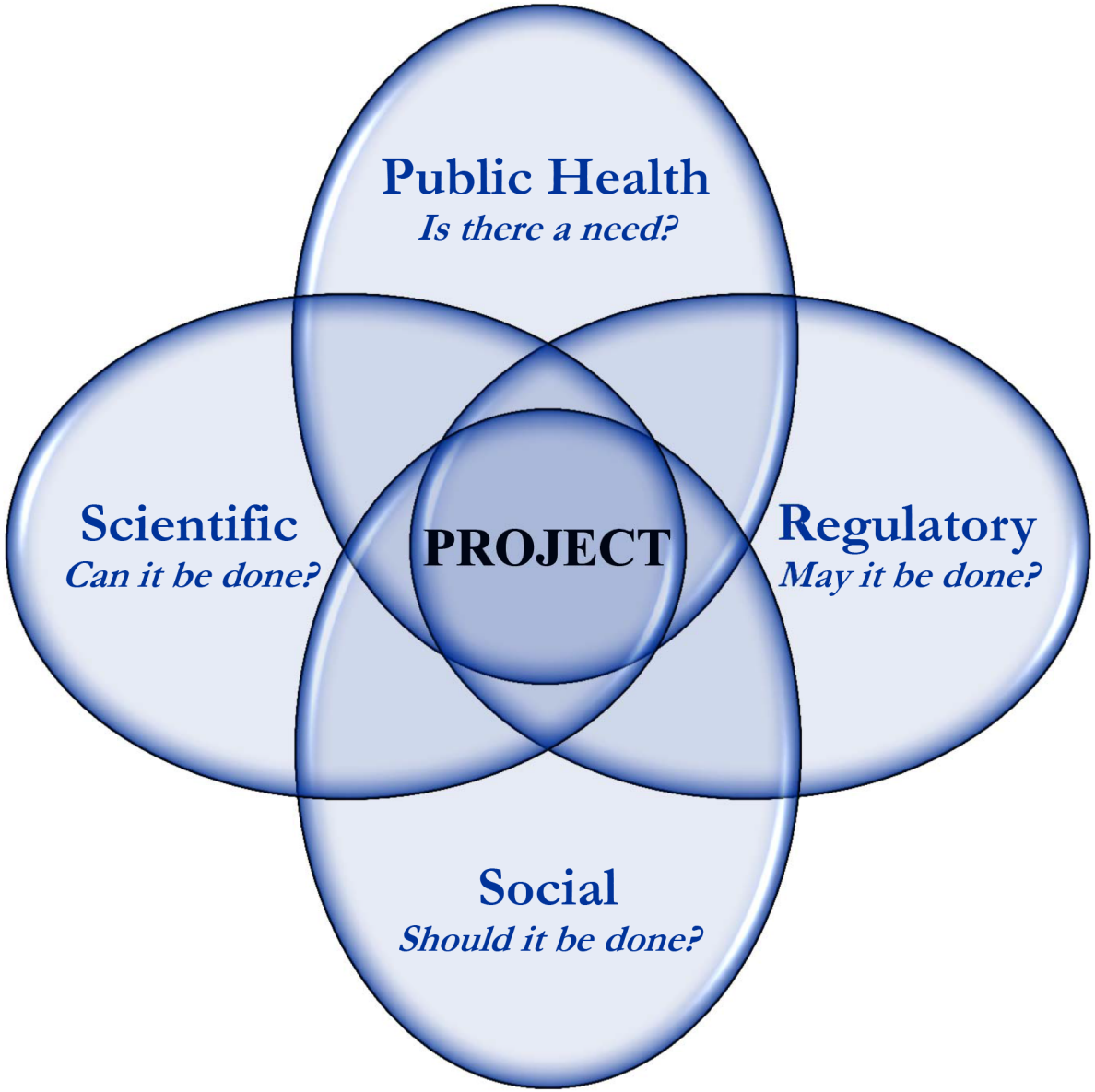
- “might be permitted, but only following much more research” and “only for compelling reasons and under strict oversight” when it is“really the last reasonable option”
- “closed the door to the vast majority of germline applications and left it open for a very small, well-defined subset”

`http://www.sciencemag.org/news/2017/02/us-panel-gives-yellow-light-human-embryo-editing`

International Summit on Human Gene Editing (2015)

- Most scientists agree that making gene-altered children is irresponsible until safety issues are addressed and there is broad societal consensus on the proposed applications
- Intensive research is needed, including manipulation of these types of human cells in the laboratory, and should proceed subject to appropriate legal and ethical oversight
- Treating adults with gene editing, to treat diseases like sickle-cell anemia, should proceed in existing regulatory frameworks

- Emmanuelle Charpentier, co-discoverer: would be very happy to see clinical trials to treat human disorders
- censure by academic authorities: Phillip Campbell of *Nature* said they have rejected several papers involving editing human embryos, either because they were poorly done or did not meet local ethics rules
- NIH funding for research using gene-editing technologies in human embryos is banned (2015).
  `https://www.nih.gov/about-nih/who-we-are/nih-director/statements/statement-nih-funding-research-using-gene-editi`


Public Health
Is there a need?
Scientific
Can it be done?
PROJECT
Regulatory
May it be done?
Social
Should it be done?