## In Retrospect: Summit on Human Gene Editing, Washington 12/2015



## The opportunities and limits of genome editing

- The new techniques allow efficient, precisely targeted genetic alterations in all living cells and promise high potential for gaining knowledge.
- Substantial research is required prior to safe and responsible clinical use.
- The German Embryo Protection Act strictly prohibits "the use of an embryo for any purpose other than inducing a pregnancy." This limits the range of human genome editing research that can be conducted in Germany.



September 2015

www.leopoldina.org/ en/publications

## Ethical and legal assessment of genome editing in research on human cells (03/2017)



- Genome editing research on human embryos and gametes should be pursued in Germany to gain basic knowledge on early embryonic development, which can be a prerequisite for the treatment of genetic disorders.
- Application of heritable human genome editing for reproductive purposes should not be permitted until potential risks of unintended adverse consequences have been thoroughly assessed.
- Normative evaluation of the risks, unintended outcomes and benefits can only be achieved through biological and pre-clinical research to obtain evidence-based reliable scientific knowledge.
- Taking the legislation and moral objections into account a compromise for German scientists would be the use of surplus IVF embryos for research.
- This option, however, can only be realized in practice if the German Embryo Protection Act becomes amended.
- Ethical and social concerns e.g. prevention, enhancement, access to treatment, social justice, governance are waiting for further discourses.



www.leopoldina.org/en/publications