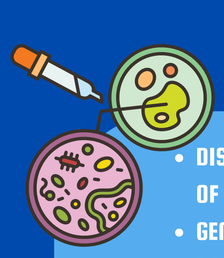
CRISPR-CAS9

Desirable Fiction or Unwanted Reality ?

WHAT IS THE BIOLOGICAL, ECONOMIC, AND LEGAL STATE OF CRISPR-CAS9 IN GENE EDITING IN HUMANS AT THE MOMENT, AND HOW DO DIFFERENT DEMOGRAPHICS WANT THE TECHNOLOGY TO BE IMPLEMENTED?



- DISCOVERED:IMMUNE SYSTEM OF PROKARYOTES
- GENETIC ENGINEERING: CAS9 IS PAIRED WITH A SINGLE GUIDE RNA TO PRECISELY TARGET AND CUT GENE SEQUENCES
- CRISPR BABIES

- INNOVATION
- BIO-TECH INVESTMENTS
- REDUCTION OF LONG-TERM HEALTHCARE COST
- UNEQUAL DISTRIBUTION
- HIGH DEVELOPMENT COST

- NO INTERNATIONAL CONSENSUS
- RESTRICTIVE APPROACH
- BIOTECH DIRECTIVE
- OVIDEO CONVENTION
- CALL FOR REGULATION

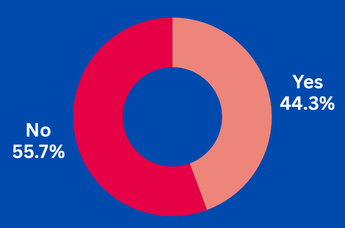
WOULD YOU USE CRISPR-Cas9 ?

1. For a nonheritable treatment on yourself (lung cancer)
2. For a heritable treatment on your child (Huntington's)
3. For an enhancing intervention on your child (improved vision)
4. For an aesthetic intervention on your child (eye colour)

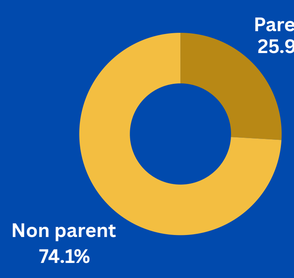
Main Hypothesis:
Parents will respond differently than non-parents in conditions where their child would be directly or indirectly affected.

212 RESPONSES:

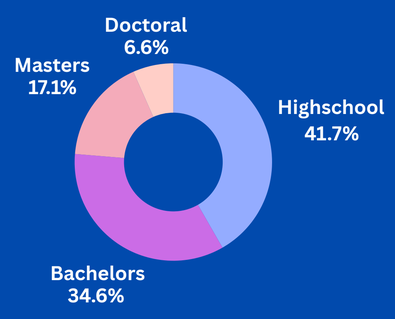
PERSONAL LINK WITH A HERITABLE DISEASE



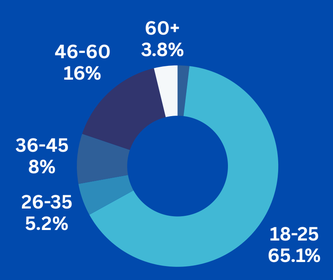
PARENT



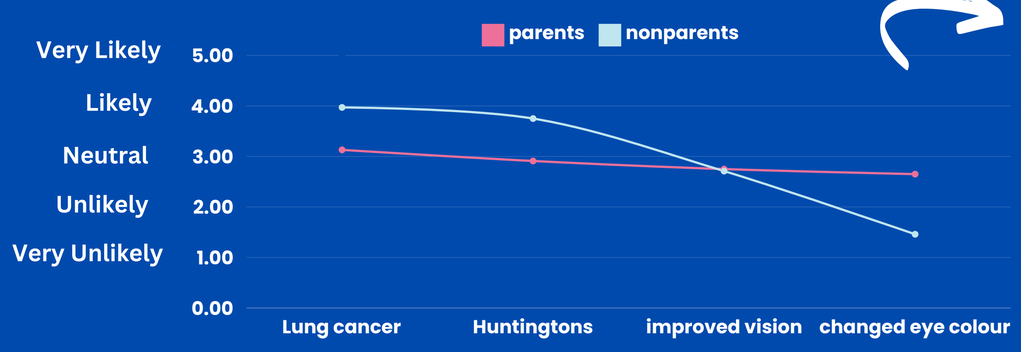
EDUCATION



AGE

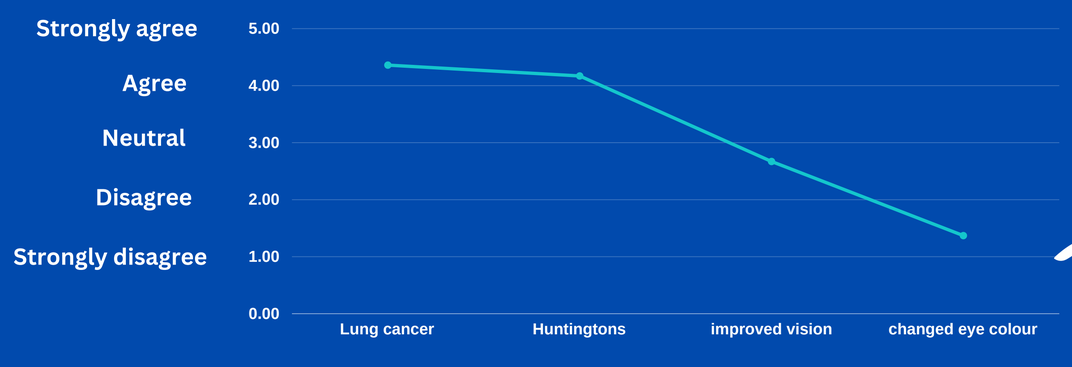


A. Likelihood to use CRISPR-Cas9 treatment



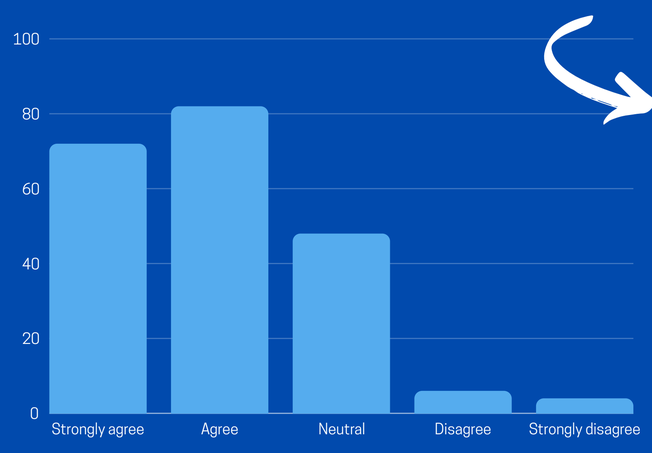
- Significant differences for the likelihood to use CRISPR-Cas9 for non-heritable and heritable diseases. For both, parents are more cautious to use the intervention
- The aesthetic condition yielded the opposite pattern with parents being more likely to change the eye colour of their child
- Overall, tendencies indicate more openness towards medical interventions than enhancing and aesthetic procedures

B. "CRISPR-Cas9 treatment should be covered by insurance"



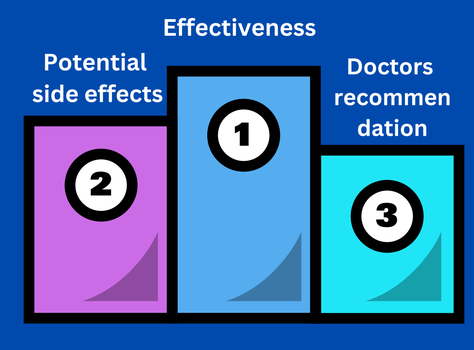
- Participants prioritized insurance funding for medically necessary treatments over enhancing or cosmetic procedures

C. "CRISPR-Cas9 treatment for lung cancer should be legal"



- The majority of participants support the legality of CRISPR-Cas9 treatments for life-threatening conditions, reflecting a broader international permissiveness towards Human Genome Editing (HGE) for medical purposes

D. Treatment factors ranked as important



Conclusion

- CRISPR-Cas9 is precise and clinical applications are on the rise
- High economic potential for investment
- Parents across scenarios indicate less extreme response patterns
- Lack of international agreement
- Public favours using CRISPR for diseases over aesthetics/ enhancements
- 72% want CRISPR to be legal for deadly non heritable diseases

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