



# Research With Embryos

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## **Measuring the degree of realization of the Right to Science**

five dimensions → index

1. access to benefits
2. opportunities to participate
3. scientific freedom
4. enabling environment
5. international cooperation

→ indicators

→ data

## Measuring the degree of realization of the Right to Science

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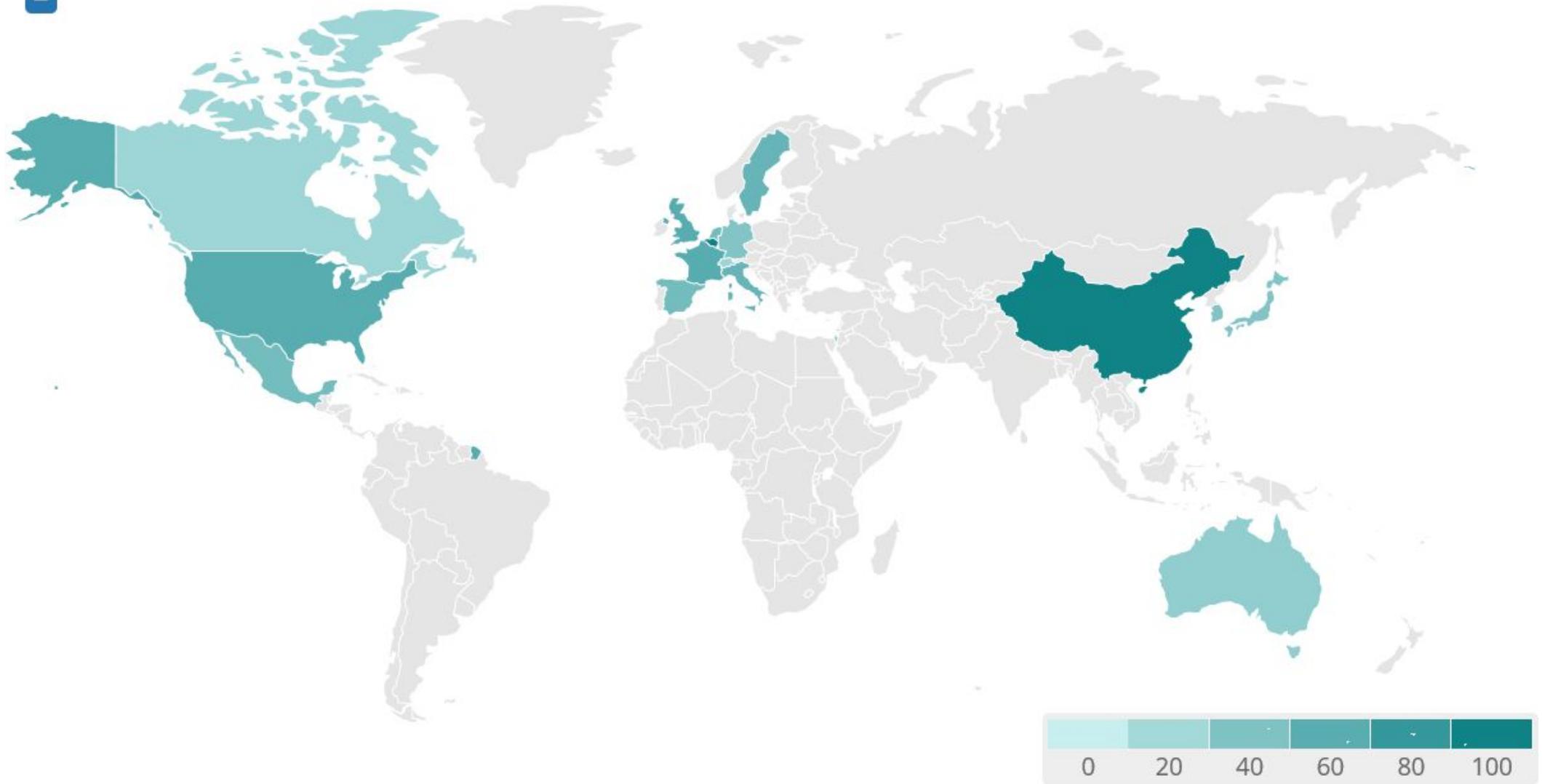
1. access to benefits
2. opportunities to participate
3. **scientific freedom** → **embryos**
4. enabling environment
5. international cooperation

**(germline modifications)**

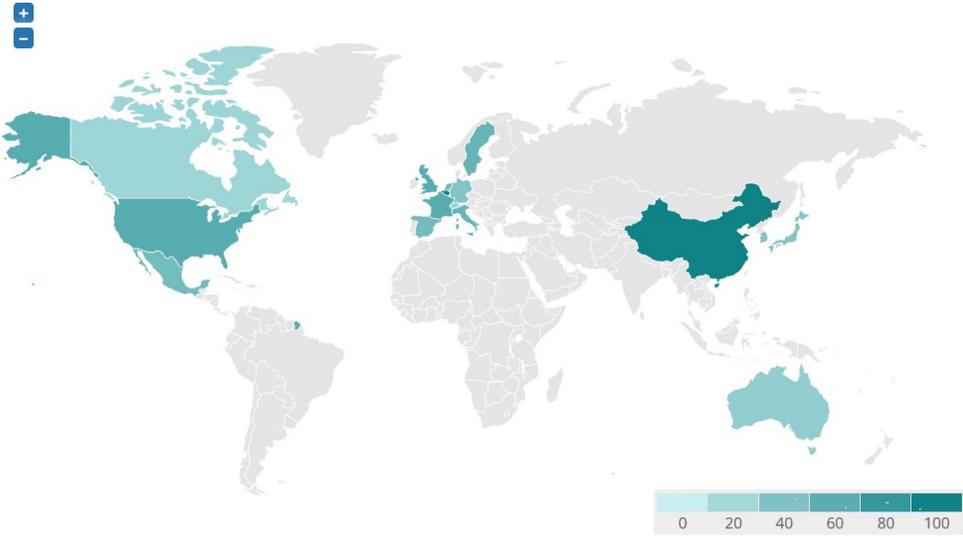
→ indicators

→ data

- 
1. Is **basic research** using germline modification in human embryos/gametes permitted
  2. Is **pre-clinical research** using germline modification technologies in animals permitted?
  3. Is **clinical research** using germline modification technologies in humans permitted?
  4. Are **clinical applications** of research using germline modification technologies (i.e., to initiate a pregnancy with edited embryos or with edited gametes) permitted?

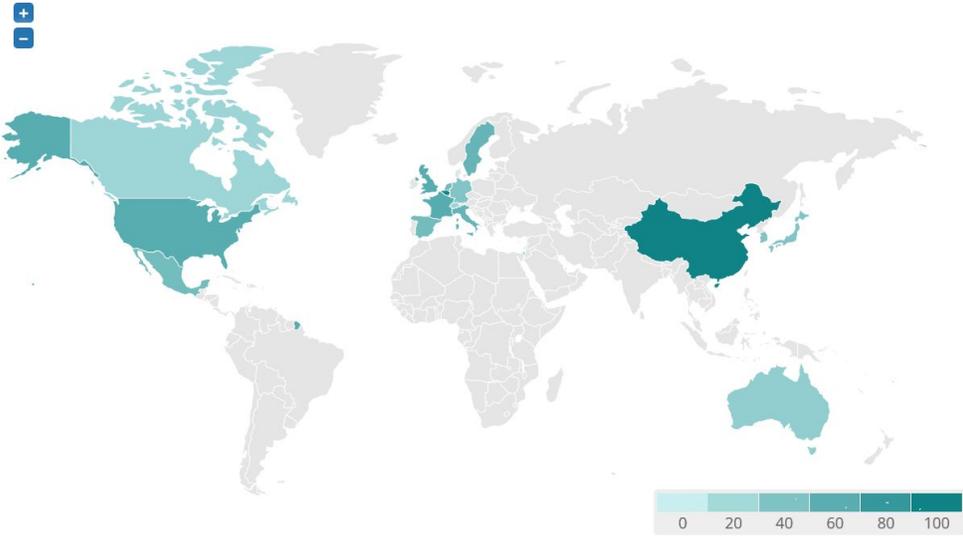


<http://freedomofresearch.org/research-with-embryos/>



| List Nations ▾ | Tot▾ |
|----------------|------|
| Belgium        | 100  |
| China          | 100  |
| France         | 61   |
| United Kingdom | 61   |
| United States  | 61   |
| Italy          | 53   |
| Sweden         | 53   |
| Mexico         | 46   |
| Netherlands    | 46   |
| Spain          | 46   |
| Germany        | 38   |
| Japan          | 38   |
| South Korea    | 38   |
| Australia      | 30   |
| Israel         | 30   |
| Canada         | 23   |
| Switzerland    | 23   |

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## Findings

- ✓ Basic research: only a handful of countries permit the creation of embryos for research purposes  
Belgium, China, Singapore  
*Spain, Sweden, UK, USA*
- ✓ Pre-clinical trials are permitted in a majority of countries
- ✓ Clinical trials on are prohibited in several countries

## Overall picture

- ✓ laws and regulations are often ambiguous
- ✓ legal uncertainty works to the detriment of scientists
- ✓ the right to science demands that regulators revisit policies

## Research With Embryos

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**survey**

<https://bit.ly/2JBHE4o>