

**ORBITAL MUN CONFERENCE**  
Hosted by British International School of Ljubljana  
**BLLED 2025**

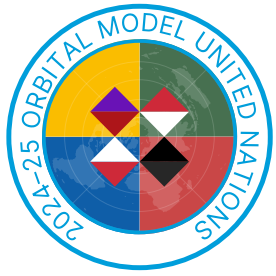
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**BACKGROUND GUIDE**  
**ANIMAL TESTING**

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*Issue: To What Extent Should Animal Testing Be Used to Develop Vaccines and Drugs in the Case of New Pandemics?*

Prepared by: Anna Rozanova and Isabella Magill



Dear Delegates,

Welcome to the second Orbital Model United Nations! We are excited to host our partner schools in Bled, Slovenia from 2–5 February 2025.

The organising committee has worked hard over the past few months to create topics and background guides which represent some of the pressing issues the world faces as we move further into this century. These topics are nuclear energy, AI in warfare, animal cruelty, and immigration.

As the world experiences more effects of climate change, many see nuclear energy as a promising alternative to fossil fuels. Recently, we have seen various new wars spark across the world, with AI being introduced in several. Animal testing has long been a question of whether the ends justify the means, something particularly relevant after the COVID-19 pandemic. Migration is often the product of many factors, some of these being the aforementioned climate change and war. Mass migration has monumental consequences for both the country of departure and the country of destination. The worldwide political landscape seems more and more fraught with danger, and so the need for international cooperation and pragmatism is heightened.

My name is Naomi Goddard, and I am honoured to be Secretary General for this Orbital MUN. I am from London but study at the British International School of Ljubljana and am thrilled that we are the host country this year. For Year 12, my subjects are English Literature, History, French, Spanish, and Psychology.

These background guides have been prepared by the chairs of each committee in order to provide a foundation of information on each topic and to facilitate individual research. They are in no way exhaustive, with the ideas provided serving simply as examples for potential discussion.

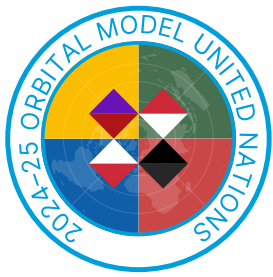
You, the delegates, are strongly encouraged to extend your research beyond the background guide. You are invited to further explore the sources cited in each guide as well as others encountered elsewhere.

Together with the Deputy Secretary General, Ema Seršen, the organising team (Isabella Magill, Anna Rozanova, Moises Camarero Trujillo, Zoja Čotar, and Lila De Launey) and Committee Chairs, we are looking forward to welcoming you to discuss these critical issues facing the world today.

Naomi Goddard

MUN Secretary General

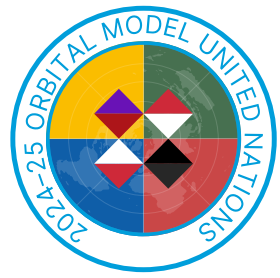
Ljubljana, November 2024



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# INTRODUCTION

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The issue of animal testing in scientific research, particularly in the development of vaccines and drugs during pandemics, has been a subject of ethical and scientific debate for a long time. The COVID-19 pandemic underscored the importance of rapidly developing safe and effective vaccines and treatments. In this context, animal testing played a key role in ensuring that vaccines and drugs were safe for human use. However, the urgency of such pandemics raises ethical questions about the extent to which animal testing should be used, especially when the need for speed conflicts with concerns about animal welfare.

This background guide will explore the scientific, ethical, and regulatory dimensions of animal testing in pandemic response, and encourage delegates to consider how to balance the necessity for quick vaccine development with ethical concerns for animal welfare. Delegates will debate the extent to which animal testing is necessary and whether alternatives should be prioritised or further developed.

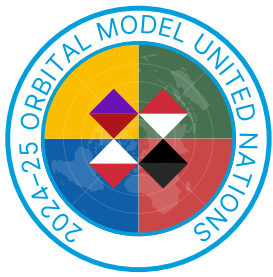
## UN SUSTAINABLE DEVELOPMENT GOALS (SDG's)

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**SDG 3: Good Health and Well-being** - This goal focuses on ensuring healthy lives and promoting well-being for all. Developing vaccines and drugs for pandemics supports SDG 3 by reducing mortality, preventing illness, and improving health outcomes. Animal testing, if done responsibly, can help achieve this goal by facilitating the development of safe and effective treatments.

**SDG 12: Responsible Consumption and Production** - This goal advocates for sustainable practices, which include ethical scientific processes. Responsible use of animal testing, limiting it to cases where alternatives are unavailable, aligns with this goal. Additionally, the development of sustainable, non-animal testing methods would advance SDG 12 by reducing reliance on animals in research.

**SDG 15: Life on Land** - This goal is concerned with protecting, restoring, and promoting sustainable ecosystems, including safeguarding animal welfare. Reducing animal testing supports SDG 15 by prioritizing the welfare of animals and exploring humane alternatives in scientific research. This goal underscores the importance of balancing human health needs with ethical treatment of animals.



# KEY TERMS

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**Animal Testing:** The use of non-human animals in experiments to test the safety and efficacy of drugs, vaccines, and other medical treatments.

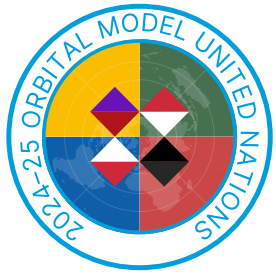
**Alternatives to Animal Testing:** Methods like in vitro testing, computer modeling, and organ-on-a-chip technology that seek to replace or reduce the use of animals in research.

**Ethical Review Boards:** Committees responsible for overseeing the ethical aspects of research involving animals, ensuring compliance with laws and regulations.

**Pandemic:** A global outbreak of an infectious disease that affects a large number of people across multiple countries or continents.

**Preclinical Testing:** The phase of drug or vaccine development that involves testing on animals before moving to human trials.

**The 3Rs Principle:** An ethical framework in scientific research advocating for the Replacement, Reduction, and Refinement of animal use.

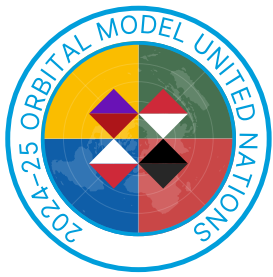


# GENERAL OVERVIEW

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Animal testing has been a key component of scientific discovery for centuries, with major medical breakthroughs - including vaccines for polio, rabies, and influenza—being developed with the aid of animal models. In pandemics, animal testing is traditionally a critical step in drug and vaccine development, ensuring that treatments are safe and effective before they are tested in humans.

However, concerns about the ethics of animal testing have grown significantly. Organizations like PETA (People for the Ethical Treatment of Animals) and others have called for the elimination of animal testing, citing unnecessary cruelty and the availability of alternative methods. The EU's ban on cosmetic animal testing in 2013 marked a significant shift in the global debate. Nevertheless, when it comes to life-saving treatments for diseases, especially in pandemic situations, animal testing is still widely considered necessary by many scientists.



# MAJOR PARTIES INVOLVED

## The United States of America

Even though the U.S. is one of the most developed countries with the largest economy, it continues to rely heavily on animal testing in biomedical research and pharmaceutical development. The Food and Drug Administration (FDA) and National Institutes of Health (NIH) require extensive animal testing to ensure the safety and efficacy of new drugs and vaccines. While there is growing investment in alternatives to animal testing, animal research remains integral, particularly during crises like the COVID-19 pandemic. The U.S. also faces significant public pressure from animal rights groups like PETA, advocating for the reduction of animal testing in favor of modern, humane alternatives.

## The United Kingdom of Great Britain and Northern Ireland

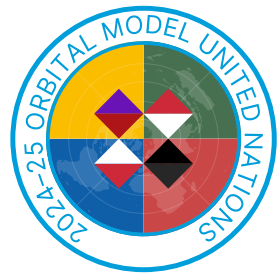
The UK, a leader in biomedical research, has a strong regulatory framework for animal testing under the Animals (Scientific Procedures) Act 1986. The UK promotes the 3Rs principle (Replacement, Reduction, and Refinement), striving to minimize animal use where possible. However, animal testing remains an essential component in the development of new vaccines and drugs, particularly in pandemic situations. During the COVID-19 pandemic, animal testing was used for vaccine development, although the UK government and researchers continue to invest in alternative methods that could reduce future reliance on animal models.

## The Kingdom of Norway

Norway, known for its high ethical standards and strict animal welfare regulations, is committed to reducing the use of animals in research. However, like other European countries, Norway continues to allow animal testing for medical research when necessary, particularly for developing vaccines and treatments for public health crises. Norwegian law promotes alternatives to animal testing where possible, adhering to the EU's 3Rs principle. Public opinion in Norway strongly favors animal welfare, pushing the country to further explore non-animal methods in scientific research.

## The Russian Federation

Russia remains one of the countries with significant reliance on animal testing for the development of drugs and vaccines. The Russian government supports biomedical research using animals and has invested heavily in testing during public health crises like the COVID-19 pandemic, particularly in the development of the Sputnik V vaccine. Unlike many Western countries, Russia places less emphasis on reducing animal testing and has not adopted stringent alternatives as widely. This positions Russia as a nation strongly in favor of continuing animal testing, especially in the context of medical advancements.



## Republic of Austria

Austria is one of the most progressive countries when it comes to animal welfare, maintaining strict regulations on animal testing in biomedical research and pharmaceutical development. Under Austrian law, animal testing is allowed only when absolutely necessary, particularly in cases where no viable alternatives exist, such as in the development of life-saving vaccines and drugs. Austria has been a strong advocate of the 3Rs Principle (Replacement, Reduction, Refinement), pushing for alternatives like in vitro testing and other advanced technologies. Despite this, animal research is still permitted for essential medical purposes, including pandemic preparedness. Austria also faces public pressure from strong animal rights organizations that continuously push for further reduction in animal testing. This ongoing debate reflects Austria's commitment to ethical research practices, even as it balances the need for scientific progress during health crises.

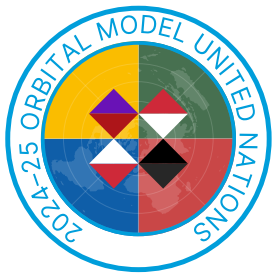
## The People's Republic of China

As one of the world's leading pharmaceutical markets, China continues to rely heavily on animal testing for drug and vaccine development. The country's regulatory bodies, such as the National Medical Products Administration (NMPA), mandate animal testing to ensure the safety and efficacy of new treatments, especially during public health crises like pandemics. While China has recently eased requirements for animal testing in some areas, such as cosmetics, animal testing remains integral for pharmaceuticals and vaccines. China is increasingly investing in alternative testing methods, but progress has been slower compared to Western countries. The country also faces less public pressure on animal welfare compared to other nations, though global criticism from animal rights organizations is growing. China's approach reflects a prioritization of public health and safety, though it is beginning to explore alternatives to animal testing in line with global trends.

## Republic of Korea

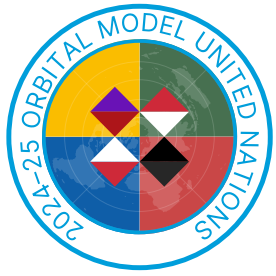
South Korea continues to rely heavily on animal testing in biomedical research and pharmaceutical development, particularly for the approval of new drugs and vaccines. The Ministry of Food and Drug Safety (MFDS) requires animal testing to ensure the safety and effectiveness of new medical treatments. However, South Korea is making strides toward reducing reliance on animal models by investing in alternative testing methods, including in vitro testing and advanced technologies. The country is also beginning to face increased pressure from animal rights groups advocating for more humane approaches, though these voices are not as prominent as in Western nations. While animal testing remains essential for South Korea's pharmaceutical industry, especially in response to pandemics, the government is slowly shifting toward a more balanced approach that considers both scientific needs and ethical concerns.





## Australia

Australia maintains a balanced stance on the use of animal testing in vaccine and drug development, recognizing its necessity for ensuring public safety while promoting ethical research practices. The country follows strict regulations governed by the National Health and Medical Research Council (NHMRC), which requires that animal testing is conducted only when there are no viable alternatives. Australia adheres to the 3Rs Principle (Replacement, Reduction, Refinement) to minimize the use of animals and improve their welfare during research. While animal testing remains a requirement for the development of vaccines and drugs, Australia is increasingly investing in alternatives, including in vitro methods and computer modeling, to reduce reliance on animals. This dual focus on scientific rigor and animal welfare reflects Australia's commitment to both advancing public health and addressing ethical concerns, especially during global health crises like pandemics.



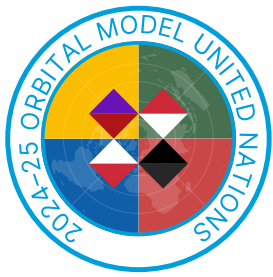
# COVID-19 IMPACT

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The COVID-19 pandemic provided a recent case study in the debate over animal testing. The rapid development of multiple vaccines was made possible, in part, due to animal testing conducted on mice, ferrets, and non-human primates. Despite the urgency, scientists and governments faced criticism from animal rights groups arguing that the animals were subjected to unnecessary harm and that alternative methods could have been used.

At the same time, regulators like the U.S. Food and Drug Administration (FDA) and the European Medicines Agency (EMA) mandate preclinical testing on animals as part of the drug approval process. Countries around the world differ in their regulations, with some requiring more rigorous testing than others.

The rise of new infectious diseases, whether they are zoonotic (transmitted from animals to humans) or otherwise, brings this issue to the forefront. With the potential for future pandemics looming, the global scientific community is exploring whether traditional methods of animal testing should be maintained, adapted, or replaced with alternatives.



# ETHICAL CONSIDERATIONS

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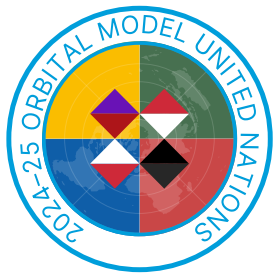
The use of animals in testing involves several ethical concerns:

**Animal Welfare:** Opponents of animal testing argue that it causes unnecessary suffering, pain, and death to animals, which is unethical, especially when alternatives exist.

**Necessity for Human Health:** Proponents argue that animal testing is crucial for ensuring the safety and efficacy of vaccines and drugs. They believe that the potential benefits to human health outweigh the ethical concerns.

**Alternatives:** There are growing calls to prioritize alternatives like in vitro methods, computer simulations, and organ-on-a-chip technologies. These alternatives can reduce or eliminate the need for animal testing but are not yet universally accepted or validated for all types of drug and vaccine testing.

**Regulation and Oversight:** Ethical guidelines, such as the 3Rs principle, call for minimizing the use of animals in research. However, the need for rapid vaccine and drug development during pandemics often puts pressure on the ethical oversight process, raising concerns about whether due diligence is always observed.



# POSSIBLE SOLUTIONS

## 1. Promote Alternatives to Animal Testing

Encourage investment and research into alternative testing methods, such as in vitro (cell-based) models, organ-on-a-chip technology, and computer simulations (in silico models). These alternatives can reduce reliance on animal models while still ensuring drug safety and efficacy.

Governments and international bodies like the World Health Organization (WHO) can collaborate to standardize and accelerate the validation of alternative methods, promoting their global adoption in biomedical research.

## 2. Strengthen and Enforce the 3Rs Principle

Global adoption and enforcement of the 3Rs principle (Replacement, Reduction, Refinement) can help mitigate the impact of animal testing. Countries can work together to promote replacing animals with alternatives, reducing the number of animals used, and refining techniques to minimize suffering.

Establishing a global scientific ethics council under the United Nations or another international body could help ensure consistency in applying the 3Rs across nations and industries.

## 3. International Collaboration on Research

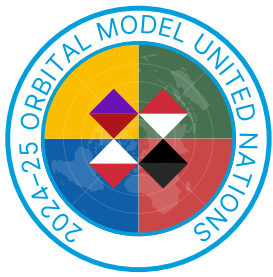
Countries can form international research consortiums to pool resources and share data on drug and vaccine testing methods. This would reduce the duplication of animal testing and allow for the sharing of best practices, particularly during pandemics.

Joint efforts to develop global guidelines on the ethical use of animals in pandemic responses could ensure that all countries follow similar standards, reducing disparities in the application of animal welfare principles.

## 4. Incentives for Pharmaceutical Companies

Governments can provide financial incentives or tax breaks for pharmaceutical companies that invest in and use alternative testing methods. This could drive innovation and encourage the private sector to prioritize alternatives over traditional animal testing.

Implementing an award or recognition system for companies that significantly reduce their reliance on animal models could also create a competitive and ethical advantage.



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## 5. Public Awareness and Education

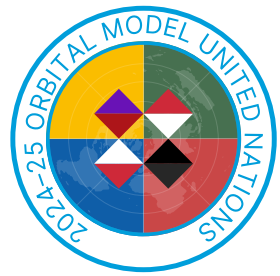
Raising public awareness on the importance of reducing animal testing while ensuring the safety of medical products can help shift public opinion. Governments and non-governmental organizations (NGOs) could launch campaigns to inform citizens about the scientific progress being made in alternative testing methods.

Educating scientists and researchers through specialized training programs on how to implement non-animal methods effectively would further integrate alternatives into mainstream scientific practices.

## 6. Harmonization of Regulations

Different countries have varying regulations on animal testing. Harmonizing international regulatory frameworks can facilitate the global adoption of alternative methods and ensure that no country becomes a testing hub due to looser regulations.

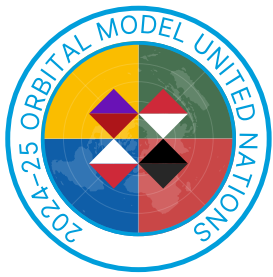
A unified global standard on when and how animal testing should be employed in pandemic scenarios would foster greater consistency and limit unnecessary animal use.



# QUESTIONS TO CONSIDER

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- Is animal testing essential for ensuring the safety and efficacy of vaccines and drugs, particularly in pandemic situations? Can alternatives be as reliable and effective in ensuring public health?
- How should the scientific community balance the need for speed in vaccine development during pandemics with ethical concerns about animal welfare?
- Should international regulatory bodies, such as the World Health Organization (WHO), establish a unified framework for when and how animal testing should be conducted during pandemics? Should countries adopt common standards or is a national approach more appropriate?
- Should countries and global organizations invest more in developing and validating alternatives to animal testing? How can this research be accelerated?
- How can governments and scientific institutions address public concerns about animal welfare while still ensuring confidence in the safety of vaccines and drugs?

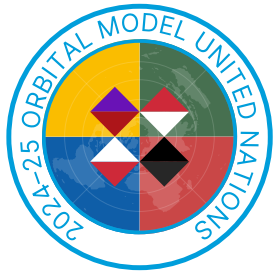


# CONCLUSION

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The debate on the use of animal testing in developing vaccines and drugs during pandemics is multifaceted, involving scientific, ethical, and regulatory dimensions. The question of how much reliance should be placed on animal testing in future pandemics is crucial as the world prepares for the next potential global health crisis. Delegates must carefully weigh the need for speed and public safety against ethical considerations and the potential for alternative methods.

As delegates, it will be your responsibility to propose solutions that strike a balance between ensuring human safety through scientific rigor and advancing humane, ethical practices in research.



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