



BIOSECURITY

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Biosecurity in animal research is critically important for several reasons, encompassing the protection of animal health, human health, and the integrity of scientific research. Here are the key aspects highlighting its importance:

- ☐ Preventing Disease Transmission
- ☐ Ensuring Human Health and Safety
- ☐ Maintaining Research Integrity
- ☐ Ethical Considerations and Animal Welfare
- ☐ Economic Implications
- ☐ Regulatory Compliance

PREVENTING DISEASE TRANSMISSION

- ❑ Biosecurity measures are essential to prevent the introduction and spread of infectious diseases among animals.
- ❑ This is crucial for maintaining healthy animal populations and ensuring the validity of research outcomes.
- ❑ An outbreak of disease can compromise the welfare of research animals and lead to the loss of valuable research data.



ENSURING HUMAN HEALTH AND SAFETY

- ❑ Many animal diseases are zoonotic, meaning they can be transmitted from animals to humans.
- ❑ Effective biosecurity protocols help protect researchers, laboratory personnel, and the public from potential health risks.
- ❑ This includes the prevention of laboratory-acquired infections and the containment of pathogens that could cause outbreaks in the wider community.



MAINTAINING RESEARCH INTEGRITY

- ❑ Contamination and disease can significantly alter experimental outcomes, leading to unreliable data.
- ❑ Biosecurity practices ensure that research findings are valid and reproducible by maintaining controlled and disease-free environments.
- ❑ This is essential for the credibility of scientific studies and for advancing knowledge in various fields, including medicine, veterinary science, and biology.



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For more than a century, mice and rats have made dramatic contributions to human and veterinary medical progress. Learn more about the benefits of animal research. Visit FBRResearch.org FOUNDATION for BIOMEDICAL RESEARCH 

There are more than 6000 strains of laboratory mouse models available today to help propel biomedical research for improved human and animal health. Photo courtesy The Jackson Laboratory.

ETHICAL CONSIDERATIONS AND ANIMAL WELFARE

- ❑ High standards of biosecurity are part of ethical animal care.
- ❑ Ensuring the health and well-being of research animals is a fundamental responsibility.
- ❑ Preventing disease through biosecurity measures minimizes suffering and aligns with ethical guidelines and regulatory requirements for the humane treatment of animals in research settings.



ECONOMIC IMPLICATIONS

- ❑ Disease outbreaks in research facilities can have significant financial consequences, including the cost of treating affected animals, the loss of research animals, and delays in research projects.
- ❑ Implementing robust biosecurity measures can prevent these costly disruptions and ensure the continuity of research activities.



REGULATORY COMPLIANCE

- ❑ Research institutions must comply with national and international regulations and guidelines regarding animal care and use.
- ❑ Biosecurity is a key component of these regulations.
- ❑ Non-compliance can result in legal penalties, loss of funding, and damage to the institution's reputation.



KEY BIOSECURITY PRACTICES

- ❑ **Quarantine and Screening:** Isolating new or returning animals to ensure they are free from infectious agents before introducing them to the general population.
- ❑ **Personal Protective Equipment (PPE):** Use of gloves, gowns, masks, and other protective gear to prevent the transmission of pathogens.
- ❑ **Sanitation and Disinfection:** Regular cleaning and disinfection of animal housing, equipment, and facilities to eliminate potential sources of infection.
- ❑ **Controlled Access:** Restricting access to animal areas to authorized personnel only and ensuring proper procedures are followed to prevent cross-contamination.
- ❑ **Monitoring and Surveillance:** Continuous health monitoring of animals and regular testing for pathogens to detect and address potential outbreaks promptly.

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- ❑ In summary, biosecurity in animal research is vital for safeguarding animal and human health, ensuring the validity of scientific research, upholding ethical standards, and complying with regulatory requirements.
- ❑ It involves a comprehensive approach that includes preventive measures, monitoring, and prompt response to potential biosecurity threats.