Public Openness in Laboratory Research: a Survey Study

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UBC releases 2012 animal research data, virtual tour of some facilities
By: Sarah Bigam
December 26, 2013, 4:03pm PST

Petition to ban invasive animal research on campus gains over 9,000 signatures
By: Ming Wong
January 23, 2013, 8:18pm PST

http://ubyssey.ca/news/ube-animal-research-333/
http://ubyssey.ca/news/stop-petition345/
National level: Canadian Council on Animal Care
National level: Canadian Council on Animal Care

- Assessment
- Education
  - Training
  - Communication
National level: Canadian Council on Animal Care

- Assessment
- Education Training Communication
- Replacement Reduction Refinement
Institutional level: UBC Animal Care Committees
Institutional level: UBC Animal Care Committees

Veterinarian
Institutional level: UBC Animal Care Committees

Veterinarian

UBC Scientists
Institutional level: UBC Animal Care Committees

- Veterinarian
- UBC Scientists
- UBC student representative
Institutional level: UBC Animal Care Committees

- Veterinarian
- UBC Scientists
- UBC student representative
- Animal Care Staff

Community Representative
Institutional level: UBC Animal Care Committees

- Veterinarian
- UBC Scientists
- UBC student representative
- Animal Care Staff

- Scientific background
- Association with the institution
- Expertise in animal experimentation

Community Representative
Spectrum of Public Attitudes

[Image: Protest signs advocating for and against animal research]

http://www.firstthings.com/web-exclusives/2013/10/the-grim-good-of-animal-research

http://oggybloggyogwr.blogspot.ca/2013_06_01_archive.html

Fully support

Affected by Factors

Do not support
Objective

- Identify key factors that affect public acceptance of animal use in research
- Potential model for increasing public openness
Methods

- n = 247 participants
- Demographic questions:
  - Age
  - Sex identity
  - Education Level
- 10 identical survey replicates
- Participants randomly placed into replicates
Smoking research using mice

Smoking during pregnancy not only causes direct adverse effects on the foetus and the newborn baby, but it has also been linked to complications later in the child’s life, such as aggression, depression, anti-social behaviour, cognitive and auditory deficits and increased rates of substance abuse. The proposed research aims to use mice to understand how nicotine interferes with brain development and what effect pre/postnatal nicotine exposure has on the adolescent and adult brain. This information could be used to later devise more effective treatments of these disorders. For this research, pregnant and nursing mice will be given nicotine in their drinking water. Once the offspring are weaned, the parents will be euthanized. Their offspring will be given several behavioural tests, such as open field, object recognition, and passive-avoidance tests. The offspring will then be euthanized and the cellular architecture of their brain tissue will be examined.


Question:
Do you support this use of mice in this research?
Methods

- Observe how nicotine affects brain development
- Understand the effects of pre/postnatal nicotine exposure on the adolescent and adult brains of mice

Social behaviour, cognitive and auditory deficits and increased rates of substance abuse. The proposed research aims to use mice to understand how nicotine interferes with brain development and what effect pre/postnatal nicotine exposure has on the adolescent and adult brain. This information could be used to later devise more effective treatments of these disorders. For this research, pregnant and nursing
Methods

Question:
Do you support this use of mice in this research?
Methods

- Choose “Yes”, “No”, or “Neutral”

- Provide a reason for their choice or select from a choice and reason left by a previous participant
Quantitative Results

n = 247

Support for smoking research using mice

- yes: 36%
- neutral: 17%
- no: 47%
Support for smoking research using mice (Sex Identity)

χ² = 8.35
p = 0.02
Quantitative Results

- Age and Education level did not significantly affect results
- Most participants were between ages 19-29
- Most participants had college or university level education
- Those with secondary level education had higher support
Qualitative Methods

- Three most popular reasons were analyzed from each group
- Reasons were grouped based on recurring themes
Qualitative Methods

Q: “Do you support the use of mice in this research?”

Example: “No because we already know smoking is bad for you. We don't need more proof.”
Qualitative Methods

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Primary factor= non-beneficial
Qualitative Methods

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Primary factor= non-beneficial
Secondary factor= Pre-existing information
Qualitative Results

- **Factors for disapproval:**
  - Non-beneficial
    - Pre-existing science
    - Smoking known to affect health
  - Research unethical
    - Euthanasia unacceptable
  - Unnecessary cost to animal
Qualitative Results

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- **Key factors for support:**
  - Benefits to science and humans
  - Mice are a good model for human testing
  - “It’s just a mouse!”
Conclusions

- Participant acceptance for smoking research using mice was low

- Sex identity significantly affects acceptance towards this use of animals

- Key factors affecting public attitudes:
  - benefits vs. cost to the animal
  - benefits to science
  - ethicality
Recommendations

- Future research to investigate ways of implementing public opinion into legislation

- Increase public openness to research protocols to allow for transparency and better public knowledge
Acknowledgements

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Schuppli, C.A., Fraser, D. and McDonald, M. 2004. Expanding the three Rs to meet new challenges in humane animal experimentation. Alternatives to Laboratory Animals 32: 525-532.

Thank you!