Public Openness in Laboratory Research: a Survey Study

EUGENIA KWOK

UBC releases 2012 animal research data, virtual tour of some facilities

By: Sarah Bigam December 26, 2013, 4:03pm PST

http://ubyssey.ca/news/ubc-animal-research-333/

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/stop-petition345/

National level: Canadian Council on Animal Care


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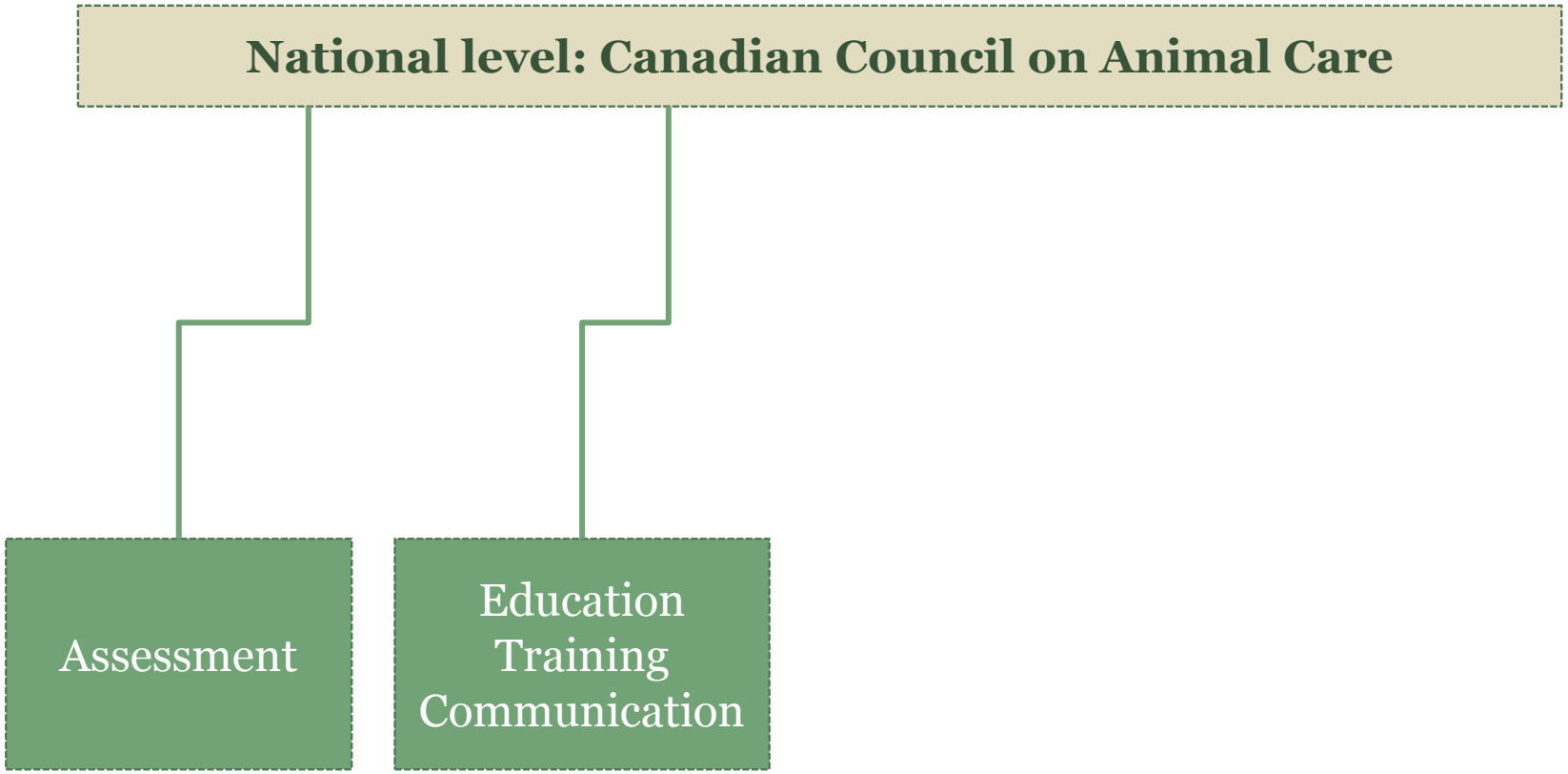
Assessment


National level: Canadian Council on Animal Care
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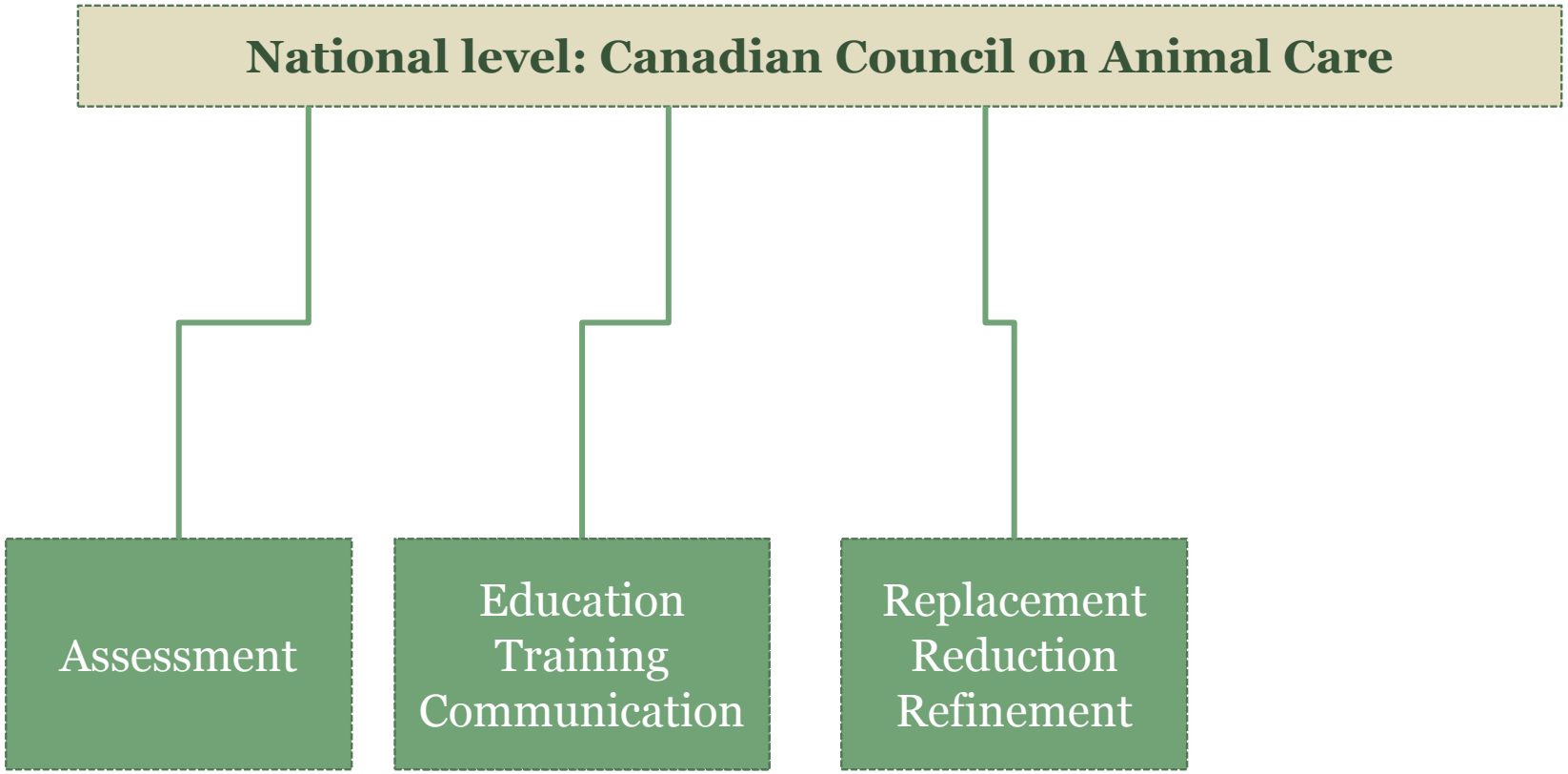
Education
Training
Communication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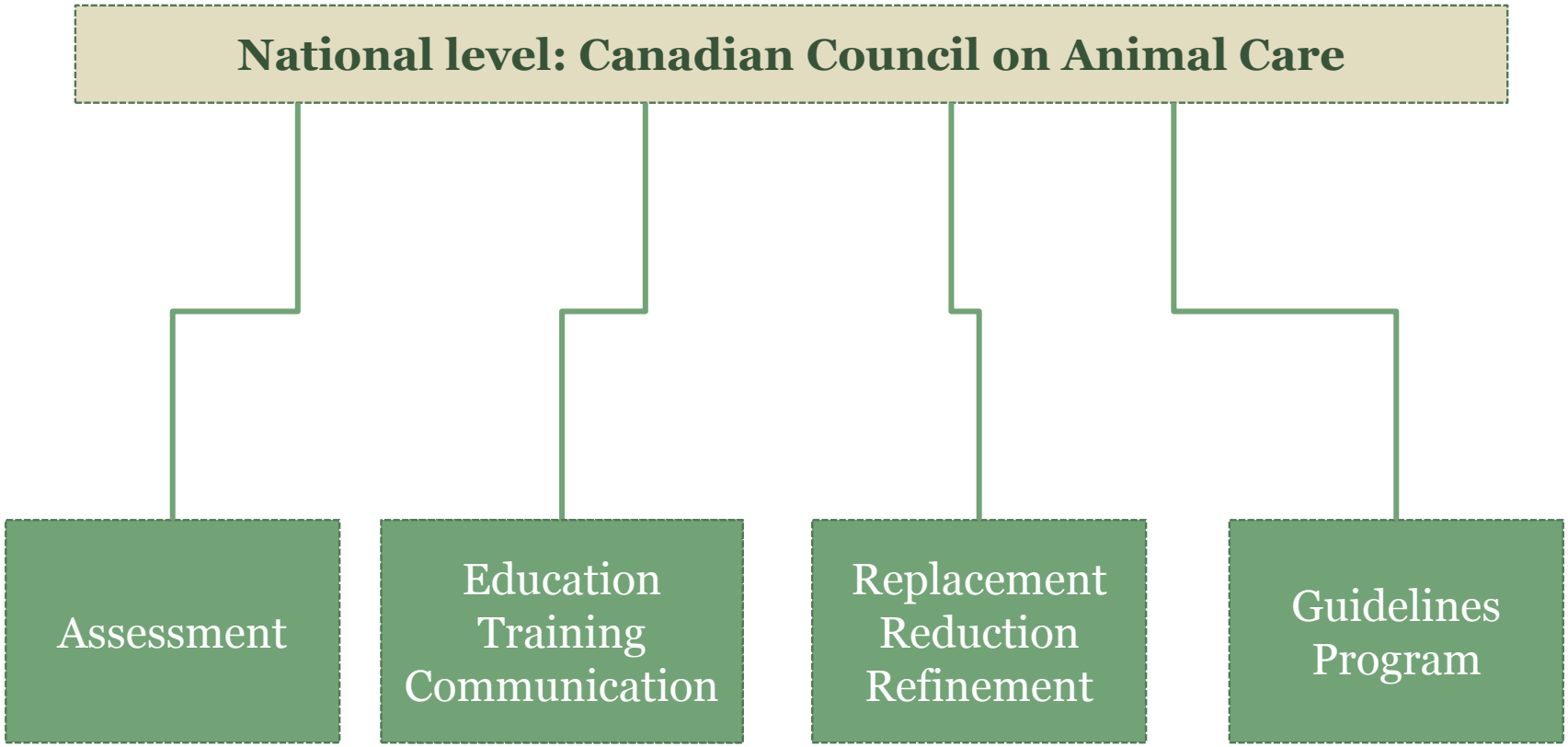
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Guidelines
Program

Institutional level: UBC Animal Care Committees

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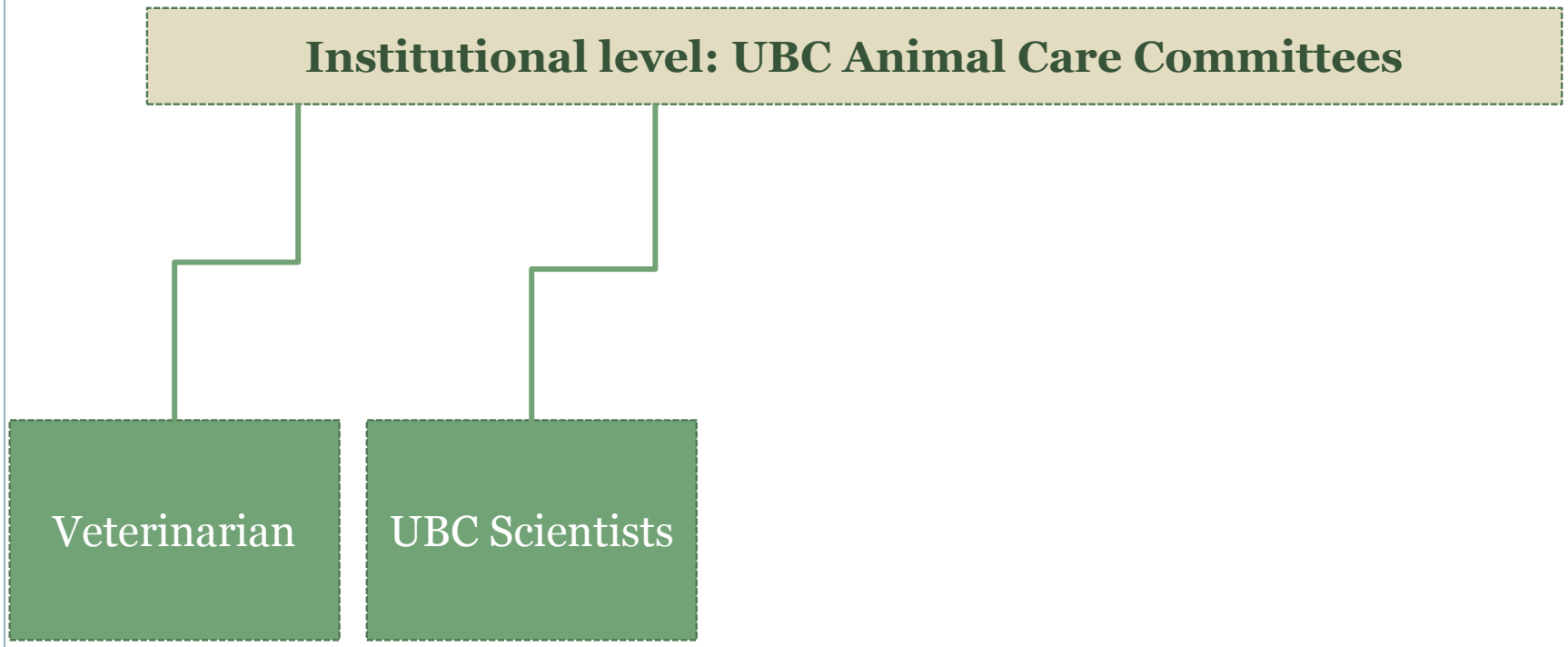
Veterinarian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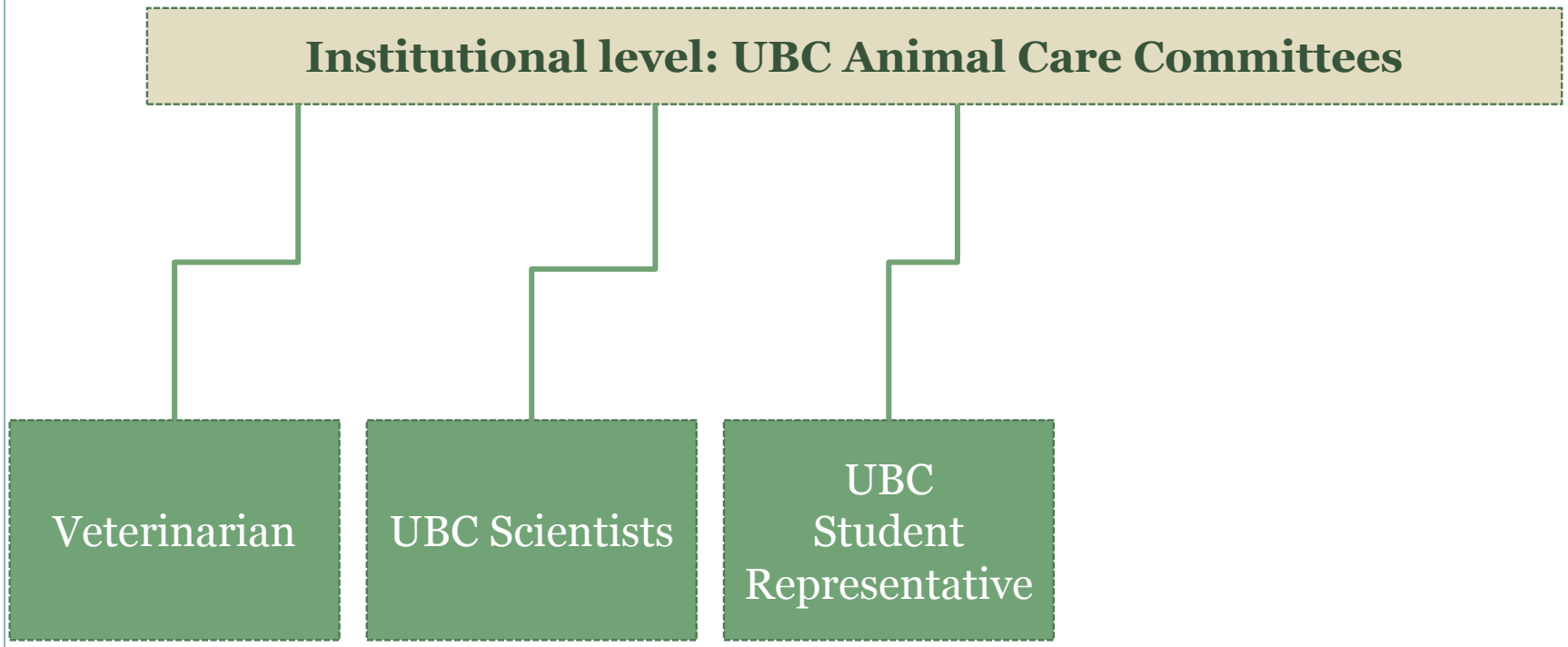
Veterinarian
UBC Scientists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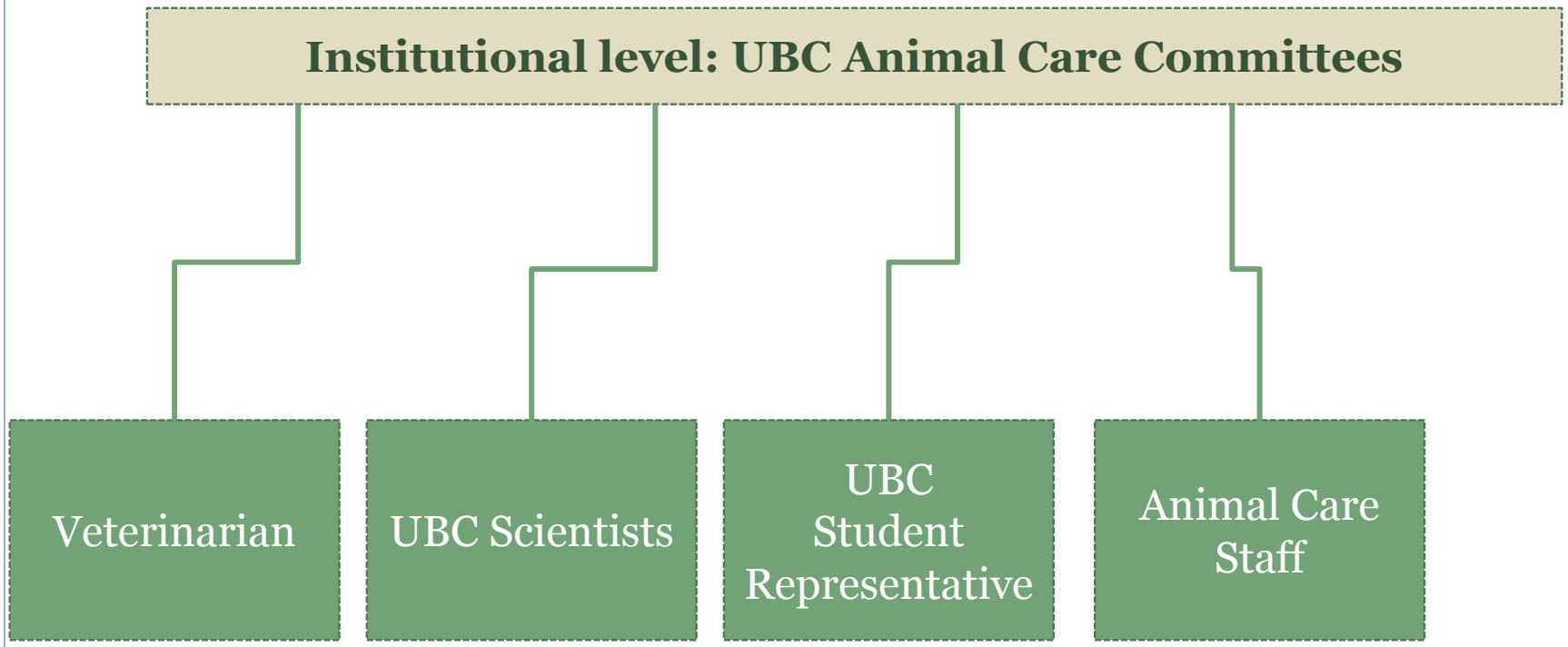
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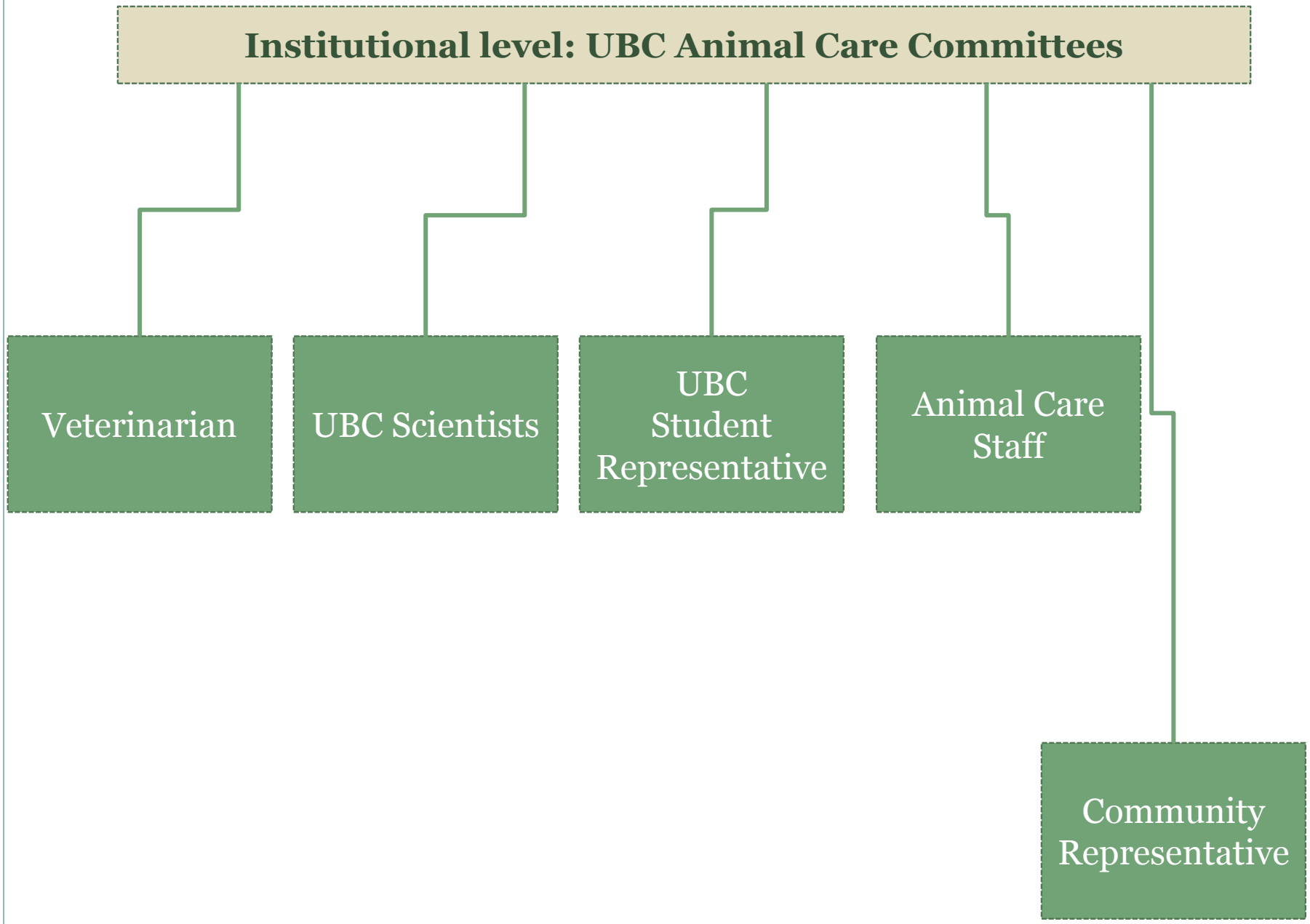
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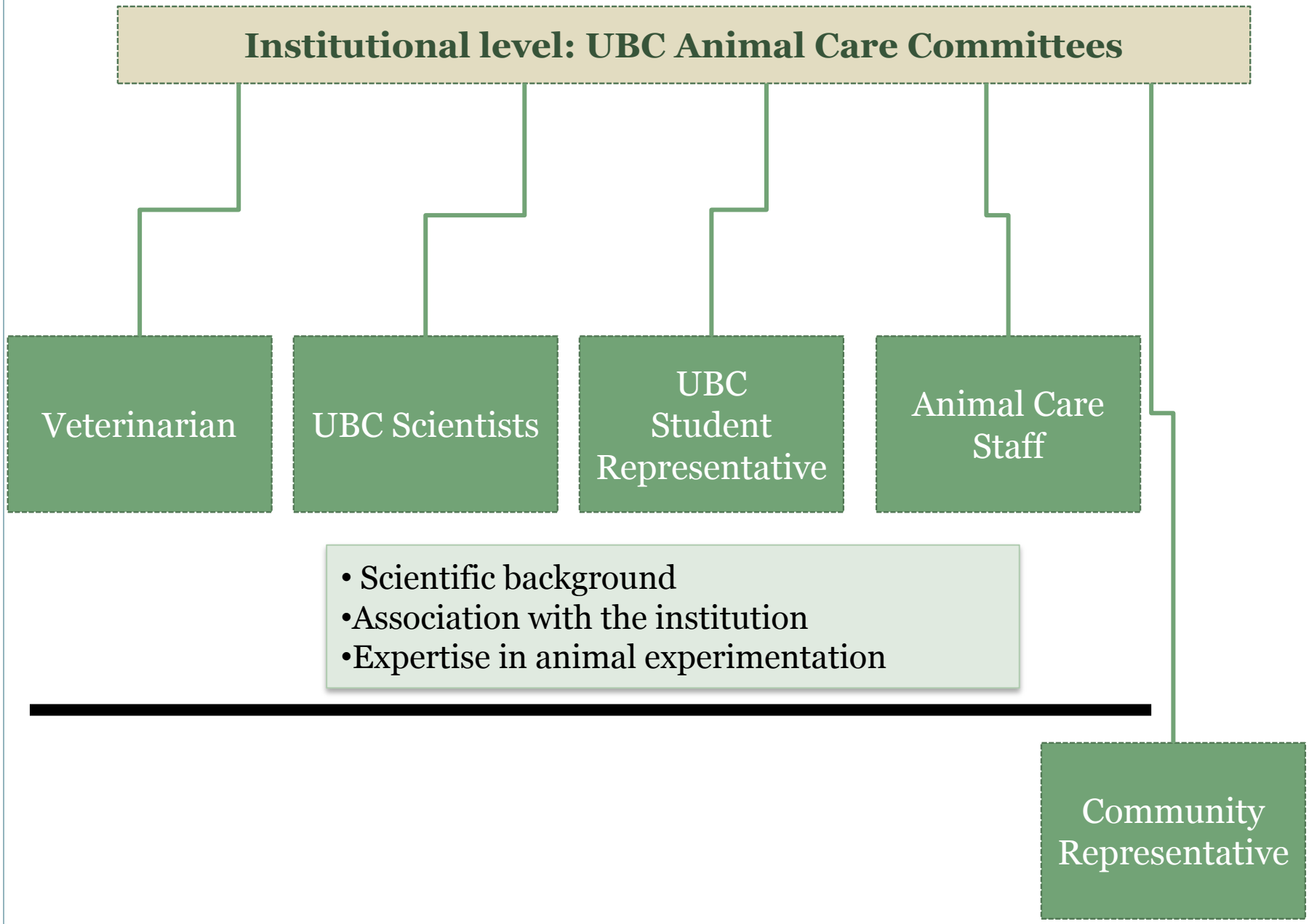
Animal Care Staff
Community Representative


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

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 ⟷ Do not support

Affected by Factors

Objective

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

http://tibilog.wordpress.com/2012/11/16/evolution-learning-marketing-in-the-21st-century/hands-up/

Methods

- n = 247 participants
- Demographic questions:

- 10 identical survey replicates
- Participants randomly placed into replicates

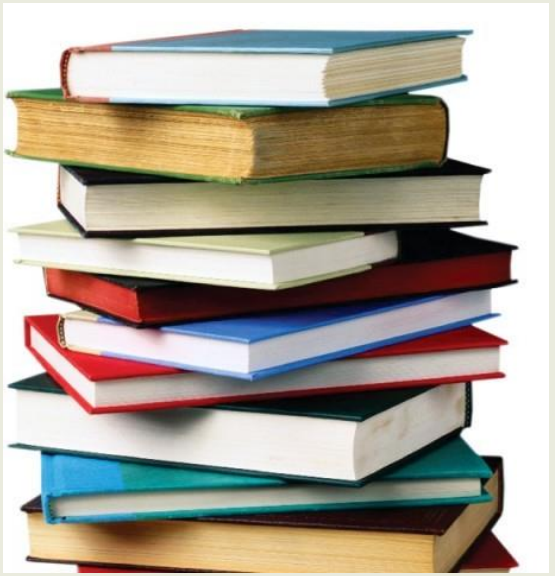
Age

http:///www.daisygreenmagazine.co.uk/beauty/features-beauty/skin-care-through-the-ages

Sex identity

http://sunny7.at/wohnen/tipps/wer-hat-hier-das-sagen-

Education Level



http://asihwidi.wordpress.com/

Methods

Smoking research using mice

View | Edit | Outline

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.

For more information here is an example of a similar published study. Coddou C, Bravo E, and Eugenín J. 2009. Alterations in cholinergic sensitivity of respiratory neurons induced by pre-natal nicotine: a mechanism for respiratory dysfunction in neonatal mice. Philos Trans R Soc Lond B Biol Sci. 364(1529):2527-2535. Medline

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

Methods

- Observe how nicotine effects 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?

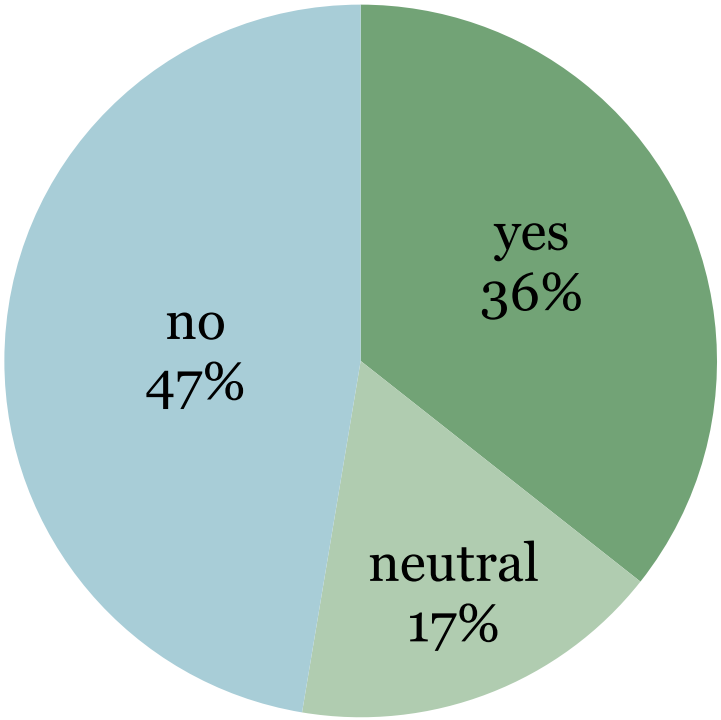
Methods

- Choose “Yes”, “No”, or “Neutral”
- Provide a reason for their choice *or* select from a choice and reason left by a previous participant

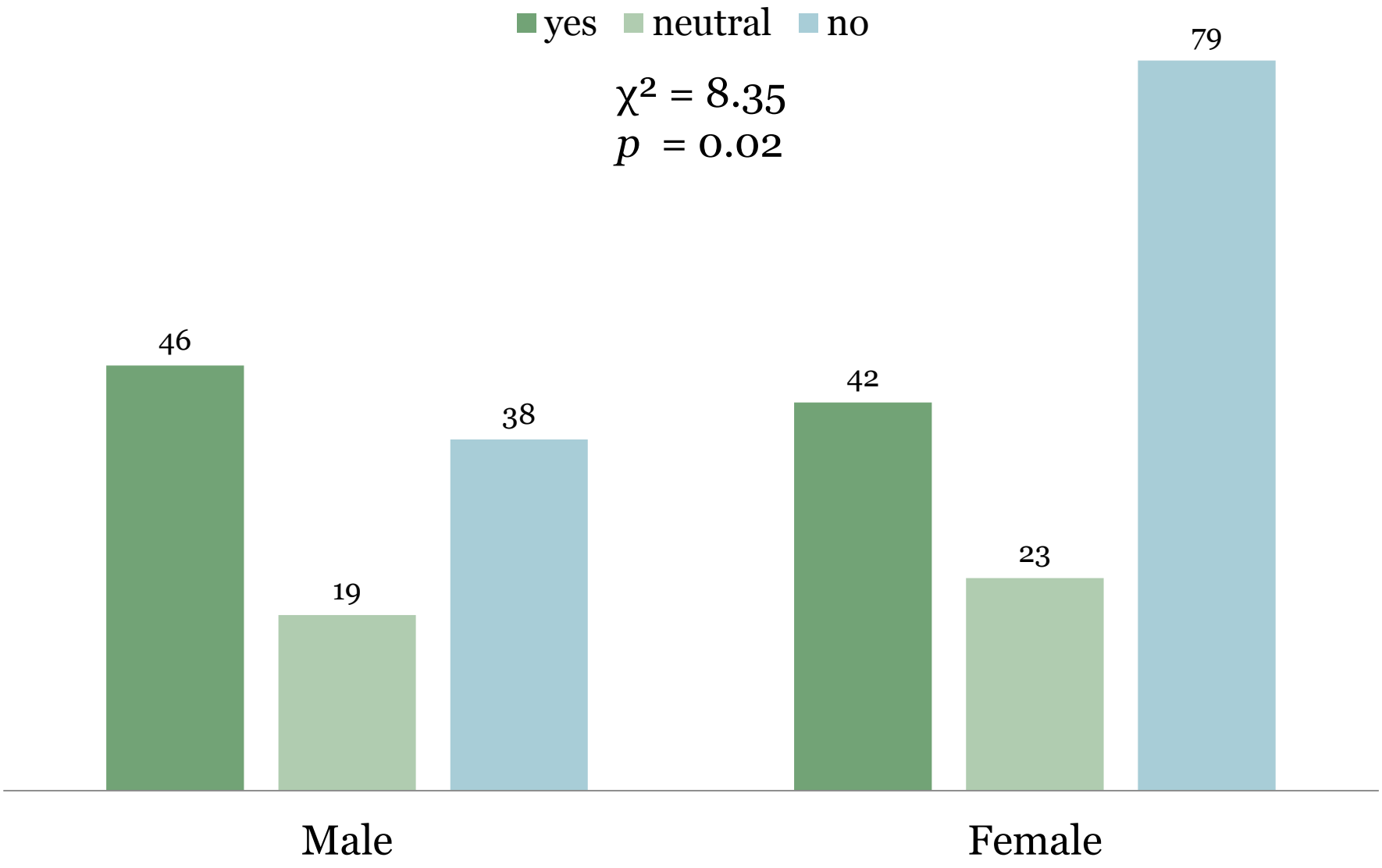
Quantitative Results

n = 247

Support for smoking research using mice



Support for smoking research using mice (Sex Identity)



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.”

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Primary factor= non-beneficial

Secondary factor= Pre-existing information

Qualitative Results

- **<u>Factors for disapproval:</u>**
  - **Non-beneficial**
    - Pre-existing science
    - Smoking known to affect health
  - **Research unethical**
    - Euthanasia unacceptable
  - **Unnecessary cost to animal**

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    - Euthanasia unacceptable
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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

- UBC Animal Welfare Program
- Drs Elisabeth Ormandy, Marina von Keyserlingk, and Daniel Weary
- APBI 398 Applied Animal Biology Research Methods Class
- UBC Multidisciplinary Undergraduate Research Conference

Literature Cited

Schuppli, C.A. and Fraser, D. 2007. Factors influencing the effectiveness of research ethics committees. *Journal of Medical Ethics* 33: 294-301.

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.

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Thank you!

http://westmorelanda13.wordpress.com/2014/01/07/the-guts-of-autism/