

# **ANIMALS IN MEDICAL RESEARCH**



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# A Brief Overview: Historical Situation



- Vivisection, dissection, cruel experiments for marginal (if any) perceived benefit from ancient period through mid-20<sup>th</sup> century
  - Scientific progress viewed as “untouchable” or imperative
- Logical positivism in the 20<sup>th</sup> century: Verifiable, empirical science as the only valuable source for knowledge and discourse
  - Science as “value-free”
  - Ethics a matter of emoting (“boo” “yay”)
- 1966: Laboratory Animal Welfare Act covers transport, sale, and handling of animals to prevent pet theft for lab use
  - Subsequent amendments elevate standards of animal care

# A Brief Overview: Current Situation



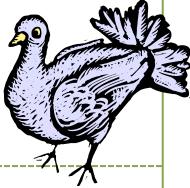
- Animal Welfare Information Center, mandated by AWA, provides information on improved animal care and alternatives to testing.
- Animal Welfare Act **does not cover most common lab animals**—rats, mice, and birds.
  - Covered by Public Health Service Policy when facilities receive federal funding
- Institutional Animal Care and Use Committee (IACUC)
  - Research institutions (e.g., universities) review all protocols that intend to use animals.
- Local and state regulations
  - E.g., Massachusetts Department of Public Health inspects research facilities that house dogs and cats.

# Institutional Review



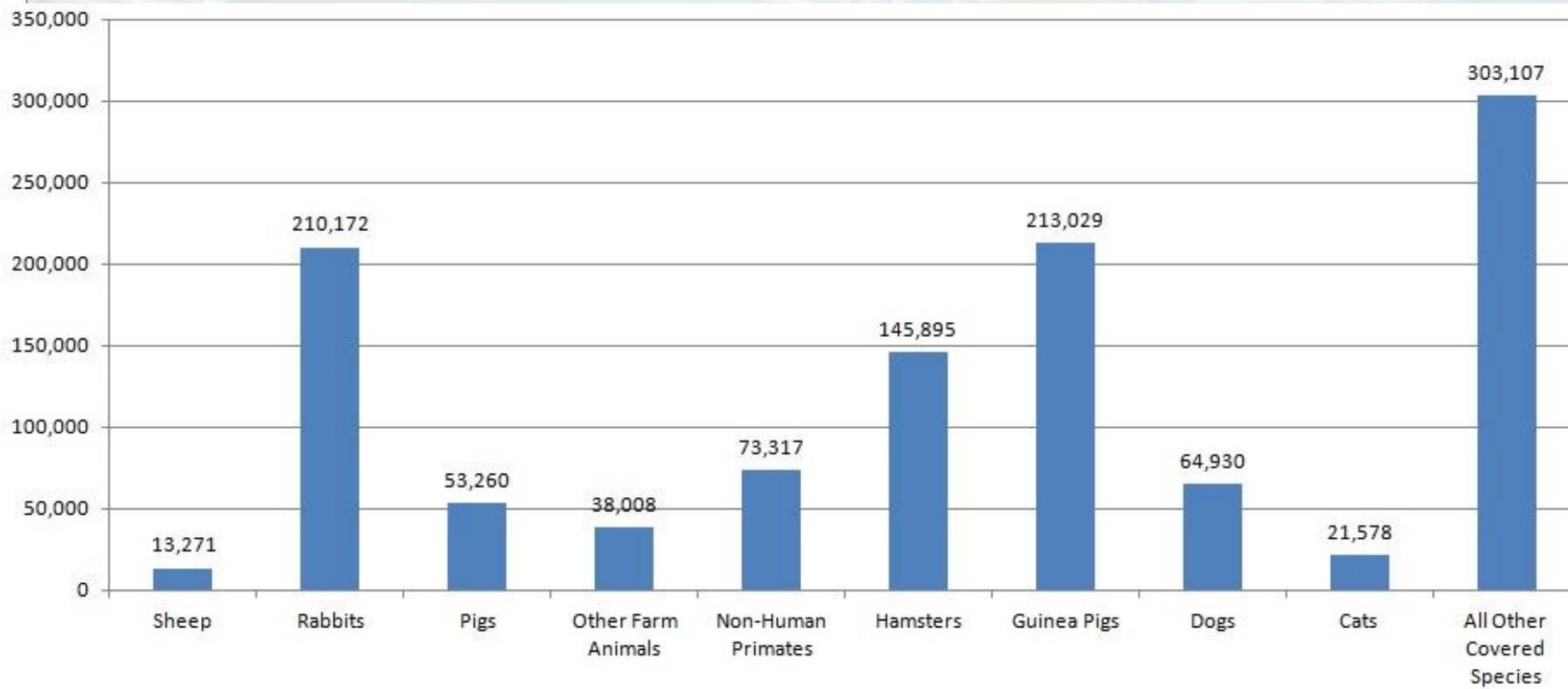
- At each institution, the IACUC determines whether protocols adequately provide the following:
  - 1) Justification for number and species of animals to be used
  - 2) Procedures/drugs used to minimize pain and discomfort
  - 3) Description of methods used to search for alternatives to painful procedures
  - 4) Description of search used to ensure experiment does not unnecessarily duplicate previous research

# Critiques of Current Regulations



- **Permissible to use painful procedures**, as long as principle investigator has considered alternatives.
- **Not required to use pain-relievers** if deemed “scientifically necessary”
- **Multiple survival surgeries** can be approved by IACUC.
- **IACUCs given a great deal of discretion** — standards can vary, be subject to whims of institutions
- **Public Health Service Policy only considers federally-funded research.**
- **Protections focus on proposed protocols**—not on what arises and happens during experimentation procedures.
  - E.g., no laws preventing researchers from breaking bones, forcing ingestion of poison, or burning animals in IACUC-approved study.

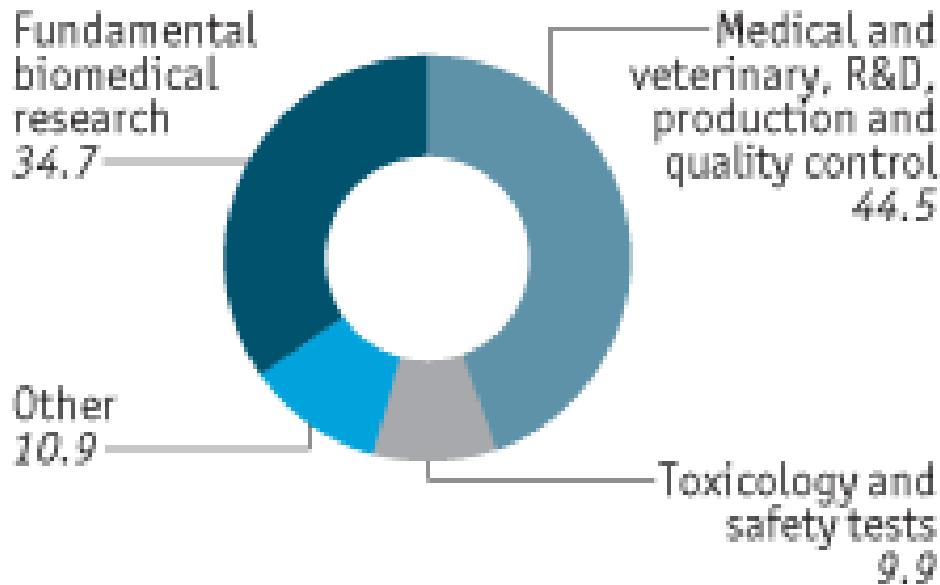
# Prevalence and Types of Animals Used in Research in the U.S. (2010)



# Reasons for Animal Research in Europe (2005)

## Why do it?

Purposes of animal experiments, %



Source: European Commission, 2005

# The Three Rs



- **Refinement** – improve experimental design, decrease inhumane procedures
  - Develop guidelines for different types of research (e.g., induction of tumors, surgical care, blood collection)
- **Reduction** – reduce number of animals used as much as possible
  - Number should match what is statistically required (no more and no fewer)
- **Replacement** – develop alternatives to live (esp. sentient) animal subjects whenever possible
  - E.g., tissue culture, perfused organs, tissue slices, sub-cellular fractions instead of using whole animals

# Moral Crux of Debate



- Boiled down to one question:

“Supposing that it were **uniquely necessary** for obtaining **genuine medical or scientific benefit**, is it morally permissible to use animals in research that is

1. harmful
2. nontherapeutic, and
3. nonconsensual

that **would be judged unethical if done with any nonconsenting human subjects** or if the same acts were done in a nonresearch setting?” (Garrett 6, emphasis added)

- Two-fold burden:
  - Demonstrate using animals provides *unique* benefits.
  - Justify treating animals inhumanely for these benefits.

# Scientific Ideology



- Basic, uncriticized assumptions of scientific inquiry and endeavors
- Part of the ideology: **Science provides neutral, value-free information and technology.**
  - Minimal (or complete lack of) ethical competence, training, and language
- Obstacle to building ethical guidelines for using animals in research
  - Ideological separation of the normative and descriptive into distinct spheres

# Moral Qualms with Animal Research



- Cost/benefit analysis
  - Costs to the animal subjects should be considered!
  - A great deal of research is not sufficiently beneficial to outweigh the numerous (financial, resource, moral) costs of animal research.
- Humane treatment
  - “do our best to meet their interests and needs, minimize their suffering as much as possible, and respect their *telos*” (Rollins 26)
  - Problem of unmitigated pain – bad ethically and methodologically

# Discussion Questions



- If using a live animal model would provide unique benefits, would it be morally permissible (or required!) to use animals as subjects?
  - What further information would you want to make this judgment?
  - What counts as sufficiently beneficial?
  - Which animals should and should not be considered?
- Keeping in mind current research regulations, do you think that the scientific ideology has changed over the years?

# Additional Resources



- “How to Do Fewer, Better Animal Experiments” in *The Economist*:  
<http://www.economist.com/node/9719666>
- “US Statistics” by Speaking of Research: <http://speakingofresearch.com/facts/statistics>
- “Animals in Research: Laws and Regulations” by the **New England Anti-Vivisection Society**:  
<http://www.neavs.org/research/laws>
  - Also see “Myth of Humane Treatment”: <http://www.releasechimps.org/laws/overview/?/harm-suffering/myth-of-humane-treatment/#axzz1RFhLyld0>
- “Cosmetics: Animal Testing” by the FDA:  
<http://www.fda.gov/Cosmetics/ProductandIngredientSafety/ProductTesting/ucm072268.htm>
- “Animals in Research: Rules and Regulations” by Northwest Association for Biomedical Research:  
<http://www.nwabr.org/community/bioethics/animals-research/animals-research-sources/rules-and-regulations>
- “Regulation of Animal Research” by National Academies Press:  
[http://www.nap.edu/openbook.php?record\\_id=10733&page=29](http://www.nap.edu/openbook.php?record_id=10733&page=29)
- Animal Welfare Information Center: <http://awic.nal.usda.gov>
- Animal Ethics Infolink: <http://www.animaletihcs.org.au/three-rs>

# Questions?



# COMMENTS?

A blurred background image of several clear plastic cups standing in a row, suggesting a social gathering or event.