Harms vs Benefits

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Premise

• Animals have played vital roles in scientific research that has led to cures and treatments for a wide array of human disease.

• Agricultural and veterinary research have helped bring about a better quality of life for many animals as well.
Maximizing the benefits/harms ratio

• Scientific merit review
  – Grant proposals: study section
  – External written review by 2 independent experts
  – Scientific advisory board

• Review of animal-based methods chosen for the research
Peer-reviewed grant applications

• Variable format
  – Number of pages, font size, figures, etc.

• Variable requirements
  – US agencies: require details of animal use

• Support requested for >1 year:
  – Predict expected results
  – Predict need for animal-based research
Peer-review committees: challenges

- Number of applications to review
- Time constraints for discussion during meeting
- Nature of grant/requested information on grant application form
- Expertise of committee members
Peer-review outcomes

• Written evaluations that include:
  – A brief synopsis of the proposal
  – An assessment of the proposal (strengths and weaknesses)
  – Comments on issues that should be flagged
  – Comments on the budget requested

• Numerical rating of the application between 0.0 and 4.9

• > 3.5 (!) considered for funding.
Mechanisms for determining scientific merit

• Competitive peer review from funding agencies
  – Funded projects
  – Above-average ratings (‘fundable but not funded’)
  – Written documentation of internal peer review

• Obtain at least 2 external written reviews
  – Comments addressing:
    • Objectives and contribution to scientific knowledge
    • Appropriateness of experimental design involving animals and animal-based methods
Mechanisms for determining scientific merit

- Corporate scientific advisory board (external experts bound by confidentiality agreements)
  - Conflict of interest?
  - Cost/benefit ratio
Minimizing ‘harms’

- From the researcher:

- Peer-reviewed for studies described in the AUP?
  - Sharing all relevant information with the ACC (especially if independent, expert peer review has focused on animal-based methods)

- Selecting the most appropriate methods for the work

- Detailing all animal-based methods in the animal use protocol form
  - SOPs
Minimizing ‘harms’

• At protocol review:
  • Justification for numbers of animals used
    – Statistical power of study
• Pilot studies
• Valid endpoints; frequent monitoring
• Insist on analgesia

• Ethics subcommittee
Minimizing ‘harms’

- Training of animal users
- Assistance from AHTs
Discussion

- The peer-review system remains the best method to evaluate and validate scientific merit;
- A thorough, well completed animal use protocol is essential;
- The ethical review by the ACC provides opportunities to reduce harms;
- Smaller institutions:
  - Increased expertise due to focussed research programs;
  - Decreased turnover of ACC members