



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