

Case study - A Multi-disciplinary Approach to Ethical Dilemmas



Dr Rayson Tan
Garvan /St Vincent's / VCCRI Research Precinct

Garvan Institute of Medical Research 384 Victoria Street Darlinghurst NSW 2010



www.garvan.org.au

Porcine Predicament

- Project approved for tissue sharing
- Tagged to pig usage in another project
- Pig usage slowed down in 1⁰ Project
- Insufficient sample size
- Limited time frame
- Researcher wants to use alternative pig lung tissue



TSX



Compliance

- *Code 2.4.13 - Investigators must conduct all aspects of a project in accordance with the conditions and requirements of the AEC approval and any subsequent amendments approved by the AEC*

Experimental Validity

- *Code 1.15 - Regardless of the potential benefits of a project, the methods used must be scientifically valid, feasible, well designed and carefully conducted so that there is a reasonable expectation that the aims of the project will be achieved. Projects that are not scientifically valid must not be performed, no matter how mild the impact on the wellbeing of the animals.*

Statistical Validity

- *Code 1.21: The number of animals used in a project must be the minimum necessary to achieve the proposed aim(s) and to satisfy good statistical design. The use of too few animals may invalidate the experimental result and result in wastage of animals.*



www.45Humor.com

TSX



Tissue Sharing

- Reduction in animal use
- Fosters collaboration between groups
- Effective use of resources

But

Are all tissue sharing the same?

Tissue Sharing

- *Code 1.26 – Where practicable, tissue and other biological material from animals being killed must be shared among investigators or deposited in a tissue bank for subsequent distribution.*



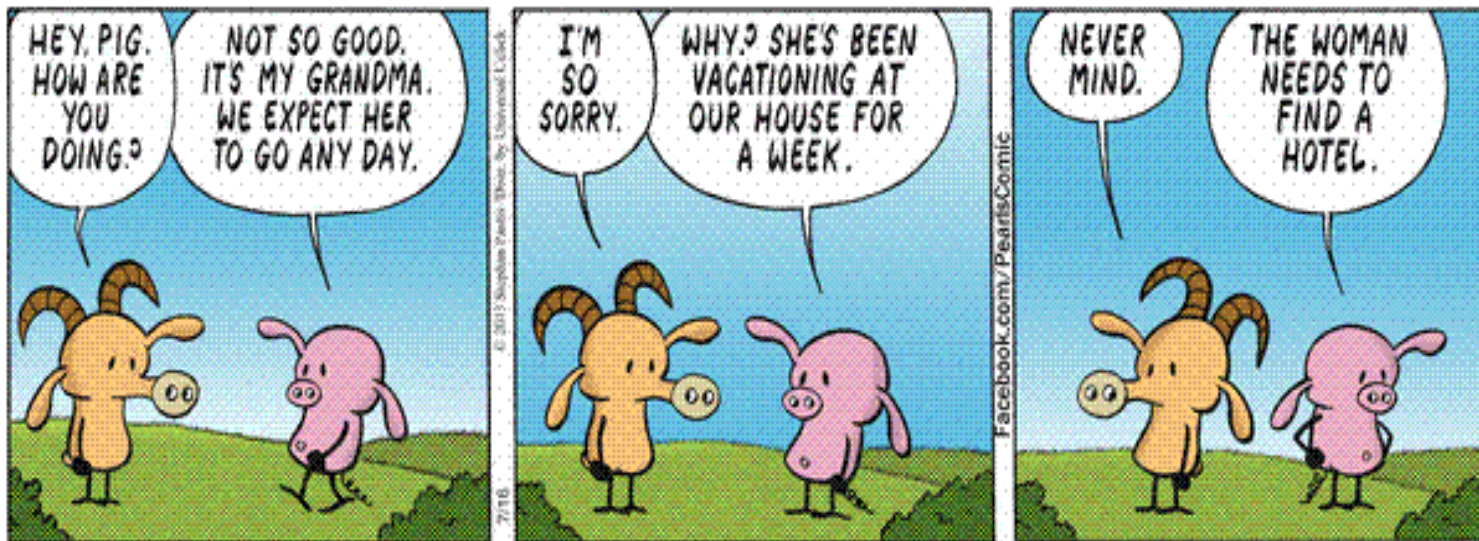
FunnyAnimalSite.com

Considerations

- Traceability (Source identification)
- Comparative models (Scientific Validity)
- Bio-containment
- Genotype, nutritional status
- Microbiological status
- General state of health

Scientific validity

- *Code 1.17: Animals used must be suited to the purpose of the project or activity, taking into account their biological characteristics, including morphology, physiology, behaviour, genetic makeup, temperament and behavioural conditioning, microbiological and nutritional status, and general state of health.*



Case Study

- Butcher/Abattoir - not the same 'surgical precision' to preserve tissue integrity
- Processing – dousing with hot water to remove fur – damage cells?
- Endemic respiratory problems?
 - *Mycoplasma hyopneumoniae*
 - *Actinobacillus pleuropneumoniae*

Case Study

- Species differences - variations in lobation, structure of pulmonary pleuras, interlobular septums and distal airways.
- Complete interlobular septums in some species but only incomplete septums in others
- Species differences in acini.

Eliminate confounders

- *Code 1.25 All possible steps must be taken to reduce factors that are not part of the experimental results, including the use of animals of known genetic, biological and behavioural background. Reduction of experimental variables may result in reduced animal use.*



Operational Considerations

- *Code 2.3.16 – In determining the duration of approval for individual projects, AECs should take into account the number of years for which the project is funded, any milestones or stages outlined in the project and any formal agreements between the institution and funding bodies.*

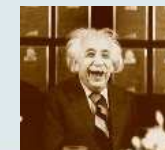
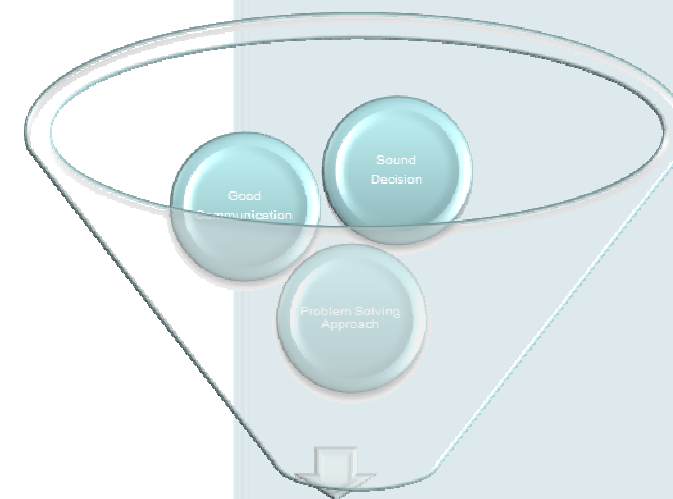
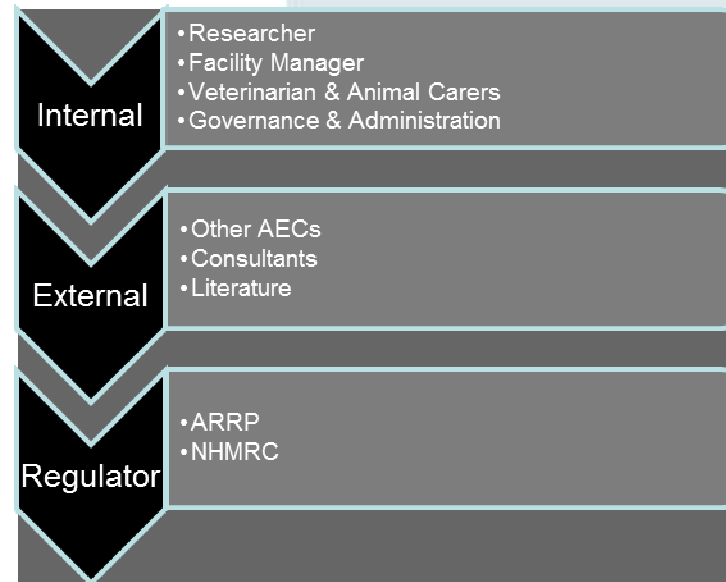
Know when to seek help!

- *Code 2.4.3 – Investigators should seek advice and identification from relevant experts, including other experienced scientists, veterinarians, animal care staff or specialist in laboratory animals, livestock or wildlife when necessary.*

Good communication

- Be inclusive in problem resolution
- Provide options whenever possible
- Ask the right questions
- Network with other institutions/ AECs
- Be consistent, reasonable and practical
- Facilitate information/resourcing – i.e. Human and animal bio banks, Ethitex





Animal Ethics Seminar 2013

Rayson Tan – Garvan/St Vincent's/VCCRI Research Precinct



ANY
QUESTIONS?

