Reduction Search Strategies for Animal Research
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Methods
- To retrieve bibliographic information regarding animal alternatives for a study investigating the use of ultrasound to visualize arteriovenous shunts in the rabbit animal model, literature searches were conducted in the databases:
  - OVID MEDLINE
  - OVID Agricola
  - Embase.com

Results
- Results from a search utilizing the Phase I AWIC model were examined for relevancy and compared with results retrieved with recent reduction search strategies, shown in this poster.
- Novel search strategies aimed for high recall versus precision.

Note: Statistical keywords and subject headings should be combined based on operator AND with terminology from the index used during the search.

OVID Agricola Search Strategy
- Adjacency statements with reduction keywords:
  - (animal$ or rabbit$) and (reducesh or fewer sh or less sh or decrease$) and labo$ or laboratory$ or experimental$ or animals$.

OVID Medline Search Strategy
- Adjacency statements with reduction keywords:
  - (power or sample) and (reducesh or fewer sh or less sh or decrease$) and (statistical$ or significance$ or power$).

Note: Statistical keywords and subject headings should be combined based on operator AND with terminology from the index used during the search.

Embase.com Search Strategy
- Title field search (combine with Emtree terms below to enhance precision):
  - (rabid$ or animal$) and (reducesh or fewer sh or less sh or decrease$)

Results
- The majority of articles retrieved with the OVID Phase I approach were relevant to the researcher, as they contained information regarding:
  - specific surgical techniques (reduction)
  - various models for animal research (replacement)
  - animal sample size (possible reduction)

However, most of these articles did not thoroughly address any methodologies to reduce the number of animals used in the study.

In comparison, articles retrieved using the novel search strategies focused on ways to reduce animal numbers (though such methods as using non-normative imaging techniques).

Conclusion
- The AWI requires PIs to put forth a "good faith" effort to locate animal research alternatives. In order to meet these requirements, we and/or information professionals need to employ a combination of search strategies, including the AWIC approach and strategies utilizing statistical terminology.