

Critical Review Form- Basic Science

Citation:

Overview

What question does the study answer?

Scientific model: (Human, Animal, Cells, Proteins, Genes, other...)

Methodology: (instrumentation, lab methods)

1. Did the authors choose the proper methodology to test their hypothesis?
2. Were all of the proper controls (positive and negative) included?
3. Were samples in measure in duplicate or triplicate?
4. Were standards and matrix controls used (if applicable)?
5. Was the timing of the study appropriate for the outcomes?
6. Was methodology consistent throughout the study?
7. If animals were used, were animals correct strains, age, weight, gender, etc?

Validity

1. Was standard deviation provided?
2. Were means or medians used? How did the authors handle outliers and missing data?
3. Were samples in the appropriate range (+/-) for the particular outcome?
4. Was the instrument sensitive enough to measure the outcomes reported?

Results

1. Summary of the results.
2. Were graphs and tables well labeled with figure legends?
3. Is there an overall trend, or do results of different figures contradict each other?
4. How precise is the method?

Relevance

1. What are the implications of the results for humans?
2. Can the results be applied to my patients?