### Project/Topic of your Clinical Question:

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<tr>
<th>Reviewer:</th>
<th>Today’s Date:</th>
<th>Final Evidence Level:</th>
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<tr>
<th>Article Title:</th>
<th>Year:</th>
<th>First Author:</th>
<th>Journal:</th>
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### Do the study aim/purpose/objectives and inclusion/exclusion criteria assist in answering your clinical question? □ Yes □ No □ Unknown

- Study Aim/Purpose/Objectives:

- Inclusion Criteria:

- Exclusion Criteria:

### Is a bench study congruent with the author’s study purpose above? □ Yes □ No □ Unknown

Comments:

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**Validity:** Are the Results of the Bench Study Valid or Credible?

1. **Was there a theoretical basis for the experiment (i.e. biologic or physiologic plausibility)?** □ Yes □ No □ Unknown
   
   Comments:

2. **Were the parameters used based on industry standard or relevant literature?** □ Yes □ No □ Unknown
   
   - If not, was there a substantive argument for using a different parameter?
   
   Comments:

3. **Was the study conducted in the field rather than a controlled, laboratory environment?** □ Yes □ No □ Unknown
   
   Comments:

4. **Were the study methods appropriate?** □ Yes □ No □ Unknown
   
   Comments:

5. **Were valid and reliable instruments/methods used to measure the results?** □ Yes □ No □ Unknown
   
   - Was evidence provided to support the validity and reliability?
   
   Comments:

6. **Was there freedom from conflict of interest?** □ Yes □ No □ Unknown
   
   - Sponsor/Funding Agency or Investigators
   
   Comments:
### Reliability: Are These Valid Study Results Important?

7. Was the description of the methods adequate to allow reproducibility?  
   - Yes  
   - No  
   - Unknown  
   **Comments:**

8. Was enough data provided to support study conclusions?  
   - Yes  
   - No  
   - Unknown  
   **Comments:**

9. What were the main results of the bench study? *(e.g., Helpful data: Page #, Table #, Figures, Graphs)*

10. Was appropriate allowance made for uncertainties in the analysis?  
    - Yes  
    - No  
    - Unknown  
    **Comments:**
    - What were the measures of statistical uncertainty *(e.g., precision)*?  
      *(Were the results presented with Confidence Intervals or Standard Deviations?)*
    **Comments:**

11. Were the results statistically significant?  
    - Yes  
    - No  
    - Unknown  
    **Comments:**

### Applicability: Can I Apply These Valid, Important Study Results to Treating My Patients?

12. Can the results be applied to my population of interest?  
    - Yes  
    - No  
    - Unknown  
    **Comments:**
    - Can the results of the bench study be translated to the clinical setting?  
    - Are the results relevant to my population or question of interest?
    **Comments:**

13. Would you include this study/article in development of a recommendation?  
    - Yes  
    - No  
    - Unknown  
    **Comments:**

### Additional Comments or Conclusions (“Take-Home Points”):
### Quality Level / Evidence Level

- Consider each “No” answer and the degree to which this limitation is a threat to the validity of the results, then check the appropriate box to assign the level of quality for this study/article.
- Consider an “Unknown” answer to one or more questions as a similar limitation to answering “No,” if the information is not available in the article.

#### The Evidence Level is:

- [ ] Good Quality Bench Study [5a]
- [ ] Lesser Quality Bench Study [5b]
- [ ] Not Applicable

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<tr>
<td><strong>TYPE OF STUDY / STUDY DESIGN</strong></td>
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<td>RCT</td>
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*RCT = Randomized Controlled Trial; CCT = Controlled Clinical Trial*

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Development: Development for this appraisal form is based on: