Instructions for reviewers

Overall Score		
Numeric	**Adjectival**	**Description**
1 - 2	Outstanding	The application has major strengths in most or all criteria. A few minor flaws may exist in lesser weigthed criteria but not to a degree that diminishes the overriding strengths.
3 - 4	Excellent	Numerous major strengths exist, especially in the more important criteria. There are a few weaknesses, but they may not be especially significant.
5 - 6	Good	Significant strengths and weaknesses are both present. The weaknesses are not insurmountable bu prevent the application from rising above the competition.
7 - 8	Fair	There is some value in the more important criteria but not to a degree that outweighs the major weaknesses.
9 - 10	Deficient	There are numerous major weaknesses in multiple criteria that are not outweighed by any redeeming strengths.

Criterion Score		
Numeric	**Adjectival**	**Description**
1 - 2	Outstanding	Numerous major strengths with no or negligible weaknesses
3 - 4	Excellent	Many major strengths with some minor weaknesses
5 - 6	Good	Some moderate strengths with some modeate weaknesses
7 - 8	Fair	A few strengths with many major weaknesses
9 - 10	Deficient	Very few minor strengths with numerous major weaknesses

- Discuss both strengths and weaknesses for each criterion, focusing on the strengths and weaknesses that influence the evaluation.

- Provide sufficient and specific details to explain why you consider an aspect of the criterion a strength or a weakness.

- For scored criteria, critiques should reflect the score.

- Use adjectives such as “serious,” “minor,” and “major” when describing strengths and weaknesses in a manner that is reflective of the criterion score.

- Reserve these statements for the extreme ends of the scoring scale.
    - State “No strengths were noted” only when you identify no strengths and score the criterion in the Deficient range (9–10).
    - State “No weaknesses were noted” only when you identify no weaknesses and score the criterion in the Outstanding range (1–2).
    - For all other scores (Excellent to Fair, 3–8), include an assessment of both strengths and weaknesses, even if you judge them to be minor.

- Address each criterion independently. Evaluative comments appropriate for one criterion should not appear under another criterion. For example, if the work could have impact, but the research strategy is not solid, the weaknesses of the Impact criterion should not be the flaws in the research strategy (which should be under the Research Strategy and Feasibility criterion only).

- Do not penalize pilot applications for not having preliminary data. If preliminary data are presented in the application, however, you should discuss them in the evaluation.

- Established investigator awards need preliminary data. If no preliminary data are presented in the application, you should discuss the lack of preliminary data as a weakness.

- For the **Significance** section, comment on:

- How well the proposed research project will make important contributions toward the goal of advancing CLA research, patient care, and/or quality of life.
- How well the proposed research project addresses a critical problem in CLA research, patient care, and/or quality of life.

- For the **Innovation** section, comment on:
  - How the research proposes new paradigms or challenges existing paradigms, or is otherwise highly creative.
  - To what degree the proposed research represents more than an incremental advance upon published data.

- For the **Investigator** section, comment on:
  - To what degree the research team's background is appropriate with respect to its ability to perform the proposed work, including whether there is evidence of sufficient clinical and/or statistical expertise (if applicable).
  - How the levels of effort are appropriate for successful conduct of the proposed work.

- For the **Approach** section, comment on:
  - How well the scientific rationale supports the project and its feasibility as demonstrated by a critical review and analysis of the literature, relevant preliminary data, and logical reasoning.
  - How well the hypotheses or objectives, aims, experimental design, methods, and analyses (and if applicable, the statistical plan, rationale for the statistical methodology, and power analysis) are developed.
  - If animal studies are included, how well they are designed to achieve reproducible and rigorous results, including the choice of model and the endpoints/outcomes to be measured.
  - If human subjects or human anatomical samples will be used, how well the plan for the recruitment of subjects or the acquisition of samples is justified and appropriate to accomplish the proposed work
  - How well the PI acknowledges potential problems and addresses alternative approaches.

Tips for writing effective critiques

- **Write in complete sentences**

- **Use the name of the criterion.**
  - For example, "This application is [not, somewhat, moderately, highly] innovative because ..." would be appropriate wording for the Innovation criterion.

- **Avoid inflammatory language.**
  - Inflammatory language is language that tends to stir up emotions, excite anger, disorder, or tumult, or invoke a physical reaction. This can include single words and phrases. It is one of the most common causes of conflict escalation. Ask yourself, "Would I like to receive this comment if I were the PI?" and "Could the PI interpret my comment as a challenge to his or her integrity or skill as a scientist or as being harmful to his or her career?" For example, rather than refer to an aspect of the application as "naïve" or "poor," describe the aspect as "not sufficiently developed."

- **Avoid absolute statements.**
  - Use less conditional words (e.g., most, many, much, few, little, some, usually, generally, often) rather than absolute words (e.g., all, every, each, always, never, none) or add phrases such as "there appears to be." For example: "Insufficient explanation is provided for the use of the mouse model" is preferable to "No explanation is provided for the use of the mouse model." "There appears to be no description of the assays the investigators will use in Aim 3" is preferable to "There is no description of the assays the investigators will use in Aim 3."

- **Avoid statements of opinion as fact.**
    - Make it clear that you are rendering a judgment based on information provided in the application. For example, “It is not clear from the application that the PI has the experience required to carry out the animal studies” is preferable to “The PI does not have the experience required to carry out the animal studies.”

- **Avoid rhetorical questions.**
    - Use declarative statements. For example: “It is not clear how the investigators will obtain the stem cell samples” is preferable to “How will the investigators obtain the stem cell samples?” “The application does not state who will perform the immunohistochemistry experiments” is preferable to “Who will perform the immunohistochemistry experiments?”