Jump ARCHES Programmatic Changes

The Jump ARCHES Program has been extremely successful in driving healthcare research and innovation at UIUC and OSF. In the context of our 10th anniversary, it was worthwhile to ask how the program could be improved.

Below are the changes to the Jump ARCHES program which are approved by the program Leadership and the Jump ARCHES Steering Committee.

1. Creation of dual tract applications:

Historically, Jump ARCHES has funded a mix of projects, ranging from research-focused efforts that aim to drive healthcare innovation, to efforts of a more translational nature with a focus on clinical impact. Since innovation-focused and translation-focused efforts are significantly different in terms of the expected impact and evaluation criteria, we created two separate tracks to recognize and streamline the evaluation of such projects.

- Created explicitly named Innovation and Translation Tracks for Jump ARCHES projects to:
  - Encourage and support more translation-focused projects
  - Position innovation-focused projects for greater success in external funding
- Simplified the Jump ARCHES grant evaluation process while improving the quality

Jump ARCHES Translation Projects
- Proposals to the translation track were primarily judged based on their potential for translational impact
- Translation track proposals primarily consist of previously funded innovation track projects which have reached a sufficient level of maturity to be candidates for translation into clinical implementation and evaluation
- In keeping with the goals of Jump ARCHES, all translation projects are based on a highly innovative technology or method.

This track is not intended to support straight-forward implementation efforts, such as process improvements, which do not require the participation of a full Jump ARCHES team consisting of academic and clinical investigators. Rather this track is meant to enable highly innovative projects to be brought to a successful clinical evaluation to provide data and insights that could support commercialization.

Jump ARCHES Innovation Projects
- Innovation Track supports the research activities that have been traditionally funded under Jump ARCHES. Proposals in this track are evaluated on their research potential, following previously established guidelines from the Jump ARCHES program.
- Require Phase 2 research track proposals to include more explicit forward-looking plans for the external funding that would be targeted at the completion of the Phase 2 award.
  - Identify the institute and funding program that would be targeted
  - Provide a tentative specific aims page for the follow-on project proposal which would be submitted after the Phase 2 is completed

- The review process for research track Phase 2 proposals provides explicit written critique on the external funding plan in terms of weaknesses and fundability, which can inform the Phase 2 research efforts

2. **Changes to solicitation and project management:**
   - Moved to a single funding call per year, in the spring semester
     - This simplifies the reviewing process and may improve proposal quality
   - Moved to a regular, fixed date for the spring funding call (the same date year over year)
     - Having a fixed date facilitates planning for all parties
   - Moved to a regular, fixed date for the start of all Jump ARCHES awards (the same start date year over year)
     - By aligning all projects to common start and end dates, the management of funds and NCEs become streamlined
     - This start date and the announcement of awards are chosen to facilitate the hiring of students on project funds in a timely manner
   - Required progress reporting at six (6), twelve (12), eighteen (18) months in addition to the final report one month after the end (24 months) of the project
   - Imposed additional constraints on NCEs
     - We would like to address the fact that nearly all projects request one NCE and some projects have requested 3 of them
       - On the one hand, funds that are allocated but not spent are not advancing the mission
       - On the other hand, ramping up a new project and finding an appropriate student is not always easy. Therefore, we should tradeoff between these perspectives
     - NCEs will be tied to a threshold on spending
       - 75% spending of project funds required for an NCE
     - Only one NCE will be granted for a maximum of one year
   - Create materials to promote the program and inform potential proposers.
     - We will create a slide deck that highlights the goals and processes of Jump ARCHES and make it available from the program website.

3. **Changes to program review:**
   - The translation and innovation track proposals are first reviewed in separate groups and ranked within each group. Then the two sets of proposals are merged for the purpose of assessing funding priorities and constraints.
   - To move closer to the NIH process, the reviewing panels which currently scores all proposals prior to the steering committee meeting *actual panel meetings* prior to the steering committee meeting.
     - The structure of the reviewer panel meeting and review criteria follow standard practices used in NIH panel reviews.
     - The panel consists of 4 researchers and 4 clinicians who agree to meet in-person and serve on the reviewer panel for a 3-year appointment.
   - The Reviewer Panel Meeting is organized as follows:
     - Divide proposals into two groups: discussed and not discussed.
       - Not discussed proposals having an initial score below a threshold are rejected without panel discussion. However, there is a period in the meeting in which panel members can move a proposal from the not-discussed category and force a discussion.

- o For each discussed proposal, one reviewer is assigned to present that proposal to the panel.
  - During the discussion period, the presenter briefly summarizes the proposal and the criticisms of the reviewers.
  - The review panel members then have an opportunity to discuss the proposal.
  - Following the discussion period, every panelist votes on the proposal.
  - The average impact score of all panelists then becomes the score for the reviewed proposal.
- o The advantage of this approach is involving the collective expertise of the panel in scoring each proposal, reducing the randomness that can arise when the scores come only from a small number of reviewers.
- The Steering Committee meets as normal, but with the following additional characteristics:
  - o Since the impact scores now reflect a more substantive discussion by the reviewing panel, we gain a more valuable signal for decision making.
  - o The approach of funding proposals which lie above a cut-point on scores are retained.
  - o Prior to the Steering Committee meeting, we identify the proposals that lie within the borderline range of scores and the discussion is focused on those proposals. Proposals whose scores below a cutoff are also identified and they are not discussed.
  - o This can support a more granular decision-making process in which the Steering Committee might set a threshold but then make additional adjustments to the funded set of proposals based on a discussion of the panel reviews.
  - o This approach will improve our ability to capture the collective insight of the steering committee in the funding decision and would provide some flexibility in the case where a conservative choice of the cut-off leaves a few attractive proposals off the table.