NCATS Advisory Council
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Concept Clearance

DEVELOPMENT OF SMART PLATE TECHNOLOGY

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Description of the Goal

- The key goal of this SBIR solicitation is to fundamentally transform the idea of a microtiter plate from being a single-use vessel for an experiment to becoming an instrument which could provide more data about the samples under test and actually provide measurements in the plate itself.

Description of the Outcome

- **Potential impact?**
  - The potential impact of this proposed technology is to address the growing need for a variety of research areas to have a more robust platform for which experiments are performed. For example, in tissue chip research, a growing area of need is for more complex and capable microfluidic devices and/or platforms for which experiments will take place.

Description of the Outcome

- **Criteria for evaluating success?**
  - As part of the management of this SBIR contract, NCATS will monitor the progress of SBC Phase 1 deliverables in order to position for a Phase 2 contract.
- **What is the major obstacle/opportunity to address?**
  - To improve the current state of technology and capabilities of microtiter plates.

Description of the Initiative

- **Relevance to the NCATS' mission?**
  - Developing an innovative solution to address a translational problem and then demonstrate that the approach works to help the larger scientific community.
- **Brief summary of ongoing research/activity in this area?**
  - NCATS is currently funding an SBIR contract with IonField Systems to develop a microtiter plate cleaning technology.
  - The Tissue Printing Intramural initiative and Tissue-on-a-Chip Extramural grant programs could directly benefit from advances in this area.