TechConnect VENTURES

Sprint Challenge Brief:
Innovations in 3D Bioprinting

BACKGROUND

Much like additive manufacturing, or 3D printing, has revolutionized industrial fabrication, 3D bioprinting has a similar potential in the medical field. Bioprinting allows for the restoration of damaged tissues and organs, creation of replacement tissues and organs for trauma, or as testbeds for pharmaceutical development operations. The advantages are numerous including less risks for the patient, mitigating organ scarcity, and potential personalized treatment leading to improved clinical outcomes.

This sprint address primarily technologies associated with the processing phase of 3D bioprinting, in addition to bioprinting material selection that occurs in the pre-processing phase.

To take advantage of this promising technology, advancements are needed including:

- New materials:
  - Bioinks including synthetic or natural polymers, cells, biomaterials
  - Biopaper including hydrogels and polymers
  - For scaffolding
  - Delivering performance advantages:
    - Improved biocompatibility or biodegradability
    - Preservation of shape/function of printed tissue
    - Maintenance of porosity and mechanical properties
- Innovations in hardware for printing via:
  - Inkjet printing
  - Laser-assisted printing
  - Stereolithic printing
  - Extrusion-based methods
- Next-generation bioreactors

TechConnect's clients are interested in learning about all technologies which enable or advance bioprinting as a viable pathway for medical research or trauma care.

All technologies and maturities are of interest as are all potential tissues or organs as end products. Approaches which provide incremental improvements are also highly sought.

Respondents to this Sprint will be considered for engagement by multiple TechConnect clients, representing a variety of industries and applications. Furthermore, select respondents may also be invited to demo, present, or showcase their proposed technology at the upcoming TechConnect World Conference in July 2023. Respondents are not obligated to participate in the Conference and non-participation will not negatively impact any potential engagement with any TechConnect clients. Event participation fees may apply. There is no cost to submit a response.

The goal of this sprint is to facilitate contact and interactions between the Sprint sponsor and commercial entities (including Start-ups) or technology developers or research organization/university in this space. Submissions from all viable subject matter experts are of interest including those from academia and commercial entities.

REQUIREMENTS

Solvers submitting an Entry are encouraged to highlight capabilities in their Submission that meet criteria including:

- Description of the innovation
- Anticipated performance
- End product(s) produced
- Advantages over other approaches
- Technical maturity

BUSINESS OPPORTUNITY FOR SOLVERS

All complete and eligible Entries will be included in an exclusive Innovation Opportunity Report that will be presented to our client. Solvers with well-matched capabilities may be contacted directly by either TechConnect Ventures or the client to discuss potential partnership opportunities, including – but not limited to – demonstrations, consulting, contract research, licensing, and more. Top-rated Entries may also be invited to register or participate in an upcoming TechConnect Ventures event or pitch program.

PARTICIPATION RULES & GUIDELINES

Solvers are encouraged to review the Rules and Guidelines provided on the Sprint page for details about participation, including submission criteria, eligibility information, and more.

QUESTIONS? Contact Executive Director, Nick Kacsandi at info@techconnectventures.com