RE: Call for Acute Mechanical Circulatory Support Research Fellowship Applications

Applications for the July 1, 2019 to June 30, 2020 academic year will be accepted on a rolling basis starting in July 2018.

Dear Program Director,

Over the past decade there has been an exponential growth in the use of non-durable, percutaneously delivered acute mechanical circulatory support (AMCS) technologies to support high risk invasive procedures, advanced heart failure, and cardiogenic shock. Tufts Medical Center has been a leader in the development of several AMCS technologies and has provided key insight into the mechanism of action, clinical utility and novel uses for existing and emerging AMCS devices. There is a growing need for physicians with advanced expertise in the fundamental principles of AMCS and application of this technology to patients.

With this background in mind, we have developed an Acute Mechanical Circulatory Support Research Fellowship program at the Tufts CardioVascular Center. AMCS fellows will spend one year performing preclinical and clinical research in the field. Clinical responsibilities will be limited to participation in outpatient clinic one day per week.

The objective of the AMCS Research Fellowship at Tufts Medical Center is to provide advanced training in the development, management, and both clinical and preclinical science of AMCS devices.

The AMCS Fellow will gain:

1. A fundamental understanding of engineering principles around axial-flow, centrifugal-flow, pulsatile, and roller pump MCS devices including device function, device development, and hemolysis
2. An advanced understanding of cardiovascular hemodynamics including device impact on biventricular function and ventriculo-vascular coupling in the pressure-time and pressure-volume domains
3. The ability to design and execute preclinical, large-animal research for short- and long-term assessment of device function using models of acute myocardial infarction and chronic heart failure
4. Experience with clinical database development and management for all AMCS devices implanted at Tufts Medical Center and in collaboration with several centers around the United States.
5. Experience with execution of multicenter clinical trials and registries focused on AMCS.
6. Engagement with key industry leaders in the field of AMCS including site-visits and tours of engineering plants with device manufacturers.

Eligibility: Eligible applicants must hold an MD, DO or MD/PhD degree. Current 2\textsuperscript{nd} or 3\textsuperscript{rd} year medical residents or Cardiology fellows currently enrolled in an ACGME certified training program are welcome to apply. Applicants with prior research experience are preferred, proficiency with Microsoft Excel, Systat, Redcap, or other statistical/database programs are preferred. Highly energetic applicants with a focused interest in translational research involving Acute MCS and the ability to collaborate in a team-like environment are preferred.
Application Process: All applicants must submit 2 letters of recommendation and a personal statement (500-750 words) summarizing their interest in the field of AMCS and why they believe this fellowship would contribute to their career trajectory. Applications should be submitted by email to Dr. Kapur (nkapur@tuftsmedicalcenter.org).

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Best regards,

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