Background - IEM believes strongly that interdisciplinary, externally-funded centers are necessary to tackle the difficult biomedical challenges we are faced with today. Centers can span disciplines, build new research communities, foster innovative collaborations, and unlock new progress that will improve human health. The mission of IEM is to *turn science and engineering into medical practice*. Facilitating the development of new centers that bring engineering approaches to bear on health problems is a core IEM strategy to fulfill this mission.

IEM’s Center Accelerator, which is the successor to its Group Grant Program, facilitates the development of highly competitive, center-level grant applications by offering substantial pilot awards along with dedicated professional staff support.

Funding – Up to $250,000 available over two years ($125,000 annually) contingent on successful review of year 1 activity. We anticipate making two or three awards in 2020. Funding will support scientific, strategic, and community-building efforts as described below. Applicants must develop a center-grant development roadmap in consultation with IEM leadership. Awardees who develop an approved center-grant roadmap and make adequate progress on roadmap tasks within the first year may be eligible for their funding to be renewed for a second year.

- The majority of the budget should be dedicated to collecting the preliminary data that will support subsequent center-level grant applications.
- A smaller portion of the budget should be dedicated to activities designed to facilitate the development and competitiveness of your team (e.g. hosting events, strategic planning, leadership coaching, communications, etc.)
- Center Accelerator grant PIs should allocate a minimum of 1.0 calendar months of effort per year to this project.

Staff Support – IEM is developing an internal consulting firm that will provide staff support to Center Accelerator clients. IEM staff and Center Accelerator grant PIs (clients) will develop a scope of work collaboratively. IEM will assemble a team of professionals to deliver this scope of work, drawing from partnerships across the university to assemble project teams with the necessary skills and expertise to accelerate each client’s center development activities. High-quality grant writing will be the core service provided by the Center Accelerator with supporting services of project management, administrative support, event planning, strategic planning, and commercialization support.

IEM Centers – IEM has designed the Center Accelerator to administer awarded centers in addition to supporting their initial development. There are many benefits to this model including: development of
institutional knowledge regarding center administration best practices, more stable career path for center administrators, availability of highly skilled and experienced staff to support newly-funded centers, and potential for a team approach to center administration that allows staff to specialize. In addition, the Center Accelerator will ease the strain on departmental resources. IEM Center Accelerator clients will have the opportunity to submit their center applications through IEM, thereby positioning their projects for administration through IEM. Center Accelerator clients are encouraged, but not required, to submit their center grant applications through IEM. An indirect cost sharing agreement would be negotiated with all stakeholders prior to grant submission. This model has the added benefit of allowing CSE centers to count towards the Medical School Blue Ridge rankings.

**Eligibility** – Multiple PI teams are encouraged for Center Accelerator grant proposals. Ideally, there will be one PI each from the Health Sciences, especially the Medical School, and CSE with participation from other colleges, including CBS and Vet Med, encouraged. All PIs and Co-Is must be IEM members or must have submitted an application for IEM membership at the time of the proposal submission. Proposals can be in any area of engineering that is related to biomedicine and health. The proposed research should aim to address a major biomedical problem with a multidisciplinary approach, including a balanced group of investigators from the health sciences, engineering, and other disciplines who have demonstrated track records of conducting externally funded biomedical research. See Appendix I for proposal instructions.

**Reporting** – Center Accelerator Grant recipients have two reporting obligations: 1) a short presentation at the 2020 IEM Annual Conference, and 2) an annual report (up to three pages) describing group activities due November 1, 2020.

**Proposal Evaluation** – Proposals will be peer reviewed with final funding decisions made by IEM leadership. Proposals will be evaluated on the following criteria:

1. Scientific strength and impact
2. Potential to generate new external, center-level funding
3. Expertise and track records of investigators
4. Strength of interdisciplinary collaboration

**Project Period:** The project period is for 12-months starting February 1, 2020.

**Deadline:** Applications should be submitted in a single pdf to iem@umn.edu by January 6, 2020, 5:00 PM. Questions and application submissions regarding any IEM grant program may be directed to: iem@umn.edu, or Stephanie M. Scott at 612-624-8483.
Appendix I: Center Accelerator Proposal Instructions

Proposals should contain the following:

- **Cover Page** (up to 1 page)
  - Project Title
  - Contact PI (name, department, and email address)
  - Other PIs (name and department)
  - Co-Is (names and departments)
  - Project summary (max. 250 words)
  - Department head statement of support

- **Abstract** (up to 1 page) - Provide a summary of the long-term scientific goal and specific aims for the research program and impact of the center if funded.

- **Research Plan** (up to 2 pages) - Elaborate on the scientific goals of the proposed center and their significance. Describe any preliminary data that you propose to collect in order to maximize your competitiveness for external funding.

- **Center Development Plan** (up to 2 pages) – Describe your team’s plans to realize your goals. How will you: organize and coordinate your activities, develop strategies, and write grant applications? How do you proposed to engage the IEM Center Accelerator staff to move your team forward? Describe specific center grant funding opportunities (may be multiple) to be pursued, timeline for submissions, and any planned group activities to develop and sustain research collaboration networks.

- **Prior IEM Funding** (no page limit) - If the PI or Co-PI previously received IEM seed funding as PI or Co-PI, the following must be provided. List all IEM-funded projects with project title, PI(s) names, duration, and amount. List any results that you have gained from each IEM-funded project, specifically:
  - External Funding (agency, total amount, grant title, dates, your role)
  - Peer Reviewed Journal Publications (title, authors, journal name, pages, year)
  - Invention Disclosures to UMN
  - Patent Applications (note if awarded)
  - Students supported and notable achievements of students
  - Other achievements

- **References** (up to 1 page)

- **Biosketches** - Current NIH-formatted Biosketches for all investigators, including other support information

- **Budget**
  - Up to $125,000. Applicants should thoroughly justify the amount proposed and should only propose what is needed. If PIs have existing external funding, it should be made clear why pilot data cannot be produced using existing external funding.
  - The IEM Center Accelerator funds can be used to support justifiable costs associated with the proposed activities, including research assistant(s) support, materials and supplies, necessary travel and faculty release time (up to 1 week
per PI per external proposal development).

- **Matching funds** – if available. Include letter from matching entity.
- **Formatting** – NIH-style formatting is required