



**Kilachand Postdoctoral Fellowship**  
**Multicellular Design Program, Biological Design Center, Boston University**

At the Biological Design Center at Boston University, we are working to build an interactive and collaborative environment across disciplines in the newly funded **Multicellular Design Program** (MDP; see <https://sites.bu.edu/mdp/>). The mission of the MDP, which is funded through the Rajen Kilachand Fund, is to understand the underlying design, assembly, and control principles governing multicellular systems, and to take advantage of these principles for the development of new technologies and therapies.

The research community has developed a deep understanding of cells, their inner workings, and how they function as individuals; however, in nature, many cells function as part of complex, multicellular systems. Cells in our own tissue and organ systems, the bacteria that live in our gut or cause infections, and even cancers operate in coordinated communities with emergent properties that are not present in isolated cells. Exploiting its unique combination of strengths in Synthetic Biology, Microbial Engineering, Tissue Engineering, Data Science, and Biophysics, Boston University is uniquely poised to address this major gap by establishing a new Multicellular Design Program. The Multicellular Design Program will establish a physical and organizational infrastructure that stewards a self-sustaining, vibrant community of Boston University scientists to pioneer this critical new field. Specifically, the MDP will provide:

- 1) a platform for scientists across Boston University to bring to bear their expertises from computing, physics, mathematics, engineering, biology, and medicine into a major integrated effort to understand the design principles of multicellular systems,
- 2) a new training ground for students and fellows at these interfaces, and
- 3) a new science that researchers across the globe can participate in.

This program will shepherd in a new era in engineering biology with major societal impacts and demonstrate these impacts through creating synthetic multicellular communities for the rational design of smart medical therapies.

Kilachand Fellows will form the foundation of our interdisciplinary community and will help catalyze new directions in our science. Fellows will play a key role in integrating strengths of BU in new ways, combining theory, data sciences, synthetic biology, microbiology, immunology, tissue engineering, and regenerative medicine, amongst others. These fellows are expected to be active participants in future Multicellular Design Program seminars and workshops, and they will have the opportunity to help shape this emerging field and its foundations here at Boston University.

Qualifications:

- Candidates with a Ph.D. in biology, biomedical engineering, computational biology, computer science, physics, chemistry, or related fields may apply. M.D.-Ph.D.s are also welcome to apply.
- Applicants must have substantial track records of demonstrated productivity, success, and leadership.

Skills:

- Strong quantitative analysis skills
- Knowledge of challenges and opportunities in the multicellular design research space
- Strong writing and verbal communication skills

Additional Information:

Appointment will be for one year, with option for competitive renewal. Fellows should identify a primary mentor and co-mentor from the MDP faculty (see <https://sites.bu.edu/mdp/team/>) and secure a commitment from them to mentor the fellow for the entire Fellowship period. BU offers competitive salary and excellent benefits to its community of postdoctoral researchers. For more information on the benefits available to postdoctoral associates at BU, visit <https://www.bu.edu/postdocs/>

Please submit the following materials to <https://sites.bu.edu/mdp/apply/> by **March 26, 2021**:

- 1) A current curriculum vitae, which includes names and contact information of your three references.
- 2) A two-page proposal including Significance, Aims, and Approach sections.

In addition, letters of reference from each of your three references (i.e., three letters) must be submitted through the separate Letters Portal (<https://sites.bu.edu/mdp/kilachand-fellow-portal-for-support-letters/>) and a single letter of support from the mentor and co-mentor must be emailed to the program administrator at [davepool@bu.edu](mailto:davepool@bu.edu) by **March 26, 2021**.

Contact Email: [davepool@bu.edu](mailto:davepool@bu.edu)

Equal Opportunity Employer:

We are an equal opportunity employer, and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability status, protected veteran status, gender identity, sexual orientation, pregnancy and pregnancy-related conditions or any other characteristic protected by law.

Maximum number of references required: 3

Maximum number of references allowed: 3

Contact: Biological Design Center, Boston University

Online App Form: <https://sites.bu.edu/mdp/apply/>