



CMaT's Research Experience and Mentoring (REM) Program

Summer 2024

The Engineering Research Center for Cell Manufacturing Technologies (CMaT) is an NSF-funded, collaborative project between the University of Puerto Rico at Mayaguez (UPRM), the Georgia Institute of Technology, the University of Georgia, and the University of Wisconsin-Madison. The Center aims to enable robust, scalable, low-cost biomanufacturing of high-quality therapeutic cells to bring affordable, curative therapies against currently incurable and chronic diseases to everyone. As part of the Center's initiatives, this year we will be hosting a Research Experience and Mentoring (REM) Program for high school students. Some of the program highlights are listed below:

- 6-week, hands-on summer research experience in CMaT Labs
- Year-long virtual mentoring (with both formal and informal mentors)
- Mentorship program for research, as well as academic/professional development
- Cross-CMaT cohort (interaction with other participants, instructors, and faculty across all CMaT sites)
- Development of professional skill sets, including awareness of regulatory framework for cell therapies, introduction to relevant ethical considerations, and scientific communication principles
- Participation in CMaT Virtual Symposium (Late July)
- Potential participation in NSF Emerging Researchers National (ERN) Conference in STEM at Washington, DC (if project is selected)

Program Objectives:

1. Introduce high school students to cell manufacturing and encourage them to pursue additional training and careers in this field through robust research and mentoring experiences.
2. Deepen research participant (and mentor) understanding of science and engineering concepts & CMaT professional and technical skill sets, as well as develop the ability to integrate these underlying principles into their research.
3. Diversify the pool of future engineers and scientists through recruitment of participants from underrepresented groups in engineering.
4. Provide mentor training for faculty, graduate student, and post-doctoral mentors to ensure high-quality experiences for all participants.

5. Integrate research participants into the broader CMaT ecosystem to foster ongoing collaborations with them and their institutions.
6. Contribute to the broader research goals of the CMaT ERC through participant research activities.

Up to four (4) high school students will be selected to participate in the CMaT REM program at UPRM. To be eligible for this program, students **must have completed their 10th or 11th grade** at school. Senior students graduating in May/June 2024 are not eligible to participate in this program. All research activities will be performed under the supervision of a graduate student and/or faculty mentor. The 6-week summer component of the research experience will **start on June 17, 2024 and end on July 26, 2024**. Students accepted into the program must be available for the entire duration of the program. The daily work hours during the summer will be from 8:00 AM to 4:30 PM Monday thru Friday. The program does not include housing and/or food arrangements, so students must be **dropped-off and picked-up daily by a responsible adult**. During the following academic year, a series of virtual seminars and/or workshops will be coordinated on a monthly or bi-monthly basis (typically late afternoon on a weekday). **Complete fulfillment** of the program requirements and deliverables will make the participants eligible for a stipend of **\$3,000.00**, to be paid in two (2) installments during the corresponding year.

The application platform for the 2024 CMaT REM program will be available late March. Students interested in applying for the REM program **should be ready to include a copy of their high school transcript and prepare a 1-page essay** explaining their reasons for wanting to participate in the program. The essay must be written in English.

The final step in the selection process will be a 10-15 minute video interview with the program director to be coordinated via Zoom or Microsoft Teams. Selected participants will be notified of their acceptance by mid-May.

Additional questions regarding the program may be directed to the REM program director and CMaT's Diversity & Inclusion Co-director, Dr. Agnes Padovani, who may be reached via email at: agnes.padovani@upr.edu. Additional information about the CMaT ERC may be found at: <https://cellmanufacturingusa.org>.