

WHY SUPPORT RESEARCH AT THE DEPARTMENT OF DEFENSE?



SO YOU CAN HELP RESEARCHERS HARNESS THE POWER OF DATA RESPONSIBLY, TREAT CANCER MORE STRATEGICALLY, AND OPEN THE DOOR TO FUTURE SYNTHETIC BIOLOGISTS.

And that's just for starters. Through \$20.6 million in research funding from the Department of Defense (DOD) in FY2022, Boston University has been creating world-class science and technology in service of DOD's ultimate mission: protecting America and everyone in it.

■ EASING THE TENSION BETWEEN DATA TRANSPARENCY AND PRIVACY

Plenty of data could greatly benefit society, but some of its most revealing information is highly sensitive. Thanks to a \$4 million DARPA grant, a team of Boston University researchers, led by Mayank Varia, an associate professor in the Faculty of Computing & Data Sciences, may be close to remedying that conflict. They are using cryptographic tools to allow any entity with sensitive data to verify compliance with the law, regulation, or contractual agreement while maintaining privacy to protect national or civil security, legitimate business needs, or personal freedom. That way privacy can be protected while assuring the data is legitimate. In other words, improving modern life may have just become a little less complicated.

■ SMARTER BREAST CANCER CARE

Imagine a wearable device that reveals how cancerous tumors are responding to therapy and then having your physician quickly identify better treatment options if necessary. Boston University engineering professor Darren Roblyer is turning imagination into reality with a non-invasive monitor that reports changes in tumor growth. With such timely information, exposure to high doses of cancer-fighting treatments with harsh side effects might be avoided, and survival rates increased by identifying the optimal time to deploy cancer drugs. Roblyer won a prestigious Department of Defense Breast Cancer Research Program Era of Hope Scholar Award for exceptionally talented early career researchers with a high potential to transform breast cancer research.

■ WHAT THE HECK IS SYNTHETIC BIOLOGY?

Thanks to a \$2.3 million DOD grant, more people will learn about this cutting-edge field, especially underserved high school students. Boston University engineering professor Douglas Densmore is heading up an outreach program to introduce young learners to a world where the engineering of biological devices is inspired by computers, using living organisms. Densmore will also help students hone science communication skills and introduce them to mentors who can position them to succeed in competitive college applicant pools. With synthetic biologists poised to transform medicine, energy, and materials science, the door to the future just opened a little wider.

We hope you'll give strong consideration to supporting research funding for the DOD. If you have any questions or would like to discuss the role that DOD research plays in our daily lives, please visit bu.edu/federal.



BOSTON UNIVERSITY IS BREAKING DOWN BARRIERS FOR FUTURE SYNTHETIC BIOLOGISTS.

→ BU.EDU/FEDERAL