

Project Title: Impactful Biomedical Research at Tufts University: A Plan for Long-Term Sustainability

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Topic Category: Research

Background. Sustainable biomedical research requires a critical mass of diverse scientists who recognize that innovation increases through collaboration. Interdisciplinary sharing of ideas and resources is a critical component of maintaining competitive research. Tufts University is committed to deepening existing research programs and enhancing collaborations across its campuses. Despite this commitment, however, cultural, administrative, and financial barriers create obstacles to effective cross-school partnerships. The goals of this Institutional Action Project were to identify common areas of scientific excellence across Tufts, explore options to strengthen collaborations among its campuses, and develop achievable recommendations to enhance the translational impact and sustainability of biomedical research across the University.

Methods. After gathering information from publically available websites, I conducted interviews with 29 individuals within Tufts University, Tufts Medical Center, and other Research Institutes. This information was incorporated into a report highlighting common research missions and objectives across Tufts, organizational barriers across the University, and ways to collectively improve Tufts' research standing.

Results. The significant research theme that emerged from discussions with University stakeholders was "One Health", an approach unique to Tufts to optimize health for humans, animals, and the environment at the local, national, and global level. This theme is represented by ongoing research in various disciplines at Tufts' Medical, Veterinary, Dental, Nutrition and Engineering Schools, the Human Research Nutrition Center on Aging, the Clinical Translational Science Institute, and Tufts Medical Center. Within "One Health", four areas of excellence were identified: Neurosciences; Obesity; Chronic, Infectious and Immune Mediated Diseases; and Cancer. Primary barriers to collaboration are Tufts' three geographically distinct campuses and decentralized funding model, leading to lost opportunities for synergy across the Schools. Based on my analysis, I prepared a report detailing specifics about these barriers that impede Tufts' ability to conduct collaborative, interdisciplinary biomedical research. I also presented several organizational models for a Tufts Research Institute (Virtual, Brick & Mortar, and a combined model) as a solution for the Tufts community to collectively enhance its overall research initiatives, best compete for funding, and elevate Tufts' international status. This report was provided to Senior Leadership for consideration in the strategic planning process.

Conclusions. As federal biomedical research budgets decrease, research programs countrywide are looking for creative ways to thrive by growing their important investigational work. This institutional initiative has identified common areas of biomedical excellence at Tufts University and options for creation of a Tufts Research Institute. Long-term outcomes will include enhanced research efficiency and sustainability across Schools, improved visibility and viability of translational research across the University, and a platform to seek increased funding in defined translational areas.