A BRIGHTER WORLD THROUGH RESEARCH AND SCHOLARSHIP: TUFTS UNIVERSITY STRATEGIC PLAN

In January 2017, Tufts University launched a university-wide research and scholarship (R&S) strategic planning effort. Our goal was then, and remains, to build on our current strengths in research and scholarship, identify new insights, and chart our path forward as an innovative, civically engaged, student-centered, tier-one research university.

Under the guidance of a 24-member steering committee composed of faculty, staff, students, and postdoctoral fellows, our aim was to create the best possible conditions for R&S. That job began by identifying R&S priorities with the potential to solve pressing societal and global challenges—grand challenges—that build on Tufts’ core strengths as an institution. We coupled this aim with an effort to recognize and address structural impediments to success in all areas of research at Tufts.

The first phase of planning included extensive input from both internal and external stakeholders—faculty, staff, students, postdoctoral fellows, alumni, research collaborators, funders, thought leaders, and other sources. Through one-on-one interviews, focus groups, surveys, online feedback, and other data gathering methods, the steering committee identified potential research priorities and necessary areas for collaboration across disciplines.

The R&S thematic priority areas identified in the strategic planning process align with and complement Tufts’ 10-year strategic plan (T10) and those of the schools and centers within Tufts; build on Tufts’ existing strengths; have the potential for leading-edge innovation; provide avenues for cross-disciplinary collaboration within and outside of Tufts; and most importantly, have the potential to impact large numbers of people and societies. The improvements to critical infrastructure identified will enable and facilitate these breakthroughs.

As we move forward to accomplish what we believe will be a new phase in R&S at Tufts, we remain committed to seeking the input and support of the Tufts community, as well as worldwide leaders in these critical thematic areas. In fall 2018, with the official launch of the implementation phase of the Research and Scholarship Strategic Plan (RSSP), “A Brighter World Through Research and Scholarship,” we will again challenge our community to take part in this exciting new era for Tufts.

Anthony P. Monaco, President

Deborah T. Kochevar, Provost and Senior Vice President, ad interim

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I. INTRODUCTION

Tufts University is dedicated to producing the highest levels of research and scholarship (R&S). R&S at Tufts is about breaking down walls—between fields, between faculty and students, between what is and what could be. Tufts’ world-class researchers push boundaries and ask questions that will take our knowledge as a society to the next level.

Innovation and interdisciplinary collaboration are the foundations of discovery at Tufts, fueled by more than 1700 faculty. For Tufts’ researchers, scholars, students, and staff, the fruits of intellectual labor—to learn, produce knowledge, and contribute to society—define an abiding commitment to being a student-centered research institution. With research experience and strengths ranging from health to humanities, technology and the environment, population and food challenges, it’s clear this work produces knowledge and understanding, and impacts the greater good on a global scale.

This report details not only the results of Tufts’ R&S Strategic Plan, but the processes and community input required to develop it. The R&S strategic planning process serves to secure Tufts’ strengths and accelerate future growth and leadership in R&S, and affirms Tufts’ mission to provide meaningful opportunities for all members of the research and scholarship community. The planning process called forth ideas and efforts from all parts of the university and entailed a deep understanding of Tufts’ capabilities, as well as areas for improvement, in response to opportunities and challenges. It will take thoughtful planning to implement this vision for the future of Tufts’ R&S.

GOALS

Advance research and scholarship

Increase students’ transformational experiences

Enhance global and societal impact
II. EXECUTIVE SUMMARY

In January 2017, at the request of the president and provost of Tufts University, Simin Nikbin Meydani, vice provost for research, launched a research and scholarship (R&S) strategic planning effort to help guide future innovations at the university. Using a stakeholder-driven approach, the effort began by assembling a 24-member steering committee composed of faculty, staff, students, and postdoctoral fellows, with the goal of strengthening research and scholarship endeavors at Tufts, thereby upholding the University’s mission as a student-centered, top-tier research institution and making a positive impact on society in the years to come.

The Planning Phase
Commencing with an inclusive effort to pinpoint externally validated grand challenges which Tufts as an institution is well positioned to address, the planning team developed strategic recommendations based on extensive information gathering from within Tufts’ R&S community, from its leadership, students, postdoctoral fellows, alumni, and trustees, and from thought leaders, research collaborators, funders and other supporters outside the university. Data were derived from

- 95 one-on-one interviews
- 16 focus groups consisting of 91 participants
- online survey distributed to 1700 faculty members
- review of the T10, and school-based strategic plans and other sources
- online feedback via the RSSP website

Analysis of these data identified two key areas of focus needed to advance R&S at Tufts: **Priority Area** and **Critical Infrastructure** for which faculty and staff working groups were formed.

### Priority Area Working Groups

- Climate, Food, Water, and Energy
- Comparative Global Humanities
- Equitable Society
- Living Technology
- One Health

### Critical Infrastructure Working Groups

- Core Facilities
- Global Engagement and Impact
- Industry Collaboration
- Resources, Barriers, and Facilitators of Research and Scholarship
**Priority Areas**

Priority area working groups built proposals that would make the best use of Tufts’ unique combination of expertise and resources in the five priority areas. Twelve research proposals were presented to the Steering Committee, and a total of eight proposals were selected for seed funding.

**The first four proposals to receive seed funding over the next three years include**

- Center for Integrated Management of Antimicrobial Resistance (CIMAR)
- Culture, History, and Translation
- One Health-y Aging
- Laboratory for Living Devices (L²D)

These are deemed the Phase I priority areas for their actionable qualities and are slated to receive funding for up to three years.

**The Phase II priority areas selected for development are**

- Climate and Energy
- Equity in Health, Wealth, and Civic Engagement
- Food and Water Nexus
- Global Obesity Collaborative

These proposals will receive planning grants for the first year; three of the Phase II proposals will be seed-funded for the following three years.

**Critical Infrastructure**

Cross-cutting, critical infrastructure working groups sought to improve the overall resources available to Tufts researchers and to remove barriers to research breakthroughs. In May 2018 the Resources, Barriers, and Facilitators of Research and Scholarship working group was formed to improve conditions for R&S across the university. This faculty-driven, 28-member committee analyzed interviews, focus groups, survey data, and reports on core facilities, global impact and engagement, and industry collaboration. Based on this input, the working group developed a set of actionable recommendations to better fuel research and scholarship for all at Tufts University. Funds have been set aside to support recommendations for this important work.
Recommendation 1: Implement policies that promote more frequent and effective communication between researchers and the various offices involved in research at Tufts.

Recommendation 2: Make changes to infrastructure and policies that facilitate frequent interactions between researchers at all Tufts’ campuses and allow them to collaborate with investigators from other institutions.

Recommendation 3: Create a centralized research portal that enables Tufts faculty, staff, and students to identify potential collaborators, resources, and core facilities that will advance their own research initiatives.

Recommendation 4: Implement policies that will allow more research time for faculty.

The Way Forward
Research and scholarship that rises to the top, has the greatest societal impact, and is published in the most prestigious peer-reviewed journals requires more than passive support from Tufts: it requires a proactive and robust commitment. In addition to a funding strategy to support priority areas, Tufts has earmarked resources to improve conditions for research and scholarship across all of its campuses.
III. THE PLANNING PHASE

The Research and Scholarship Strategic Plan (RSSP) began in January 2017, guided by an understanding that it would only succeed with broad and deep participation from across the community and through a transparent process. (See Appendix A for governance committee membership.)

The RSSP leadership model was designed to maximize efficiency in driving information gathering and results, allow for internal communication and support through all phases of the process, and identify key interests and priority areas across the entire Tufts community. It has three distinct components:

- **Executive Committee (EC):** A five-member leadership committee responsible for decision making resulting from the planning process, consisting of the university president, executive vice president, provost and senior vice president, vice provost, and vice provost for research.

- **Steering Committee (SC):** The steering committee consisted of 24 members that included research deans, faculty, staff, students, and postdoctoral fellows representing each school and key administrative office at Tufts. The SC shaped the process by providing insight and connections to the schools and centers, and then made informed recommendations to the EC throughout each phase of the process.

- **Project Team (PT):** The PT supported the steering and executive committees. Reporting to the vice provost for research, the PT managed all phases of the planning effort.

Leadership provided essential guidance united by twin goals: 1) to identify R&S priorities that build on Tufts’ core strengths and opportunities for cross-disciplinary collaboration in order to create innovative solutions to pressing societal and global challenges, and 2) to identify and address structural impediments to success in all areas of R&S at Tufts.

**Planning Timeline**

2017
- **Feb:** Identify RSSP vision, goals and planning principles and approaches
- **Apr:** Establish leadership structure
- **OCT - JAN:** Data analysis

2018
- **Feb:** Faculty-led priority area working groups assess options and develop proposals
- **APR:** Form cross-cutting working groups
- **FEB:** Present recommendations to trustees
- **MAY:** SC identifies preliminary R&S priority themes
- **JAN:** SC reviews proposals and selects proposals for funding
- **APR:** EC approves funded proposals in 2 phases
- **MAY:** Information gathering
- **Jun:** One-on-one interviews
- **Aug:** Focus groups
- **Sep:** Faculty survey
- **Oct:** University (T10) and school-based strategic plans
- **Nov:** Online feedback

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SC: Steering Committee
EC: Executive Committee
Information Gathering
RSSP leadership sought to gather a broad range of input and perspectives from the Tufts research constituency, including deans, faculty, researchers, students, postdoctoral fellows, alumni, trustees, and staff, as well as external research thought leaders and stakeholders. To accomplish this objective, five different sources were employed:

- 95 one-on-one interviews
  (individual interviews across several different internal and external constituencies)
- 16 focus groups consisting of 91 participants
  (targeted discussion sessions gathering perspectives from faculty and staff by school or affiliation)
- online faculty survey distributed to 1700 faculty members
  (a broad-reaching survey focusing on faculty perspectives)
- review of university and school-based strategic plans and other sources
- online feedback via the RSSP website

Once the information was gathered, an educational research consulting firm was engaged by the OVPR to review the data collected via these methods, and verify that it was appropriately analyzed and interpreted. The Project Team and the Steering Committee synthesized these outcomes in order to develop initial recommendations of the RSSP.

One-on-One Interviews
During the summer of 2017, OVPR representatives and members of the SC conducted 95 one-on-one interviews with internal and external research community stakeholders. See Appendix B for a list of all participants.

Focus Groups
In 2017, members of the Project Team conducted a series of focus groups, typically consisting of two senior, two mid-career, and two junior faculty members, as well as four staff administrators, such as finance administrators, research technicians, etc. Each school within Tufts conducted one focus group, with the exception of Arts and Sciences, which held separate focus groups for the arts and humanities, social sciences, STEM stakeholders, and chairs. Additional focus groups were held with core facilities, Tufts leadership (deans) participating in the provost’s retreat, as well as the Human Nutrition Research Center on Aging (HNRCA). See Appendix B for a list of all participants.

Online Faculty Survey
The RSSP online faculty survey was distributed to 1700 faculty and staff and received a 30% response rate. The survey addressed three key areas of R&S at Tufts: grand challenges that Tufts researchers and scholars can and should address, enablers and impediments to cross-disciplinary collaboration, and facilitators and barriers to research. The goal of the survey was to ensure the RSSP included input from as many members of the Tufts community as possible. See Appendix C for detailed descriptions of questions and responses.
Using Grand Challenges to Set Priorities
With globalization has come an awareness of the radically different scale, scope, and complexity of the challenges of the 21st century. One of the most sustained efforts throughout the early RSSP process was to identify a set of broad, externally validated, multi-layered and multi-disciplinary issues to be used to set priorities for R&S at Tufts across school boundaries.

With these external data sources as guides, project team members developed an extensive list of possible “grand challenges” which Tufts is well positioned to address through existing channels, schools, and infrastructure. Grounded in a series of retreats and planning sessions conducted with members of the Steering Committee, and backed by the information gathered during the one-on-one interviews and focus groups, the team identified five grand challenges:

• be meaningful to people and societies
• be broad in scope
• have wide visibility
• generate interest and activity within the Tufts community
• have potential to generate financial and other support from internal and external sources
**Addressing Grand Challenges**
Faculty survey questions focused on two main aspects of the grand challenge areas.

1. In your opinion, which are the most important grand challenges that researchers and scholars at Tufts can and should address in the next decade?

2. In which of all the grand challenges can you imagine scholars in the arts, engineering, humanities, and biological and social sciences working collaboratively, both within Tufts and with external entities?
In general, the responses to each of these two distinct questions had similar distributions among faculty members (e.g. 40% of respondents selected Food and Water as an area Tufts can and should address, and 40% of respondents selected Food and Water as an area for working collaboratively).

This indicates that Tufts faculty see a strong potential for R&S pursuits to impact major change in critical (and top-ranked) areas.

- Health was strongly rated as the top grand challenge with 57% of responding faculty selecting that Tufts can and should address elements of this challenge in the next decade.
- 51% of faculty indicated Climate Change and Environment was an area that Tufts can and should address.

**Collaboration As a Key Component in Forming Priority Areas**

The steering committee reviewed the faculty survey responses related to collaboration with a focus on two distinct areas—collaboration within the grand challenges and collaboration broadly speaking—to inform priority areas. Within the grand challenges, faculty identified key areas they believed offered opportunities for collaboration. In some of the lower-ranked grand challenges, responses were higher on the Working Collaboratively responses than on the Can and Should responses (see Chart 2 below).

Chart 2 suggests faculty see more opportunity to collaborate across disciplines on some grand challenges that they perceive as having a lower potential impact on challenges facing society as a whole.
Within each grand challenge area, the faculty indicated those subcategories that Tufts can and should address in the next decade. The top ten subcategories are tabulated in Chart 3 below.

Interestingly, even though Health was the top selected grand challenge Tufts can and should address, the top three subcategories belonged to the Climate Change and Environment grand challenges. This suggests that the faculty have a more unified perspective on the areas within Climate Change and Environment that provide the most opportunity for Tufts, whereas faculty perspectives under Health are more disparate.

Chart 3: Top Ranked Grand Challenge Subcategory Selections

<table>
<thead>
<tr>
<th>Grand Challenge Subcategory</th>
<th>Grand Challenge</th>
<th>Percentage of Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Warming</td>
<td>Climate Change and Environment</td>
<td>44%</td>
</tr>
<tr>
<td>Human Impact</td>
<td>Climate Change and Environment</td>
<td>40%</td>
</tr>
<tr>
<td>Ecosystem Loss</td>
<td>Climate Change and Environment</td>
<td>35%</td>
</tr>
<tr>
<td>Obesity</td>
<td>Health</td>
<td>34%</td>
</tr>
<tr>
<td>Chronic Disease</td>
<td>Health</td>
<td>32%</td>
</tr>
<tr>
<td>Health Disparity</td>
<td>Health</td>
<td>32%</td>
</tr>
<tr>
<td>Infectious Disease</td>
<td>Health</td>
<td>32%</td>
</tr>
<tr>
<td>Agriculture and Sustainable Production</td>
<td>Food and Water</td>
<td>29%</td>
</tr>
<tr>
<td>Sea Levels</td>
<td>Climate Change and Environment</td>
<td>29%</td>
</tr>
<tr>
<td>Antibiotic Resistance</td>
<td>Health</td>
<td>28%</td>
</tr>
</tbody>
</table>

Based on this information, SC members sought a way to reconcile the main topic areas with the more nuanced subcategories. These data points suggested that priority areas needed to be shaped according to opportunities for collaboration in proportion to Tufts’ known strengths and areas of excellence. Members of the steering committee and others involved in the strategic planning process identified possible collaborations within each of the subcategories using a synergy exercise. (See Inner Circle on page 12.) The result of this exercise combined with the data collected from the survey helped shape the priority areas selected for working groups.
IV. FROM DATA TO ANALYSIS: ADVANCING RESEARCH AND SCHOLARSHIP
PRIORITY AREAS

Forming Working Groups in Priority Areas

In late 2017 and early 2018, working groups were formed for each of the five thematic priority areas selected based on data gathered from stakeholders as described above. (For Priority Area Working Group Membership, see Appendix A.) Each group was asked to develop up to three proposals highlighting new collaborative research and scholarship efforts and opportunities within the selected priority areas. Proposals were to be based on the potential for societal benefit and innovation as well as information provided to the working group, including: results from survey, focus groups, and interviews; inventory of Tufts strengths relevant to a theme; potential for multi-disciplinary collaboration; and public and private funding sources.

Each proposal had to address the following criteria:

- Align with and complement Tufts’ T10 and school/center strategic priorities
- Safeguard Tufts’ Carnegie rating as “R1 – highest research activity” university
- Build on Tufts’ existing strength
- Have potential for field-advancing innovation
- Make a beneficial contribution to needs or opportunities of profound importance to large numbers of people and societies
- Provide avenues for multi-disciplinary collaboration inside Tufts and beyond
- Attract external funding and other sustaining support
- Engage students and other trainees

Through facilitated discussion and collaboration, the working groups created and submitted twelve proposals for new cross-cutting research programs as part of the RSSP. The SC reviewed the proposals and selected eight for Phase I and Phase II funding:

**Phase I proposals to receive support for up to three years:**

- Center for Integrated Management of Antimicrobial Resistance (CIMAR)
- Culture, History, and Translation
- One Health-y Aging
- Laboratory for Living Devices (L²D)

**Phase II priority areas selected for development are:**

- Climate and Energy
- Equity in Health, Wealth, and Civic Engagement
- Food and Water Nexus
- Global Obesity Collaborative

These proposals will receive planning grants for the first year; three of the Phase II proposals will be funded for the following three years.

Once the Tufts-initiated seed funding periods conclude for Phase I and Phase II proposals, each will establish sustainable alternative funding paths through external partners and organizations.
Priority Area and Funded Proposal Descriptions

CLIMATE, FOOD, WATER, AND ENERGY

As the world’s population grows and geopolitical powers shift, humanity faces global challenges to protecting the planet as a habitable place for all. These challenges affect both the social order (through migration, economic disparity, and availability of water, natural resources, healthcare, data security) and the natural order (through depletion of non-renewable resources, food waste, climate change). Tufts has the expertise to address these challenges, which lie at the junction of society, natural resources, and our changing ecosystem. The strength of Tufts’ impact will depend on synergies between schools and programs devoted to these concerns from the School of Arts and Sciences, Cummings School of Veterinary Medicine, Friedman School, The Fletcher School of Law and Diplomacy, Human Nutrition Research Center on Aging, School of Engineering, and School of Medicine.

Climate and Energy

As a leader in integrated energy research, education, and impact, the Tufts University Climate and Energy Initiative will help the United States and the world transition to a clean energy economy through both technological and policy solutions; define energy literacy as a key component of climate and energy education; and develop a new generation of professionals prepared to tackle all aspects of renewable energy development and policy to prevent catastrophic climate change.

Food and Water Nexus

Feeding the growing global population within planetary limits and providing global access to clean water are two of the 21st century’s biggest challenges. As a leader in scholarship and education on water, and the food system, Tufts will make an impact through systems-level advancements by linking natural resource impacts and use, nutrition and health, and governance and policy.
The research in Comparative Global Humanities examines culture, history and translation to consider the interdependency of peoples, societies, and economies, both throughout history and in the current era of globalization. This scholarship requires that we build upon the traditional strengths of humanities—languages, textual interpretation, ethics and values—to rethink society, culture, art, religion, and civilization beyond the national and area units that previously organized many studies. Comparative Global Humanities considers the longer history of contacts, exchanges and entanglements that link Europe, Asia, Africa, and the Americas today, and over the course of world history.

Culture, History, and Translation

Culture, History, and Translation considers longer histories of connection, exchange, and interdependency in ways that unsettle discretely bounded territories and recast traditional historical periods, by reconsidering formerly studied “areas” and recasting the global study of Europe, transoceanic studies, hemispheric American studies, global Black diaspora studies, and global Asian studies. Tufts scholars critically engage translation as interceding on settled notions of culture and history and as built into constructions of colonialism, race, empire, and diaspora. This initiative will develop and implement a model of global intellectual collaboration to renew humanities research, innovate curricula, and ultimately support an ecology of academic study that will give rise to a new era for Tufts and for the next generation of humanists.
The analysis of inequality and the pursuit of equity are pressing issues today. For example, the richest one percent of the world’s population own just over half of the world’s wealth and have seen twice as much income growth as the bottom half since 1980 according to the World Inequality Report 2018, Credit Suisse Research Institute’s Global Wealth Report. Such statistics raise contested questions that require both explanation and assessment from diverse perspectives. Equity is fundamental to many current debates about specific social issues.

Many institutions have created centers devoted to inequality, but they usually emphasize inequality of income or wealth. Tufts will adopt a positive focus on defining and achieving equality instead of merely analyzing inequality. Drawing on Tufts’ strengths, equality will be investigated from multiple angles including assessing and remedying disparities in health, wealth, and civic engagement both within the U.S. and internationally.

**Equity in Health, Wealth, and Civic Engagement**

All societies are and have been unequal. But inequality is changing rapidly and in poorly understood ways that have significant consequences. To inform the debate about equity requires scholarship on the nature of justice, empirical research on the causes and consequences of inequality, and studies of effective interventions. Drawing on Tufts’ known strengths in all these areas across the schools, the initiative’s approach will involve a broad definition of the term that encompasses health, voice, and wellbeing as well as wealth and income; a normative debate about what constitutes justice; and attention to how active citizens can improve the world. This initiative will build an intellectual community around equity including faculty, students, and staff and as preparation for the long-term goal of establishing a Center for Equitable Society.
LIVING TECHNOLOGY

Technology is an integral part of our contemporary, connected world. New materials are bringing computing, sensing, and imaging to the skin and to both the inside and outside of human bodies. Data are pervasive and rich in emergent information of diagnostic, social, and logistical importance that allows us to see the invisible, access and transfer information globally, and connect like we never have before. The internet of things and the internet of people are becoming one.

Laboratory for Living Devices (L$^2$D)

The Laboratory for Living Devices is a one-of-a-kind, multi-disciplinary research initiative at Tufts that is a ‘materials-first’ environment involving world leaders in materials science, chemistry, and environmental sciences, biology and biomedical engineering, human health, and the arts. This initiative will enable Tufts researchers to develop tools, devices, and approaches to reduce the separation between the technological and biological worlds, thereby redefining new formats for technology, medicine, diagnostics, arts, and education. This initiative is unique, as it encompasses both the ‘wet’ and the ‘dry’ sciences, aggregates tools that operate across disciplines and scales, enables seamless invention workflows, and sparks innovative fabrication by tightly connecting ‘top-down’ fabrication techniques with ‘bottom-up’ biological self-assembly methods. This initiative will accelerate the processes needed to generate the preliminary data required to obtain external funding and facilitate the production of prototypes for translation to spin-out companies, thereby reinventing fabrication tools and making new classes of materials available to researchers world-wide.
Center for Integrated Management of Antimicrobial Resistance (CIMAR)

The spread of antimicrobial resistance (AMR) in microbes threatens a return to the pre-antibiotic era when common infections were untreatable and life threatening. Indeed, approximately 700,000 human deaths are attributable to AMR each year globally. If trends continue, by 2050, 350 million cumulative deaths may have been caused by AMR infections. This rise is fueled by microbiological, evolutionary, environmental and societal factors and can only be counteracted by a multidisciplinary approach that addresses each of these aspects. Infectious disease research is a well-documented strength of the university, which will be complemented by efforts at Tufts Medical Center to translate basic science discoveries to practical solutions. In an era when options for expanding faculty ranks through conventional means are limited, CIMAR will foster a critical mass of Tufts investigators who, by developing collaborations and connections that are difficult to replicate elsewhere, will produce a stable, well-focused center that is a leader in the management of AMR.

One Health-y Aging

Advances in science have significantly increased the human lifespan; however, at the same time non-communicable diseases such as sarcopenia, cardiovascular disease, obesity, diabetes, dementia, macular degeneration, and cataracts are on the rise. Strategies are needed to address the economic and social costs associated with a growing population of older adults and their impact on the economic survival of every nation. The One Health-y Aging initiative aims to stem the tide of age-related pathologies by conducting interdisciplinary and translational research—especially by employing a “One Health” approach to identify modifiable risk factors and effective strategies for targeting.

Global Obesity Collaborative

According to the Centers for Disease Control, rates of obesity continue to increase in every country worldwide, and nearly 40% of adults and 20% of children in the U.S. are now obese. This is a global crisis not only because obesity causes premature death and serious health problems including diabetes, cardiovascular disease and stroke, but because obesity is an underlying driver of an even broader set of societal problems that include high rates of disability, inefficiency in the workforce, absenteeism, and bullying in school. This initiative will harness Tufts’ unique combination of strengths in basic sciences, social sciences, medicine, data science, economics, nutrition, engineering, behavioral psychology, and veterinary and dental sciences to define common aspirations, and identify ways to create collaborative, high-impact projects that generate research, scholarship, and training support to solve the global obesity crisis. Existing strengths in intervention research, active citizenship, strategy, and global connections are critical components unique to Tufts.
V. FROM DATA TO ANALYSIS: IMPROVEMENTS TO CRITICAL INFRASTRUCTURE

Accessing Collaboration, Improving Resources, and Reducing Barriers for Research at Tufts

Data from the online faculty survey revealed a need for improvements to critical infrastructure and resources vital to the success of research and scholarship at Tufts.

Chart 4: Faculty Satisfaction with Existing Resources, Policies, and Services at Tufts

- Library collections
- Information technology
- Research/Lab assistants
- Administrative support for grant applications
- Administrative support for meeting regulatory requirements
- Seed funding
- Core facilities
- Supplemental support of graduate students and postdocs
- Time/Course release
- Support for commercialization and industry relations

Chart 5: Faculty Satisfaction with Existing Resources to Support Collaboration

- University-wide symposia
- Formal research and scholarship exchanges
- Incentives for working groups
- Programs to support multidisciplinary student training
- Shared research and scholarship work space
- Facilitation of awareness of others’ work
After identifying the core issues that may impede research at Tufts, working groups drilled down on survey, interview, and focus-group data, as well as reports on Core Facilities, Global Engagement and Impact, and Industry Collaboration to form a cross-cutting perspective necessary to develop a course of action to benefit the Tufts R&S community across all campuses. An umbrella working group, Resources, Barriers, and Facilitators of Research and Scholarship, was then established to identify impediments to research and recommend ways to address them in each of these infrastructure and cross-collaborative areas.

Each group delivered a report with actionable recommendations. The reports were reviewed by the Resources, Barriers, and Facilitators working group—composed of 28 faculty and key administrators. (see Appendix A for member list.)

The Resources, Barriers, and Facilitators of Research and Scholarship working group was tasked with bringing the resources and facilitators of research and scholarship into alignment with the needs of the research community. To do this work, the group

1) evaluated the information gathered during the RSSP regarding impediments to advancing research and scholarship and identifying and prioritizing core issues; and

2) proposed solutions to these issues that will improve conditions for research and scholarship across the university.
Recommendations:

• Implement policies that promote more frequent and effective communication between researchers and the various offices involved in research at Tufts.

• Adapt infrastructure and policies that facilitate researchers’ frequent interactions at Tufts’ campuses, and allow them to collaborate with investigators from other institutions.

• Create a centralized research portal that enables Tufts faculty, staff, and students to identify potential collaborators, resources, and core facilities that will advance their research initiatives.

• Implement policies that will allow more research time for faculty.

Based on these recommendations, actionable next steps have been identified for review and approval by the Steering and Executive committees before being finalized. Funds have been allocated to support this vital work.
VI: THE WAY FORWARD

Implementation Phase (July 2018-2022)

During the RSSP implementation phase, priority area working groups and other members of the research community will undertake outreach efforts to increase engagement across the university and set out to meet project-specific milestones. Stakeholder retreats will serve to mobilize participation from the broader Tufts research community. Simultaneously, the university will implement recommendations from the Resources, Barriers, and Facilitators of Research and Scholarship working group designed to improve the Tufts research environment, facilities and support system. A timeline and an implementation plan for these recommendations are currently being developed.

A critical aspect of forward-looking implementation will be developing sustainability plans and proposals to solicit external funding for the priority area research proposals. Tufts recognizes that any research initiative designed to solve grand challenges will require financial investment from interested parties and organizations. External collaboration and funding will be crucial to the long-term success of each proposal.

Implementation timeline for research and scholarship priority areas:

As a student-centered research university, Tufts is committed to providing transformative experiences for students and faculty in an inclusive and collaborative environment where creative scholars generate bold ideas, innovate in the face of complex challenges, and distinguish themselves as active citizens of the world. By framing its strategic research and scholarship priorities around grand challenges, collaboration, and transparency, Tufts ensures that future R&S priorities affirm and uphold this commitment.
VII. EPILOGUE

Near-Term Update on Priority Areas and Critical Infrastructure As of November 2018

To assist priority area teams, the OVPR established an Implementation Support Team. Led by the director of strategic initiatives, the team includes a project manager as well as representatives from Research Development, Research Administration, Corporate and Foundation Relations, and Lewis Burke Associates, Tufts’ Washington, DC-based consultants. The purpose of the Implementation Support Team is to reduce administrative burden, assist in raising support, anticipate challenges and respond to them promptly.

Throughout July 2018, priority area working groups met with the vice provost for research and the Implementation Support Team to set expectations for revised proposals and budgets.

As Tufts moves forward towards a brighter world through Research and Scholarship, the offices of the president, the provost, and the vice provost for research will strive to ensure the highest quality environment and support for research and scholarship at Tufts University.
APPENDIX A: GOVERNANCE

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Dept of Mathematics

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Robinson Professor and Chair
Dept of Chemistry
Joseph Litvak
Professor and Chair
Dept of English

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Professor and White Family Chair
Dept of Biology

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Dept of History

School of Engineering

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Dept of Mechanical Engineering

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Dept of Chemical and Biological Engineering

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School of Dental Medicine

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Eileen Doherty
Director of Predoctoral Student Research

Kathryn Dunn
Program Manager
Dental Research Administration

Irina Dragan
Assistant Professor
Dept of Periodontology

Matthew Finkelman
Associate Professor
Dept of Public Health and Community Service

Driss Zoukhri
Professor
Dept of Ophthalmology

School of Medicine

Michael Berne
Research Assistant Professor
Dept of Immunology

Andrew Bohm
Associate Professor
Dept of Developmental, Molecular and Chemical Biology

Doug Brugge
Professor
Dept of Public Health and Community Medicine

Stephen Bunnell
Associate Professor
Dept of Immunology

Athar Chishti
Professor
Dept of Developmental, Molecular and Chemical Biology

Olaf Dammann
Professor
Dept of Public Health and Community Medicine

Chris Dulla
Assistant Professor
Dept of Neuroscience

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Arthur E. Spiller Professor and Chair
Dept of Immunology

Peter Juo
Associate Professor
Dept of Developmental, Molecular and Chemical Biology

James Kubilus
Research Assistant Professor
Dept of Immunology

Jamie Maguire
Assistant Professor
Dept of Neuroscience

Verna Manni
Dept Manager
Dept of Molecular Biology and Microbiology

Paola Massari
Research Associate Professor
Dept of Immunology

Brenda McGinnis
Associate Director of Research Administration
Dept of Public Health and Community Medicine

Karl Munger
Professor
Dept of Developmental, Molecular and Chemical Biology

Wai-Leung Ng
Assistant Professor
Dept of Developmental, Molecular and Chemical Biology

Allen Parmelee
Manager
Laser Cytometry Core

Jeanne Rose
Dept Manager
Dept of Immunology

Shruti Sharma
Assistant Professor
Dept of Immunology

Albert Tai
Research Assistant Professor
Dept of Immunology

The Fletcher School

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Research Professor
Executive Director, World Peace Foundation

Carolyn Gideon
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Ian Johnstone
Professor of International Law

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Fares Center for Eastern Mediterranean Studies

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Michael Berne
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Vitamin K Lab
HNRCA

Jimmy Crott
Scientist I
Vitamins and Carcinogenesis Lab
HNRCA

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School of Dental Medicine

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Center for the Study of Drug Development
School of Medicine

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Tufts Clinical and Translational Science Institute

Harry Selker
Dean, Clinical and Translational Science Institute
Professor of Medicine
School of Medicine

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Dept of Psychology
School of Arts and Sciences

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Cummings School

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Distinguished Professor of Biomedical Sciences
Cummings School

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School of Arts and Sciences

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Professor
Dept of Economics
School of Arts and Sciences

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Professor of the Practice of International Negotiation and Conflict Resolution
The Fletcher School

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Office of the Provost

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Dept of Romance Studies
School of Arts and Sciences

Lorlene Hoyt
Executive Director, Talloires Network
Tisch College

Eileen Kennedy
Professor
Friedman School

Fiorenzo Omenetto
Dean of Research
Frank C. Doble Professor of Biomedical Engineering
School of Engineering
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Nutrition and Genomics Lab
HNRCA

Susan Roberts
Senior Scientist and Director
Energy Metabolism Lab
HNRCA

Keleigh Sanford
Research Administration Director
School of Engineering

Seedang Simonin
Director of Sponsored Research Administration
Friedman School

Joel Trachtman
Professor of International Law
The Fletcher School

Christine Wanke
Professor and Director
Nutrition and Infection Unit
Dept of Medicine
School of Medicine

Provost’s Retreat

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Dean
Professor of Medicine and Public Health and Community Medicine
School of Medicine

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Senior Scientist and Lab Director
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HNRCA

Patricia Campbell
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Tufts University

Diana Chigas
Associate Provost
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The Fletcher School

Chris Drew
Planning Consultant

Kevin Dunn
Vice Provost
Office of the Provost

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School of Arts and Sciences

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Cummings School

Simin Nikbin Meydani
Vice Provost for Research
OVPR

Dariush Mozaffarian
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Professor of Biomedical Sciences
Cummings School

Augusta Rohrbach
Director of Strategic Initiatives
Strategic Initiatives, OVPR

Naomi Rosenberg
Dean
Sackler School
Alan Solomont
Pierre and Pamela Omidyar Dean
Tisch College

James Stavridis
Dean
The Fletcher School

Dawn Terkla
Associate Provost
Office of the Provost

Huw Thomas
Dean
Professor of Pediatric Dentistry
School of Dental Medicine
APPENDIX C: FACULTY SURVEY RESULTS

I. Demographic of Responses

II. Infrastructure and Collaboration

Question 2: Tufts has many resources available to support research and scholarship. Please indicate whether you are aware of the following:

<table>
<thead>
<tr>
<th>Research/Scholarship Resource</th>
<th>Response</th>
<th>I am aware of this resource and have used it</th>
<th>I am aware of this resource, but have not used it</th>
<th>I am not aware of this resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative support for commercialization and industry relations</td>
<td>483</td>
<td>13%</td>
<td>38%</td>
<td>49%</td>
</tr>
<tr>
<td>Administrative support for grant applications</td>
<td>487</td>
<td>58%</td>
<td>30%</td>
<td>13%</td>
</tr>
<tr>
<td>Administrative support for meeting regulatory requirements</td>
<td>488</td>
<td>34%</td>
<td>40%</td>
<td>100%</td>
</tr>
<tr>
<td>Core facilities (e.g., DLAM, sequencing, imaging, Data Lab, etc.)</td>
<td>486</td>
<td>29%</td>
<td>39%</td>
<td>31%</td>
</tr>
<tr>
<td>Formal research and scholarship exchanges (i.e., with administrative support for planning, mini-symposium)</td>
<td>485</td>
<td>10%</td>
<td>31%</td>
<td>59%</td>
</tr>
<tr>
<td>Incentives for working groups</td>
<td>487</td>
<td>6%</td>
<td>18%</td>
<td>76%</td>
</tr>
<tr>
<td>Information Technology (e.g., high-performance cluster, data storage and management (apart from basic maintenance and connectivity))</td>
<td>482</td>
<td>39%</td>
<td>39%</td>
<td>22%</td>
</tr>
<tr>
<td>Library collections</td>
<td>488</td>
<td>75%</td>
<td>20%</td>
<td>5%</td>
</tr>
<tr>
<td>Programs to support multidisciplinary student research and scholarship training</td>
<td>490</td>
<td>16%</td>
<td>33%</td>
<td>51%</td>
</tr>
<tr>
<td>Research/Lab assistants</td>
<td>483</td>
<td>27%</td>
<td>27%</td>
<td>46%</td>
</tr>
<tr>
<td>Seed funding</td>
<td>486</td>
<td>34%</td>
<td>37%</td>
<td>29%</td>
</tr>
<tr>
<td>Shared research and scholarship work-space</td>
<td>486</td>
<td>9%</td>
<td>25%</td>
<td>66%</td>
</tr>
<tr>
<td>Supplemental support of graduate students and postdoctoral fellows</td>
<td>488</td>
<td>18%</td>
<td>25%</td>
<td>57%</td>
</tr>
<tr>
<td>Time/Course release</td>
<td>482</td>
<td>16%</td>
<td>30%</td>
<td>54%</td>
</tr>
<tr>
<td>University-wide symposia</td>
<td>487</td>
<td>37%</td>
<td>42%</td>
<td>21%</td>
</tr>
<tr>
<td>Videoconferencing</td>
<td>481</td>
<td>45%</td>
<td>42%</td>
<td>13%</td>
</tr>
</tbody>
</table>
Question 2a: Below are the resources you have selected in the previous question (I am aware...). Please indicate how well they meet your research and scholarship needs.

III. Awareness and Collaboration

Question 3
How familiar are you with research/scholarship activities of other faculty members at Tufts?

- Not familiar at all: 14%
- Very familiar: 18%
- Moderately familiar: 68%

Question 4
To what extent do you feel Tufts facilitates learning about the research/scholarship activities of other faculty members at Tufts?

- Not at all: 37%
- Moderately/Very well: 55%
Question 5: How can Tufts improve your awareness about research and scholarship programs and activities that already exist across the University? Check all of the following that would be of interest to you.

- Searchable list of research and scholarship activities
- Facilitate informal research and scholarship exchanges/discussions
- Incentives for working groups
- Formal research and scholarship exchanges (i.e. with administrative support for planning, mini-symposium)
- Collaboration-building workshops
- Programs to support multidisciplinary student research and scholarship training
- Newsletters
- University-wide symposia
- Shared research and scholarship work-space
- Videoconferencing
- Other

**IV. Grand Challenges and Opportunities**

Question 6: In your opinion, which are the most important grand challenges that researchers and scholars at Tufts can and should address in the next decade? Please select up to five.

When making your selections, please think broadly about challenges facing our society as a whole, consider Tufts’ strengths in research and scholarship across all schools and disciplines, and do not limit yourself to areas related to your own discipline. You can hover over each list element for more detail.
Question 6a: Within the grand challenge you have selected, please select all that you think Tufts can and should address in the next decade.

<table>
<thead>
<tr>
<th>Exploring and Expressing Human Culture and Creativity</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding Art Culture and Heritage</td>
<td>70</td>
</tr>
<tr>
<td>Global Humanities</td>
<td>68</td>
</tr>
<tr>
<td>Creating Art, Literature, and Expressive Culture</td>
<td>66</td>
</tr>
<tr>
<td>Educational and Learning Disparities</td>
<td>61</td>
</tr>
<tr>
<td>Understanding Human Behavior as It Relates to Global Challenges</td>
<td>54</td>
</tr>
<tr>
<td>Preserving and Understanding Cultural Expressions</td>
<td>52</td>
</tr>
<tr>
<td>New Media</td>
<td>42</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obesity</td>
<td>179</td>
</tr>
<tr>
<td>Chronic Disease</td>
<td>170</td>
</tr>
<tr>
<td>Health Disparity</td>
<td>169</td>
</tr>
<tr>
<td>Infectious Disease</td>
<td>169</td>
</tr>
<tr>
<td>Antibiotic Resistance</td>
<td>148</td>
</tr>
<tr>
<td>Availability of Care</td>
<td>130</td>
</tr>
<tr>
<td>Pain and Opioid Addiction</td>
<td>114</td>
</tr>
<tr>
<td>Malnutrition</td>
<td>100</td>
</tr>
<tr>
<td>Occupational Health</td>
<td>67</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New Technologies</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Data</td>
<td>122</td>
</tr>
<tr>
<td>Materials/Biomaterials</td>
<td>113</td>
</tr>
<tr>
<td>Genetic Engineering</td>
<td>105</td>
</tr>
<tr>
<td>Artificial Intelligence</td>
<td>105</td>
</tr>
<tr>
<td>Technology and Society</td>
<td>100</td>
</tr>
<tr>
<td>Imaging</td>
<td>93</td>
</tr>
<tr>
<td>Access</td>
<td>41</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Population</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aging</td>
<td>71</td>
</tr>
<tr>
<td>Wealth Inequality</td>
<td>70</td>
</tr>
<tr>
<td>Migration</td>
<td>54</td>
</tr>
<tr>
<td>Birth Rate, Population Size and Growth</td>
<td>46</td>
</tr>
<tr>
<td>Urbanization</td>
<td>42</td>
</tr>
<tr>
<td>Unemployment</td>
<td>38</td>
</tr>
<tr>
<td>Fertility and Contraception</td>
<td>28</td>
</tr>
<tr>
<td>Gentrification</td>
<td>25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Security</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cybersecurity</td>
<td>70</td>
</tr>
<tr>
<td>Terrorism</td>
<td>53</td>
</tr>
<tr>
<td>Refugees</td>
<td>46</td>
</tr>
<tr>
<td>Violent Conflict</td>
<td>43</td>
</tr>
<tr>
<td>Genocide</td>
<td>31</td>
</tr>
<tr>
<td>Arms Proliferation</td>
<td>24</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Human Rights and Geopolitical Challenges</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equality (e.g., racial, gender)</td>
<td>127</td>
</tr>
<tr>
<td>Democracy and Civic Engagement</td>
<td>123</td>
</tr>
<tr>
<td>Diplomacy and Conflict Resolution</td>
<td>105</td>
</tr>
<tr>
<td>Unequal Economic Growth</td>
<td>100</td>
</tr>
<tr>
<td>Globalization</td>
<td>96</td>
</tr>
<tr>
<td>Stronger Communities</td>
<td>78</td>
</tr>
<tr>
<td>Gender Identity</td>
<td>63</td>
</tr>
<tr>
<td>Africa in the 21st century</td>
<td>54</td>
</tr>
<tr>
<td>Religious Freedom</td>
<td>51</td>
</tr>
<tr>
<td>Decolonization</td>
<td>41</td>
</tr>
<tr>
<td>Rise of New Powers</td>
<td>29</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Infrastructure and Economy</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable Development</td>
<td>66</td>
</tr>
<tr>
<td>Transportation</td>
<td>54</td>
</tr>
<tr>
<td>Smart Cities and Grids</td>
<td>51</td>
</tr>
<tr>
<td>Utility Access (e.g., water, energy, internet)</td>
<td>49</td>
</tr>
<tr>
<td>Waste Management</td>
<td>41</td>
</tr>
<tr>
<td>Data Handling</td>
<td>39</td>
</tr>
<tr>
<td>Governance</td>
<td>37</td>
</tr>
<tr>
<td>Communication</td>
<td>29</td>
</tr>
<tr>
<td>Global Financial Systems</td>
<td>23</td>
</tr>
<tr>
<td>Shelter</td>
<td>20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Food and Water</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture and Sustainable Production</td>
<td>156</td>
</tr>
<tr>
<td>Water Pollution</td>
<td>143</td>
</tr>
<tr>
<td>Availability</td>
<td>132</td>
</tr>
<tr>
<td>Hunger</td>
<td>130</td>
</tr>
<tr>
<td>Security</td>
<td>113</td>
</tr>
<tr>
<td>Wastage</td>
<td>92</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Climate Change and Environment</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Warming</td>
<td>233</td>
</tr>
<tr>
<td>Human Impact</td>
<td>213</td>
</tr>
<tr>
<td>Ecosystem Loss</td>
<td>185</td>
</tr>
<tr>
<td>Sea Levels</td>
<td>154</td>
</tr>
<tr>
<td>Severe Weather</td>
<td>130</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Energy</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable Generation</td>
<td>137</td>
</tr>
<tr>
<td>Efficiency</td>
<td>118</td>
</tr>
<tr>
<td>Storage</td>
<td>91</td>
</tr>
<tr>
<td>Increasing Demand</td>
<td>50</td>
</tr>
</tbody>
</table>
Question 7: Would any of the following encourage/motivate you to participate in research or scholarship that addresses the grand challenges you have identified? Check all that would encourage or motivate you.

<table>
<thead>
<tr>
<th>Research/Scholarship Resource</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed funding</td>
<td>293</td>
</tr>
<tr>
<td>Dedicated administrative support for multidisciplinary grant applications</td>
<td>234</td>
</tr>
<tr>
<td>Supplemental support of graduate students and postdoctoral fellows</td>
<td>227</td>
</tr>
<tr>
<td>Time/Course release</td>
<td>215</td>
</tr>
<tr>
<td>Incentives for working groups</td>
<td>214</td>
</tr>
<tr>
<td>Bridge funding (intramural)</td>
<td>212</td>
</tr>
<tr>
<td>Research/Lab assistants</td>
<td>190</td>
</tr>
<tr>
<td>Cross-disciplinary educational opportunities/training</td>
<td>177</td>
</tr>
<tr>
<td>Collaboration-building workshops</td>
<td>176</td>
</tr>
<tr>
<td>Core facilities (e.g., DLAM, sequencing, imaging, Data Lab, etc)</td>
<td>148</td>
</tr>
<tr>
<td>Shared research and scholarship work-space</td>
<td>143</td>
</tr>
<tr>
<td>Formal research and scholarship exchanges (i.e., with administrative support for planning, mini-symposium)</td>
<td>138</td>
</tr>
<tr>
<td>Additional faculty</td>
<td>138</td>
</tr>
<tr>
<td>Information Technology (high-performance cluster, data storage and management (apart from basic maintenance and connectivity))</td>
<td>124</td>
</tr>
<tr>
<td>Administrative support for meeting regulatory requirements</td>
<td>109</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>32</td>
</tr>
</tbody>
</table>

Question 8: In which of all the grand challenges can you imagine scholars in the arts, engineering, humanities, and biological and social sciences working collaboratively, both within Tufts and with external entities? Select all that apply.

[Bar chart showing distribution of responses to Question 8]
Question 9: Responses to many 21st century grand challenges would benefit from collaboration across multiple disciplines. How well do you believe each of the following will be able to support multidisciplinary collaboration at Tufts.

<table>
<thead>
<tr>
<th></th>
<th>Moderately/Very well</th>
<th>Not well at all</th>
<th>No basis for evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed funding for multidisciplinary collaboration</td>
<td>329</td>
<td>16</td>
<td>29</td>
</tr>
<tr>
<td>Dedicated administrative support for multidisciplinary grant applications</td>
<td>310</td>
<td>25</td>
<td>39</td>
</tr>
<tr>
<td>Supplemental support of graduate students and postdoctoral fellows</td>
<td>305</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>Programs to support multidisciplinary student research and scholarship training</td>
<td>304</td>
<td>28</td>
<td>36</td>
</tr>
<tr>
<td>Bridge funding for multidisciplinary collaboration</td>
<td>299</td>
<td>21</td>
<td>49</td>
</tr>
<tr>
<td>Recognition towards tenure/promotion</td>
<td>298</td>
<td>32</td>
<td>42</td>
</tr>
<tr>
<td>Searchable list of research and scholarship activities</td>
<td>296</td>
<td>38</td>
<td>40</td>
</tr>
<tr>
<td>Incentives for working groups</td>
<td>285</td>
<td>32</td>
<td>51</td>
</tr>
<tr>
<td>Research/Lab assistants</td>
<td>277</td>
<td>35</td>
<td>48</td>
</tr>
<tr>
<td>Formal research and scholarship exchanges (e.g., with administrative support for planning, mini-symposium)</td>
<td>275</td>
<td>42</td>
<td>46</td>
</tr>
<tr>
<td>Funding to create centers around themes</td>
<td>275</td>
<td>59</td>
<td>36</td>
</tr>
<tr>
<td>Collaboration-building workshops</td>
<td>273</td>
<td>52</td>
<td>40</td>
</tr>
<tr>
<td>Time/Course release</td>
<td>271</td>
<td>24</td>
<td>69</td>
</tr>
<tr>
<td>Bridge professors</td>
<td>252</td>
<td>50</td>
<td>62</td>
</tr>
<tr>
<td>Shared research and scholarship work-space</td>
<td>224</td>
<td>80</td>
<td>55</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>17</td>
<td>3</td>
<td>34</td>
</tr>
</tbody>
</table>
A BRIGHTER WORLD THROUGH RESEARCH AND SCHOLARSHIP

Tufts University Strategic Plan for Research and Scholarship

Fall 2018