

been used to improve access to clinical research resources during the start up process. RESULTS/ANTICIPATED RESULTS: Since inception in 2018, the CRSC has provided support to over 1700 studies with 437 research projects referred to a Clinical Research Specialist within the CRSC. Of those projects, 97 (22.2%) received comprehensive support from the following expert groups: regulatory guidance (n=74), biostatistics (n=68), clinical (hospital or clinic) partners (n=60), recruitment (n=36), budget development assistance (n=30), and (bio)informatics (n=27). Successful examples of synergies to streamlining study start up include shortening the window between protocol development support from Clinical Research Specialists and IRB submission preparation through to Regulatory Specialists to 3 days. DISCUSSION/SIGNIFICANCE OF FINDINGS: Providing cross-functional support to research teams through the CRSC increases the likelihood of quicker and successful execution and completion of research initiation and subsequently impacts the dissemination of that research to patients and the broader community.

### Commercialization/Entrepreneurship

27229

#### Team Science: A Two-Year Follow-Up Case Study of Rutgers' Ideation Forum

Hosen Arman<sup>1</sup>, Ziyad Razeq<sup>2</sup>, Nancy Reichmann<sup>3</sup>, Edmund Lattime<sup>4</sup> and Biju Parekkadan<sup>5</sup>

<sup>1</sup>Rutgers University Camden; <sup>2</sup>Rutgers Graduate School of Biomedical Science; <sup>3</sup>Rutgers Robert Wood Johnson Medical School; <sup>4</sup>Rutgers Cancer Institute of New Jersey; <sup>5</sup>Rutgers School of Engineering

ABSTRACT IMPACT: This study will provide important insight about effective team formation from coming up with an idea to successfully implementing that idea, as well as will highlight the implementation, evolution, and future directions of a team science initiatives. OBJECTIVES/GOALS: The goal of this study is to describe the feasibility of initiating an ideation forum to catalyze team formation, explore the process by which themes and teams are selected to participate in the forum setting, and assess the progress of participating teams post-forum through internal and external funding and other synergistic research activities. METHODS/STUDY POPULATION: Three ideation forums took place between 2018-2019 at Rutgers University, with a defined process and collection of data. The method of intervention to trigger team science, specifically the methodology employed to identify teams and produce new collaborative ideas, will first be described to show the feasibility of such an event to encourage team formation. In post-hoc analysis, we compare various success matrices of participating teams received seed funding versus teams that didn't receive any funding to assess the progress of teams in the research ideation forum incubation process. RESULTS/ANTICIPATED RESULTS: Triggering team science through ideation forums is feasible and, in fact, quite productive to creating a durable response in formed teams showing continued productivity in publications, fundraising, and other academic metrics. DISCUSSION/SIGNIFICANCE OF FINDINGS: Our case review can illuminate how academic institutions can support team science research through ideation forums. In addition, this study lays an initial foundation for improvements in ideation forum creation and new metrics that can be shared broadly to compare across other institutions.

### Dissemination and Implementation

54478

#### The NIH Reporter Database: A Wealth of Information for Developing Team Science Metrics?

Hosen Arman<sup>1</sup>, Ziyad Razeq<sup>2</sup>, Nancy Reichmann<sup>3</sup>, Edmund Lattime<sup>4</sup> and Biju Parekkadan<sup>5</sup>

<sup>1</sup>Rutgers University Camden; <sup>2</sup>Rutgers Graduate school of Biomedical Sciences; <sup>3</sup>Rutgers Robert Wood Johnson Medical School; <sup>4</sup>Rutgers Cancer Institute of New Jersey; <sup>5</sup>Rutgers School of Engineering

ABSTRACT IMPACT: As scientific research is trending towards greater interdisciplinary and collaboration in order to meet the challenges of contemporary science, which has led to increased recognition of the importance of Team Science, this study will promote team science research within NJ ACTS Consortium as well as across the country. OBJECTIVES/GOALS: The objective of this study is to assess the feasibility of using the NIH Reporter database for developing and tracking team science metrics within the CTSA-funded NJ ACTS Consortium, which consists of RU, PU, and NJIT. The NIH Reporter database provides detailed information on single-PI and multiple-PI R01 grants funded by NIH. METHODS/STUDY POPULATION: 58 multi-PI projects and 344 single-PI projects are currently funded within the NJ ACTS consortium. We will use information from the database on funding levels, institutional composition of projects (e.g., within-consortium projects vs. projects with PIs both within and outside of the consortium), numbers of publications, impact factors of publications, and funding supplements obtained to quantify and track NIH R01 Team Science activity in the consortium. RESULTS/ANTICIPATED RESULTS: Preliminary analysis suggests that it will be both feasible and efficient to use the NIH reporter database to develop Team Science metrics and to augment information in the database with information on PI characteristics such as department/center/school/university, academic discipline, and rank/tenure status, as well and detailed composition of research teams, such as the mix in terms of senior and junior scholars. DISCUSSION/SIGNIFICANCE OF FINDINGS: This study will make an important contribution to this movement by demonstrating the feasibility of using the publicly available NIH Reporter Database to quantify the level and success of Team Science in the form of single-PI and multiple-PI R01 grants funded by NIH, which represent extremely important Team Science activities at universities.

### Education/Mentoring/Professional and Career Development

15000

#### Exploring team science, professional networks, and innovation success in the THRIVE COVID-19 fellowship program

Layla Fattah, Janice Gabrilove, Holly Oemke, Joseph Borrello, Turner Baker, Kevin D. Costa, David Putrino and Anthony Costa ISMMS

ABSTRACT IMPACT: Implement and evaluate a fellowship program to foster a new generation of entrepreneurial and collaboratively-minded team scientists, equipped with the knowledge and skills to innovate technology-based solutions for COVID-19 to

advance human health **OBJECTIVES/GOALS:** Mount Sinai Targeted Healthcare Innovation Fellowship (THRIVE) is a 9-month program for participants from diverse professional backgrounds to develop HealthTech innovations related to COVID-19. The program is designed to provide an experiential team science platform for fellows to take an idea from concept to commercially viable innovation. **METHODS/STUDY POPULATION:** Following a competitive application process, 16 THRIVE fellows comprise four teams working collaboratively in an online forum with input from experts in the field. Success of the program will be evaluated by: assessing pre- and post- collaborative research orientation among THRIVE fellows using the ROI scale<sup>1</sup> using social network analysis (SNA) to investigate the social networks of THRIVE fellows to capture patterns of communication and collaboration related to innovation development exploring participant experiences of group formation, teamwork and collaboration related to innovation development using one-to-one semi-structured interview determining team success in innovation development, measured by number of publications, funding awarded, provisional patents and viable products. **RESULTS/ANTICIPATED RESULTS:** Paired t-tests will determine whether collaborative orientation of THRIVE fellows changes pre- vs. post- program participation, indicating changes in attitude toward multidisciplinary team work. SNA will be used to describe structural patterns of communication that occur at individual and group levels. Network-level indices will provide insight into patterns of communication that exist in innovation development: degree centrality (number of connections per individual), betweenness centrality (number of bridges to others in a network), closeness centrality (closeness to others in a network). We will also test for associations between network characteristics and team success. **DISCUSSION/SIGNIFICANCE OF FINDINGS:** Understanding patterns of formal and informal relationships, interactions, and perceptions of the collaborative process among individuals in THRIVE teams will elucidate whether such a program can provide an effective forum for team science and innovation development related to COVID-19.

16506

### Recognizing Interdisciplinary Collaborative Research in Promotion and Tenure Processes

Brenda K. Zierler<sup>1</sup>, Nicole Summerside<sup>2</sup>, Jennifer Sprecher<sup>3</sup>, Erin Blakeney<sup>3</sup>, Mia Vogel<sup>3</sup>, Frances Chu<sup>4</sup> and Jonathan D. Posner<sup>5</sup>

<sup>1</sup>Department of Biobehavioral Nursing and Health Informatics, Center for Health Sciences Interprofessional Education, Research, and Practice, University of Washington; <sup>2</sup>Department of Biobehavioral Nursing and Health Informatics, Center for Health Sciences Interprofessional Education, University of Washington; <sup>3</sup>Department of Biobehavioral Nursing and Health Informatics, Center for Health Sciences Interprofessional Education University of Washington; <sup>4</sup>Department of Mechanical Engineering, Department of Chemical Engineering, Department of Family Medicine, University of Washington

**ABSTRACT IMPACT:** Recognizing Interdisciplinary Collaborative Research in Promotion and Tenure Processes **OBJECTIVES/GOALS:** Academic institutions have traditionally focused on individual achievements for promotion. We present our effort on identifying and measuring attitudes on promotion and tenure (PT) criteria that values and rewards interdisciplinary research (IR). We have developed a toolkit to facilitate the recognition of IR in PT processes. **METHODS/STUDY POPULATION:** Our group reviewed appointment, promotion and tenure (APT) policies from

each of the six Health Science Schools and the College of Engineering at the University of Washington (UW) to assess language of objective criteria and attributes of IR to guide APT committees in the evaluation of interdisciplinary researchers. We surveyed faculty about their attitudes relating to IR within the context of promotion and tenure. Interviews of department chairs and administrators about institutional policies and infrastructure that supports or inhibits IR, and current best practices, were conducted. We have developed toolkits for junior faculty, department chairs, external reviewers, and APT committees to facilitate rewarding IR at promotion. **RESULTS/ANTICIPATED RESULTS:** Review of APT policies found criteria that recognizes IR for APT in three schools. 118 faculty responded to the survey (44% Professor, 26% Associate, and 37% eligible for APT committees). The majority of faculty reported they were currently conducting IR (95%), considered IR important (98%), and believed the UW faculty code should encourage IR (85%). Although a vast majority considered their units supportive of IR (>80%), less than half (43%) reported that their APT criteria provided examples that included participation in IR. Our survey also found that APT committees were challenged about best practices to reward IR, APT external reviewers struggle to evaluate individual vs team contributions, and individual faculty are challenged to describe contributions for APT within context of an interdisciplinary team. **DISCUSSION/SIGNIFICANCE OF FINDINGS:** IR is conducted and valued by UW faculty; however, current structures, policies, and APT code do not facilitate IR for promotion and tenure. We have developed a toolkit for promotion-eligible faculty, chairs, external reviewers, and APT committees to facilitate IR. Our goal is to modify UW faculty code and unit APT criteria to recognize and reward IR.

59182

### An exploratory analysis of network bridges in translational research; a case study of research grants collaboration networks at University of Rochester School of Medicine and Dentistry

Reza Yousefi Nooraie, Elizabeth Wayman and Ann Dozier  
University of Rochester Medical Center

**ABSTRACT IMPACT:** This analysis helps disentangle various paths to translational collaboration, with implications for departmental capacity building and support. **OBJECTIVES/GOALS:** Studies that bridge research collaboration networks are cross-disciplinary and translational. We explored the characteristics of researchers and their collaboration patterns in bridging research grants at University of Rochester School of Medicine and Dentistry. **METHODS/STUDY POPULATION:** the database of sponsored research grants from 2011 to 2018, obtained from an internal University database was transformed into a two-mode network of grant-to-investigator. Grants at 90th percentile and above of normalized two-mode betweenness centrality were defined as 'bridging grants'. For each grant we extracted the gender, academic rank, academic degree, affiliating department, and centrality-status (being at 75th percentile of degree centrality in one-mode collaboration network) of the Principal Investigator (PI), as well as the number of co-investigators (CI) and the existence of central actor(s) in the research team. **RESULTS/ANTICIPATED RESULTS:** Out of 2491 sponsored grants, 250 were 'bridging grants'. The significant predictors of bridging were centrality of PI, existence of central CI(s), PI holding PhD, and larger number of CIs. The PI's academic rank (being full professor) and gender were not significant predictors. Among bridging grants 79 included both central PI and CIs (central actors group)