Regenerative Medicine Minnesota: Progress Report

Grant Title: Innovative Minds Partnering to Advance Curative Therapies (IMPACT) Program
Grant Number: RMM-2016-EP-05R
Requester: Katherine Campbell, PhD
Project Timeline: June 20, 2016-June 19, 2017

Brief description of project: The IMPACT program is a crowdsourcing-inspired educational initiative that challenges undergraduate students to develop novel hypotheses for real-world health questions. In this program, multidisciplinary teams of students across all academic years conduct primary literature review to address regenerative medicine cause-to-cure challenges through written submissions, scientific posters, and oral presentations at an annual symposium.
Through our renewed RMM education grant, we proposed to do the following:
Aim 1: Scale IMPACT to 40 undergraduate institutions across the state of Minnesota
Aim 2: Increase recruitment and retention of underrepresented IMPACT students
Aim 3: Provide a regenerative medicine education platform to MN students and faculty

Where did this project take place? Mayo Clinic, IMPACT symposium on March 18, 2017

People impacted by project and where they are from: Support from RMM enabled the IMPACT program to expand to 30 colleges (up from 3 inaugural institutions). Participating institutions include state universities, private colleges, and community and technical colleges across the state. A total of 238 undergraduate students participated in IMPACT over the past year (522 total to date).

What was the outcome of the project?
Aim 1: The IMPACT program has now engaged 30 Minnesota private, state, and community colleges. An established network of 65 institutions will continue to be utilized to increase the number of participating colleges in coming years.
Aim 2: Compared to our control student population, IMPACT participants represented a significantly more diverse population ($p=0.0071$), with a total of 58 IMPACT students from backgrounds traditionally underrepresented in the sciences.
Aim 3: 82% of IMPACT participants responded 'yes' to a survey item that gauged student interest in pursuing further education and/or career opportunities within the field of Regenerative Medicine, compared to 56% of control students who responded 'yes' to the same survey item.

Overall, this project was successful in expanding the network of participating MN colleges, engaging underrepresented students in regenerative medicine hypothesis generation, and increasing visibility of and interest in regenerative medicine research among MN undergraduate students.

Resulting publications/grants/awards
This research has enabled the PI to be awarded an Education Science Career Development Award at Mayo Clinic and has resulted in one manuscript submission to CBE Life Sciences Education and one grant submission to the NSF Improving Undergraduate STEM Education Program.

Responsible Spending:
The RMM education award was utilized to offset a portion of the program director's salary/benefits, travel costs for campus visits, technology costs for IMPACT data management, costs associated with the IMPACT symposium, and travel costs and program awards for the IMPACT students.