**ASCEND Project Summary**

**A**dvancing **S**TEM **C**areersby **E**mpowering **N**etwork **D**evelopment

**Abstract**

This project seeks to create **inter-institutional peer mentoring** **networks** for those who identify as women in the STEM fields within the northwest region of Northern California, Oregon, and Washington, and the midwest region of Ohio, Michigan, and Northeastern Illinois with the goal of **developing systemic approaches to increase the representation and advancement of women in academic STEM careers**. Inter-institutional peer-to-peer mentoring creates an environment in which all parties involved are both contributing to and receiving support while providing confidentiality to the members of the group and creating a safe environment for difficult discussions. Mentoring networks are particularly beneficial to underrepresented faculty and those from disadvantaged backgrounds, who are impacted by the intersection of gender and race, ethnicity, disability status, economic status, first generation status, foreign-born and foreign-trained status, and/or sexual orientation, allowing them to **identify and address the impact of intersectionality on their careers**. Many women in the STEM fields often experience a sense of isolation that mentoring networks have the capacity to offset. Additionally, **members of mentoring networks develop the ability to advocate for and achieve institutional change.** Throughout the project, participants will work with institutional leaders at participating universities to identify barriers to faculty advancement and propose methods by which these institutions can better support the pathways, retention, and advancement of underrepresented faculty and, in doing so, support students in STEM.

**Objectives and Goals**

* Create peer-to-peer mentoring cohorts among women in the STEM fields at public and private Primarily Undergraduate Institutions (PUIs) in Northern California, Oregon, and Washington, and in Ohio, Michigan, and Northeastern Illinois
* Support STEM faculty who are impacted by the intersection of gender and race, ethnicity, disability status, economic status, first generation status, foreign-born and foreign-trained status, and/or sexual orientation
* Develop a series of enrichment workshops to equip faculty with career building skills and techniques in inclusive pedagogy
* Create a positive culture which supports women empowering women to create change
* Implement institutional change by providing tools for participants to work with senior leadership at their universities

**Context**

The PIs on this proposal learned the value of inter-institutional peer-to-peer mentoring through participation in the NSF ADVANCE project, “Advancing the Careers of Women in STEM at Predominantly Undergraduate Institutions through Professional Networks.” During the course of this five-year project, our alliance of five mid-career female chemistry faculty, located at five different institutions across the United States, met online monthly with the goal of providing cross-career mutual support. **Through these interactions, all members of the alliance advanced in our careers, experienced improved job satisfaction, and effected change on our individual campuses.** Perhaps most importantly, we felt supported and encouraged, which provided increased confidence and job satisfaction, which in turn enabled our career advancement. In fact, **several of us have moved into positions of leadership within our own institutions and have worked to create structures that better support underrepresented groups**. In assessing the larger NSF ADVANCE project, the majority of faculty reported psychosocial gains listing the following benefits: increased confidence, willingness to take risks, increased career resilience, greater pride in accomplishments, decreased feelings of isolation, greater willingness to negotiate on one’s behalf, and increased understanding of how universities function.

**Proposal**

A survey of STEM faculty at PUIs in the Pacific Northwest region revealed that women faculty at the mid-career level have the greatest need for support. **We propose to form peer-mentoring groups (4-6 participants/group) for late early-career and mid-career women faculty in the areas of Biology, Chemistry, Computer Science/Mathematics, and Physics/Engineering**. Each network will meet virtually every month. With support of the National Science Foundation, an annual meeting among participants will be held to provide face-to-face time with well-designed faculty enrichment workshops. Year 1 will focus on self identity and assessing areas of strength and growth, Year 2 will focus on leadership development, Year 3 will focus on strategic support for women faculty and students as well as communication skills, and Year 4 will focus on working with participants and institutional leaders to implement policies on gender equity, intersectionality, and diversity and inclusion.

**Tentative Timeline**

August 2018: Submit Letter of Intent for NSF ADVANCE Grant - Partnership Program Track

January 9, 2019: Submit NSF Partnership Grant Proposal

**Principal Investigators**

**Northern California/Oregon/Washington**

Mia Bertagnolli, Ph.D., Interim Associate Dean, College of Arts and Sciences, Professor of Biology, Gonzaga University

Patricia Flatt, Ph.D., Associate Professor of Chemistry, Western Oregon University

Sarah Kirk, Ph.D., Associate Dean for Faculty Development, Professor of Chemistry, Willamette University

Hala G. Schepmann, Ph.D., Department of Chemistry Chair, Professor of Bioorganic Chemistry, Southern Oregon University

**Ohio/Michigan/Northeastern Illinois**

Chrystal D. Bruce, Ph.D., Associate Professor of Chemistry, John Carroll University

Elizabeth S. Roberts-Kirchhoff, Ph.D., Assistant Dean for Academics, Professor of Chemistry and Biochemistry, University of Detroit Mercy

**Network members needed**

We are submitting an NSF ADVANCE Partnership grant proposal to support the formation of peer-mentoring groups for late early-career and mid-career women faculty in the areas of Biology, Chemistry, Computer Science/Mathematics, and Physics/Engineering.

Are there faculty who identify as women in STEM at your institution that would be interested in participating as a member of a peer-to-peer mentoring network? If so, how many faculty do you estimate would be interested in each disciplinary network (Biology, Chemistry, Computer Science/Mathematics, and Physics/Engineering)?

We are also particularly interested in the experiences of STEM faculty who are impacted by the intersection of gender and race, ethnicity, disability status, economic status, first generation status, foreign-born and foreign-trained status, and/or sexual orientation. What is your estimate of how many such faculty in STEM at your institution would be interested in each disciplinary network (Biology, Chemistry, Computer Science/Mathematics, and Physics/Engineering)?