Project Description

The State of Maryland is primed and ready to support **The PROMISE Academy**, a project that will increase the numbers of underrepresented STEM faculty within its public institutions. In 2017, the University System of Maryland's (USM) Board of Regents made inclusion and diversity, and faculty diversity in particular, a top goal for USM Chancellor, Dr. Robert Caret, who will also serve as the new president of the Association of Public Land-grant Universities (APLU).The USM, comprised of 12 higher education institutions and two regional centers, has been committed to the goals of the AGEP program, and has previously focused its support on activities for graduate students. The USM's support for the PROMISE Academy represents a new focus on recruiting and retaining URM STEM faculty. The USM has organized a subset of its institutions with strengths in biomedical and life sciences to form a career development alliance called **The PROMISE Academy**. The PROMISE Academy will be an AGEP program that will actively work to cultivate and hire underrepresented STEM scholars for tenure-track faculty positions within 5 unique public institutions in Maryland, with career development initiatives that will facilitate retention and success toward tenure. The University of Maryland Baltimore County (UMBC), will serve as lead institution, in collaboration with lead founding partners of the PROMISE AGEP that served graduates students and postdoctoral fellows, the University of Maryland College Park (UMCP), and the University of Maryland Baltimore (UMB). This branch of the "PROMISE AGEP brand" for specific development of URM STEM faculty will also include two of the state's comprehensive universities, Salisbury University (SU) and Towson University (TU). The PROMISE Academy will have the support and imprimatur of the USM. While the PROMISE Academy will narrowly focus on a small number of participants, URM STEM faculty candidates for the 5 institutions, USM is planning to use the outcomes to assist its other institutions, and all provosts within the USM support this endeavor. Further, the USM's Vice Chancellor for Government Relations, (former member, Maryland House of Delegates) has agreed to elevate the visibility of The PROMISE Academy within the legislature as an initiative that will assist with addressing STEM workforce diversity.

> **The PROMISE Academy:** *An alliance of 5 institutions in Maryland that will facilitate new tenure-track faculty appointments and career development for scholars who are underrepresented in STEM. The PROMISE Academy is for URM STEM future faculty candidates who want to become tenured professors in the state. It is a career development program that will position scholars to transition to available tenure-track positions within 2 years. Unlike traditional future faculty programs for graduate students, The PROMISE Academy works with provosts and deans to facilitate direct access to long-term faculty employment, and reverse-engineers promotion dossiers to provide career development across faculty ranks.*

The PROMISE Academy will serve scholars who have not yet obtained a tenure-track position in STEM in two phases by 1) developing targeted "conversion to faculty" placement initiatives, supplemented by career-building activities for scholars on the target campuses, and 2) developing networks of STEM faculty through career development initiatives that connect within and across departments from USM institutions. The new PROMISE Academy will build upon the promising practices developed through successful PROMISE AGEP programs at the URM graduate student and postdoctoral levels, ADVANCE programs at UMBC and UMCP for supporting women faculty in STEM, and the *"On-Ramps to Full Professor"* program at UMBC that investigated issues that were causing STEM women faculty to stall, and not advance after tenure.

The PROMISE Academy will fill a gap that has neither been addressed by previous PROMISE AGEP programs, nor ADVANCE programs: attention to URM STEM faculty hiring. Our approach for this "Career Development Program" will draw upon research and outcomes from past PROMISE Pathways AGEP and PROMISE AGEP-T projects where PROMISE has been featured, such as recruiting postdocs based on best practices from AGEP and ADVANCE recruitment programs and inviting scholars of color to become faculty (Reed & Tull, 2012; Reed & Tull, 2016), AGEP as a conduit for professional development on campuses (Tull, Rutledge, Warnick & Carter, 2012), bridge programs that facilitate transitions (Matthews, 2011), ways that PROMISE has trained graduate students for faculty positions outside of Maryland (Ponjuan, Gasman, Hirshman, and Esters, 2011), and the importance of the PROMISE multi-level mentoring structure (Rutledge, Carter-Veale, & Tull, 2011). The PROMISE Academy's activities will be further informed by literature on university cultures, including work by the PROMISE Social Science research team, which highlights expanding networks, promoting faculty agency, egalitarian mentoring structures, and the intentional use of the "Third Place" (e.g., PROMISE conferences) as a neutral space that is neither work

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nor home to facilitate community, skill-building, and retention (Griffin, Baker, O'Meara, Nyunt, Robinson, & Staples, 2016; O'Meara, Lounder, & Campbell, 2014; Thomas, O'Meara, & Espy-Wilson, 2014).

Faculty Diversity at the Forefront of the USM's Agenda

The USM's Board of Regents, Chancellor, and Office of the Sr. Vice Chancellor for Academic Affairs have worked with Co-PI Dr. Renetta Tull and the provosts of the institutions to develop a collaborative network that will leverage the USM's "system-ness" to collectively develop, support, and share recruitment initiatives that will attract and retain diverse STEM faculty. In 2017, the USM provosts and the USM Board of Regents Committees on Education, Policy and Student Life (EPSL), and Inclusion and Diversity (I&D) have had regular meeting agenda items on faculty diversity, which has made discussing the topic increasingly more comfortable and engaging. Discussions have centered around research such as how varying views of diversity can affect underrepresented scholar's engagement and participation in STEM faculty opportunities (Aragón, Dovidio, & Graham, 2017), research and teaching motivations for faculty in STEM (Carter-Johnson, Byars-Winston, Tull, Zayas, & Padin, 2016; Gasman, 2016; Lechuga, 2012), recommendations for leveraging resources and improving URM faculty preparation (Li & Koedel, 2017; MacLachlan, 2006; Whittaker & Montgomery, 2014) and attention to faculty retention (Han & Leonard, 2016; Hardy & Thompson, 2017; Lawrence, Celis, Kim, Lipson, & Tong, 2014; Layton, Brandt, Freeman, Harrell, Hall & Sinche, 2016).

While the name "PROMISE" has been attached to training diverse graduate students and postdocs, Maryland took the "*and the Professoriate*" portion of the AGEP name seriously and began to brand "PROMISE" as an initiative that could assist schools with their faculty diversity efforts. It can take years to develop both institution-wide and system-wide approaches that facilitate faculty diversity, that are embraced by both the administration and the current faculty. The PROMISE AGEP provided participants with information about faculty careers, and motivation to pursue the professoriate that they hadn't received otherwise. PROMISE now has among its alumni scholars who are or have been tenured professors, on tenure-track, and researchers at Clemson, Augustana College, UCLA, Catholic University, the University of Puerto Rico Rio Piedras, Norfolk State University, CUNY, MIT, the University of Pennsylvania, and several other institutions. PROMISE AGEP models are used at the University of Pittsburgh, Cornell University, MD Anderson – University of Texas, Purdue University, Old Dominion University, and Virginia Tech. PROMISE has a proven track record of training URM scholars in STEM, and transitioning grad students and postdocs to faculty positions at a variety of institutions both within and outside of the US. The USM's leadership is now committed and ready to adopt these effective practices to increase faculty diversity within Maryland.

Preparation for this PROMISE Academy proposal began in 2016, providing the University System of Maryland with a platform on which to position and build out the system's faculty diversity efforts. The name for "The PROMISE Academy" was chosen for this AGEP to purposely connect it to the PROMISE AGEP-T's success with facilitating a diverse STEM workforce. **The word "PROMISE" among USM Regents, Presidents, Provosts, and Deans, evokes thoughts of inclusive excellence that extend from degree completion among diverse graduate students, to developing community for postdocs, to the proposed initiatives that are being designed to increase the numbers of URM STEM tenure-track faculty.**

> *"As I mentioned during the NSF Site Visit for the PROMISE AGEP in May 2016, developing system-wide efforts takes time, and the University System of Maryland has now reached the point where PROMISE is regularly on system-wide agendas where the AGEP's best practices are shared with policy-makers. In 2016, our system began to focus increased attention on improving faculty diversity, and PROMISE was poised and ready to move into a position to providing advice and counsel to the system. PROMISE shared outcomes from key programs such as the Dissertation House and the Summer Success Institute, which are replicated in other states for sharing potential solutions. As a result, there was enthusiastic support to develop The PROMISE Academy to stimulate faculty diversity."* – Joann A. Boughman, Ph.D., Sr. Vice Chancellor for Academic Affairs, USM

The PROMISE Academy is focusing on two projects that will have distinct areas of action: **1) USM Placement Initiative**, and **2) Transitional Support for New Assistant Professors**. The program will pilot collaborative tenure-track conversion models with career development components. Further, The PROMISE Academy will include a network of support for all newly appointed assistant professors in STEM fields,

throughout the system because we believe that underrepresented faculty will thrive in collaborative environments that facilitate the success of STEM junior faculty, from all groups. In November 2017, The Chronicle of Higher Education highlighted newly-released results from a Government Accountability Office workforce report, stating that "freshly minted academics are apt to wind up with jobs off the tenure track," and that some of the public institutions that were examined showed that "most positions held by people under 40 (excluding graduate assistants) had no path to tenure," (GAO, 2017; Williams-June, 2017). Given the AGEP's focus on developing a new generation of professors, such recent discussions, along with the Council of Graduate Schools' studies on understanding career paths (Allum, Kent, & McCarthy, 2014) urge us to design mechanisms that will successfully transition underrepresented scholars to faculty careers. Results within our own NSF ADVANCE programs for women faculty in STEM have shown that women scholars who participated in initiatives such as leadership programs became leaders, and those who participated in peer networks with career agency and sense of community were more likely to be retained. Further, by having a program such as ADVANCE on campus with its structure of support, the numbers of assistant professor women increased, numbers of women who advanced in all faculty ranks increased, and the proportion of assistant professor women who resigned pre-tenure decreased ("UMBC ADVANCE Tenured/Tenure Track Data," n.d.; "University of Maryland ADVANCE Results from 2010 - 2015," n.d.). Toward achieving similar results for faculty from underrepresented groups, The PROMISE Academy has assembled a collaborative team of PIs, Co-PIs, and senior personnel who have worked with ADVANCE, the PROMISE AGEP, or other faculty development programs to study the USM's faculty diversity data, consider barriers to entry, and examine reasons for URM faculty attrition. The response from the Board of Regents is that we need The PROMISE Academy, and that we are eager to make it work.

Maryland Needs the PROMISE Academy:

> *"We're examining our data within the USM, and acknowledge that we need The PROMISE Academy to assist the system with developing our pipeline for future faculty, recruiting diverse faculty, and sharing data, advice, and initiatives for retaining our diverse scholars through and beyond tenure.* – Robert L. Caret, Ph.D., Chancellor, University System of Maryland.

The 2015-2016 USM Data Journal reports 15,436 faculty in all fields, of whom 15% are from underrepresented racial and ethnic groups. To reach parity with the U.S. population, the percentage of faculty who are American-Indian, Black, Hispanic, or Pacific Islander would need to rise to 32.3% (United States Census Bureau, 2015; USM, 2016). USM STEM data (2016) for Biological Sciences, Computer and Information Sciences, Engineering, Mathematics, and Physical Sciences show that the system's URM STEM faculty only comprise 10% of the USM's total STEM faculty. This is not on par with our undergraduate population where URM STEM undergraduate and graduate students comprise 35% and 36% of their respective STEM student populations within the system. As more researchers examine data for URM STEM faculty, they are pushing back on the low URM STEM pipeline argument as a reason for a lack of faculty diversity. Studies note that within the biomedical community, there has been significant growth in the numbers of URM PhD scientists, and that PhD production should be decoupled from faculty attainment. The argument is that there are other reasons why URM scientists are not pursuing faculty careers. Concerns include issues such as conspicuous minority status, cultural isolation, a low sense of belonging, low academic salary compared to offers in industry or other sectors, life-work balance, "tolerant" environments that are not welcoming, compelling needs to be advocates for social justice that may not be possible in a STEM academic environment, and desire to escape an environment where there were negative experiences during graduate school. The PROMISE Academy will be following the advice of the literature by actively cultivating fellows, addressing the issues stated above, utilizing the collaboration of the USM, and "supporting integration and interaction across multiple levels of inter-institutional partnerships" (Boddener, 2016; Byars-Winston, 2014; Callier, 2016; Gibbs, 2016; Lechuga, 2012, Whittaker & Montgomery, 2014).

> *"The regents commit to supporting initiatives proposed for The PROMISE Academy, which will represent our system. We are committed to working with this transformation alliance as they develop models to increase and sustain a diverse faculty. Our regents are looking carefully at faculty diversity, and we're looking forward to partnering with this NSF program to specifically work toward increasing the numbers of underrepresented faculty in science, technology, engineering, and math fields on our USM campuses … We want the composition of our faculty to accurately reflect the demographics of our student body."* – James T. Brady, Chair, Board of Regents

Plan of Action: The PROMISE Academy

The PROMISE Academy will recruit 16 URM STEM future faculty candidates who want to become STEM professors in Maryland. The PROMISE Academy is a career development program that will position scholars to successfully transition to available tenure-track positions within 2 years. The PROMISE Academy differs from traditional graduate student future faculty programs, because the program provides "through-tenure" career training, laboratory management, publication and proposal writing mentor-coaching, inter-institutional teaching experience, customized reverse-engineered tenure packages, faculty collaborations, external conference support, and direct access to long-term employment. The PROMISE Academy will be the NSF-sponsored career development arm of the STEM "tenure-track conversion" programs that are being developed by USM institutions (with resources from the institutions) to address faculty diversity. The PROMISE Academy will leverage the investments of NSF in its PROMISE AGEP programs, and relationships with the USM's provosts and STEM deans to stimulate an increase in STEM faculty diversity by focusing on two areas of action*: Project 1 (P1): USM Placement Initiative,* and *Project 2 (P2): Transitional Support for New Assistant Professors*. While the USM includes 12 institutions, The PROMISE Academy will focus efforts on 5 institutions: UMBC, UMCP, UMB, Towson, and Salisbury. Each institution has a plan for cultivating new faculty based on leveraging existing structures, developing new initiatives for retention, and leveraging the USM's connections for placements (summarized in Table 1).

Ground Zero (P0): Recruitment and Cultivation of PROMISE Academy Fellows

The PROMISE Academy will draw upon its networks within other AGEPs, the Council of Graduate Schools, LSAMP Bridge to the Doctorate Programs, NIH IMSD programs, the SREB Compact for Faculty Diversity and alumni of URM STEM training programs to cultivate and recruit *PROMISE Academy Fellows*. The team of STEM deans serving as Co-PIs for The PROMISE Academy will also actively seek diverse faculty when they attend their discipline-specific conferences. A plan to stimulate faculty hiring through by leveraging networks, can help to increase the percentage of those who pursue academic careers (Gibbs, 2016; Yong, 2016). **The PROMISE Academy will recruit 16 Fellows over the course of 5 years**, with a plan for each of them to transition to a tenure-track faculty position within the University System of Maryland.

Table 1: Summary of the PROMISE Academy

University System of Maryland Partners: UMBC, UMCP, UMB, Towson, Salisbury	
Premise: Career development arm of scholar to tenure-track (TT) faculty conversion programs in the USM	
# of Fellows: 16, across institutions, over 5 years; Goal: 16 new URM STEM TT faculty in Maryland	
Ground Zero (P0) *Cultivation and Recruitment of Fellows*	
Project 1 (P1) *USM Placement Initiative*	**Project 2 (P2)** *Transitional Support/Supportive Community*
a) **Conversion:** 16 Fellows across postdoctoral scholar programs, e.g., Natural Sciences Pre-Professoriate Fellowship (UMBC), President's Postdoctoral Fellowship Program (UMCP), Teaching Postdoctoral Program (Salisbury)	a) **Departmental meetings and cross-campus conversations** within disciplines where scholars are placed. Discussions will include climate of department, opportunities for recognition, facilitation of research and collaboration.
b) **Career Advancement Seminar Series – The 'Reverse-Engineered Tenure Package':** Early coached development of the dossier from which to build.	b) **Faculty Development Biomedical Sciences Conference** Participants will have an additional audience with members of the UMB Science Faculty Mentoring Team.
c) **Guest Lectures:** Participants will give a guest lecture at Towson University, and a seminar at UMB, in addition to teaching requirements on respective campuses.	c) **Teaching and Mentoring Workshops** (sponsored by Salisbury and Towson) will focus on undergraduate teaching. Programming by UMB will focus on teaching grad courses.
d) **External Conferences:** Participants will coached toward disseminating research ideas and results within year 1. They will develop external collaborations within professional societies and build their global scholarly reputations.	d) **USM-wide Discussions:** Process improvement discussions for creating more "pull" factors across campuses such that scholars will want to come to Maryland, be productive, reach professional goals, and stay.
Duration of Program: *2 years per fellow*, with opportunities to participate in select activities as alumni	

P0) *Cultivation and Recruitment of Fellows.* The PROMISE Summer Success Institute (SSI) will serve as one of the Maryland-based cultivation venues. The SSI was initially designed as a conference to connect underrepresented STEM graduate students across USM's institutions. The popularity and utility of the conference grew, such that alumni began to return, seeking programming and advice that would assist them with obtaining tenure. Further, our external guest speakers began to bring their graduate students to the event, noting that their graduate students needed a solid community of scholars of color. When students

from other schools started to come for the sense of community, and then began to apply for jobs in Maryland, we decided that we had a venue that could be more strongly utilized to attract future faculty. In August 2017, for the first time, USM provosts and STEM deans representing each institution came to the SSI and began to share faculty opportunities, inviting students to engage and consider faculty positions in Maryland. Several of the provosts invited participants to their campuses for visits, and one campus hired a PROMISE scholar into a STEM teaching postdoctoral fellow position, another USM campus hired a visiting scholar (mentee of one of the SSI's guest speakers) into an evaluation and assessment directorship. Other guest speakers and mentors have taken advantage of the SSI to find faculty for their schools. Given these outcomes, the USM provosts have agreed that the annual August SSI would be the perfect venue for them to invite and meet prospective faculty. They would be working with The PROMISE Academy team and STEM faculty within their departments to follow-up on leads from conferences and networks to invite prospective PROMISE Academy participants to the annual August SSI, and to their respective campuses.

Project 1 (P1): USM Placement Initiative

The PROMISE Academy's P1 activities involve co-development of institutional initiatives and policies to stimulate hiring of diverse STEM PhDs into permanent faculty positions. These include partnering to support postdoctoral research fellowships, postdoctoral teaching fellowships, and visiting professorships as pathways to tenure-track faculty positions. The USM is hearing recommendations to have institutions throughout the system consider reflective models and implicit-bias training for all faculty search committees, as schools that have used these models are reporting out on best practices and results that led to successful hiring of diverse employees on their campuses. Actions of P1 build upon pilots for ***postdoc to tenure-track conversion models***. Connections include the actions discussed in P0, coupled with on-campus visits to discuss faculty options with deans, to meet faculty, meet students, and see the campus. Table 1 provides a summary of activities, enumerated as elements a-d. Elements for P1a) *Tenure-track Faculty Conversion Plan*, will vary across institutions, as each institution has developed requirements that connect to hiring and advancement. Table 2 summarizes the initiatives and featured pilots that will be the beneficiaries of targeted infusions of professional development and career advancement funds. Elements for P1b) *Career Building Activities that are specific to the participants* across the system will include development of the "Reverse-engineered dossier." Elements for P1c) *Teaching experience on partner campuses,* will be coordinated by Towson University and UMB, and will include both guest lectures. Element P1d) *External Conferences* will promote Fellows' participation in external meetings, and will facilitate connections within the departments so that Fellows can join members of the department to attend discipline-specific conferences as colleagues.

P1a) Scholar/Postdoctoral Fellow to Tenure-track (TT) Faculty Conversion Models
The PROMISE Academy will provide career development to support new models for TT conversion. Fellows will be recruited and hired into UMBC's Pre-Professoriate Program or the Provost's Postdoctoral Fellowship for Faculty Diversity, College Park's President's Postdoctoral Fellowship Program, UMB's faculty affiliate initiative, and Salisbury's Teaching Postdoc initiative. While the universities cover the salaries for these programs, The PROMISE Academy will provide 16 fellows from across these programs with mentored career development, and a $20,000 "start-up" package to cover conference travel and collaboration, instrument services, and disposable supplies. Brief details for each program will be outlined below.

UMBC. UMBC will support 6 PROMISE Academy Fellows across the 5-year period. Fellows will be recruited to UMBC's College of Natural and Mathematical Sciences (CNMS) new pre-professoriate fellowship which has an option to convert the fellow to a tenure-track faculty member after two years. The program is modeled after the UMBC Provost's Postdoctoral Fellowship for Faculty Diversity which has mechanisms to convert postdoctoral fellows to tenure-track faculty by offering the postdoctoral positions to departments with available faculty lines. The Provost's program has been successful in the College of Arts, Humanities and Social Sciences, and CNMS is tailoring their program to be more specific to natural sciences. CNMS' appointees will be *"Research Assistant Professors"* with two-year appointments that will include an "Individualized Conversion to Tenure-Track Plan," and a "Post-Conversion Mentoring Plan." CNMS will provide research and teaching mentors, laboratory space, and access to equipment, core shared facilities, and service infrastructure. Appointees will participate in UMBC's Active Learning, Inquiry Teaching Certificate (ALIT) Program, and participate in training activities relevant to first year faculty. Appointees will receive additional coaching and mentoring through The PROMISE Academy to facilitate successful TT conversion.

UMCP. Over the five years, UMCP would bring 6 postdocs to campus through its President's Postdoctoral Fellowship Program (PPFP), which emphasizes building a diverse pipeline of scholars for academic careers. Given that the PPFP is open to all fields, UMCP will develop targeted recruitment efforts towards STEM fields as part of the project. Postdocs applying to the PPFP are reviewed and vetted at four distinct junctures: 1) at the point of application for fit and eligibility; 2) at the point of mentor identification, as each applicant must have an identified mentor who is willing to support the postdoc; 3) at the department level, as Chairs must also commit to supporting the postdoc; and 4) at the College level, through a review by the Dean with an indication of support. Each of these review stages is designed to screen applicants as potential future tenure track faculty members. PPFP postdocs have designated mentors who are committed to providing research experiences that prepare the postdocs for academic careers, and in addition we have developed particular experiences for our Fellows that further develop communities of support, practice, and scholarship designed to prepare postdocs for academic careers through our Office of Postdoctoral Affairs. Postdocs will participate in activities through UMCP's Teaching and Learning Transformation Center (TLTC). Participating postdocs will be eligible to apply for open positions on the College Park campus, as well as those within the USM system and partner institutions.

UMB. UMB will recruit two PROMISE Academy fellows to positions within basic science research areas of the School of Pharmacy and the School of Medicine (not patient-oriented nor related to disease prevention). Fellows will be hired into faculty roles (not post-doctoral positions) to make a conversion tenure track hire possible. A "Science Faculty Mentoring Team" will coach fellows.

SU. SU will recruit two PROMISE Academy participants as post-doctoral fellows as part of the second and fourth year cohorts. To enhance recruitment of these post-doctoral fellows, SU will provide membership in an Undergraduate Faculty Learning Community to be established through this award and an existing Mentor Match program to connect them to research students; a research and teaching mentor; an allowance to offset costs of housing; and a new post-doctoral/Visiting Assistant Professor program run out of SU's Office of Graduate Studies and Research. The University has committed to moving the PROMISE Academy post-doctoral fellows to tenure-track positions within three years pending positive annual reviews.

TU. TU's primary focus will be attracting, recruiting, and then retaining great URM faculty members. They will work with the other campuses who are training postdocs to cultivate future faculty for their STEM programs. TU will conduct workshops to help participants understand the particular challenges and rewards of applying for and accepting a tenure-track faculty position at a Primarily Undergraduate Institution.

Table 2: PROMISE Academy Pathways to Tenure-Track (TT) Positions

Featured Pilots	Pathways to the tenure track
UMBC CNMS Natural Sciences Pre-Professoriate Fellowship	***Conversion option to TT faculty? YES.*** The CNMS program will recruit URM scholars as pre-professoriate fellows into faculty lines, with a TT conversion option after 2 years.
UMCP President's Postdoctoral Fellowship	***Conversion option to TT faculty? YES.*** All STEM deans are participating to assist with preparing fellows for hire at either UMCP or partner institutions.
Salisbury University Teaching Postdocs & Visiting Professorships	***Conversion option to TT faculty? YES.*** Salisbury will hire into a Teaching Postdoc or Visiting Professor role with plans to convert.
UMB PROMISE Academy Fellow	***Conversion option to TT faculty? YES.*** UMB will hire scholars directly into a faculty line to facilitate conversion to a tenure-track position.
Towson University (Receiver)	***Conversion to TT faculty under consideration.*** The Fisher College of Science & Mathematics will cultivate fellows hosted by other institutions, for their upcoming positions.

P1b) *Career Advancement Seminar Series – The 'Reverse-Engineered Tenure Package'*
The PIs have recommended that PROMISE provide programming that allows fellows to understand requirements for tenure and metrics in advance of evaluation. Therefore, participants will work with coaches on a "reverse-engineered tenure package," that can continually be updated. Dr. Carole Sargent from the Georgetown's Office of Scholarly Publications, and Dr. Isabel May from UMB's Writing Center will serve as coaches. Each participant will have a dossier from which to build. Seminars will be designed to work with participants on developing all elements for their packages, e.g., CV in correct tenure format, teaching portfolio. Seminars will also cover selection of aspirational awards and review of criteria, discussion of external

letter writers, understanding what it means to be a "citizen of the department," and balancing service. Fellows will be cognizant of metrics for demonstrating successful teaching, how to develop a national reputation for research productivity, and how to cultivate peers in their field of specialization.

P1c) *Guest Lectures on Partner Campuses*
Towson will invite all PROMISE fellows to present research seminars in their areas of interest, and will facilitate campus visits to Towson to share experiences as faculty at a PUI, including relatively heavier teaching loads (compared to research institutions) and research expectations. UMB will also assist with facilitating guest lectures on their campus, and other campuses within the USM. Fellows will have opportunities to expand their portfolios, and develop colleagues across the system as a result of these lectures.

P1d) *Developing an External Reputation and Collaborations via External Conferences*
Each of the fellows' start-up funds will have provisions for travel to conferences and meetings, so that fellows can develop strong national reputation. Fellows will receive funding each year for up to two years to facilitate very strong participation in discipline-specific meetings, research dissemination, and leadership opportunities within the professional societies. Travel costs are incorporated to prepare scholars for criteria beyond tenure, e.g., "international reputation for scholarly activities." As faculty in STEM who are native to countries outside of the U.S. already have established global connections, the PROMISE Academy seeks to equip URM scholars with development of their reputations as international scholars, well in advance of the third-year review as an assistant professor. Given lessons learned from projects by members of the PROMISE Academy team such as "On-Ramps to Full Professor," and projects on women STEM faculty of color and their choices for international engagement (described in the section on "Results from Prior NSF Support"), it will be important to provide fellows with opportunities to expand their networks, and their reach.

Rationale for P1. Transitional or conversion programs are not new, particularly within graduate education. The NSF's own LSAMP Bridge to the Doctorate program is an example of an initiative that fosters transitions between academic levels. The Fisk-Vanderbilt Bridge Program invokes the mentoring style of PhD programs at the M.S. level to foster transitions. The program addresses: retention through formation of strong mentorship relationships, recruitment, not competition, and having faculty involved in the programmatic design for support and monitoring. The program has had a 91% retention rate (Stassun, Burger, Lange, 2017). Recent studies note that interventions at later stages may be needed to increase faculty diversity, and they call for the kinds of support mechanisms that The PROMISE Academy will provide, e.g., peer support, funding, mentorship, and sponsorship to support URM postdocs to "progress to independence" (Gibbs, 2016; Griffin, Baker, O'Meara, Nyunt, Robinson, & Staples, 2016; MacLachlan, 2006; Sowell, Allum, & Okahana, 2015; Whittaker & Montgomery, 2014).

Project 2 (P2): Transitional Support for New Postdocs and Assistant Professors

Building a sense of community on campus is essential, and while the PROMISE AGEP has been successful with building a psychological sense of community and sense of belonging (McMillan & Chavis, 1986; Sarason, 1974) at the graduate level, the new challenge will be to facilitate smooth transitions for the new PROMISE Academy Fellows as they navigate faculty roles within their departments.

P2a) Departmental meetings and cross-campus conversations In order to assist with providing an environment that is welcoming for the fellows, the USM's PROMISE Academy will be extending select career development program invitations to all new STEM postdocs and assistant professors. While the PROMISE Academy will focus attention on its Fellows and their trajectories, it will be important for the program to be viewed as one that broadly supports new faculty scholars. Shared programming will include elements that increase the "pull" factors such as opportunities to produce high-quality research and scholarship, environments that foster meaningful and less competitive collegial relationships. Likewise, it will be important to reduce factors that "push" faculty to leave institutions such as stress caused by the work environment, and lack of collegial connections. Further, retention improves when there are regular conversations around expectations and standards that govern promotion (Lawrence, et. al, 2014; Lechuga, 2012). Therefore, The PROMISE Academy has been given permission to leverage positioning within the USM to facilitate meetings with current deans and faculty within departments, and between institutions to convene new STEM faculty broadly for networking and faculty development.

P2b) Faculty Development Biomedical Sciences Conference. All five campuses have life sciences, and in partnership with UMB, The PROMISE Academy will develop and sponsor the Conference for Biomedical Sciences to facilitate faculty preparation for current and future junior faculty from all of the campuses. Table 3 shows details of the conference that will invite postdoctoral fellows, non-tenured faculty, and new professors in the USM. Scholars from all racial backgrounds will be invited to attend to foster community.

Table 3: Faculty Development Conference for the Biomedical Sciences

Preparation for Faculty Applications
Faculty Application Packet: Reviewing and updating the CV, letters, research statements, teaching philosophy
Expectations for publications (quantity, impact factors) - *Exercise: Highlighting publications (reviewing journal articles from new hires), examining publication record, plans for new submissions*
Developing collaborations: Sharing research in small groups.
Recommendation letters - *Exercise: Create and review drafts*
The faculty interview (meetings with faculty colleagues, delivery of research and teaching presentations, debriefing with the search committee) Speakers: Faculty panel from search committees.
Grant and Editorial Board Reviews: Intellectual quality and merit of the study, potential impact, validity of the hypothesis, evidence-based approach, logical aims, appropriate and feasible procedures, experience and competence of the investigators, adequate facilities, and understanding legal conflicts of interest.
Feedback & Goal-setting: One NIH or NSF grant, two publication venues. *Exercise:*   a)   Go through the RFP of an intended grant submission thoroughly. Start a draft document with each section, and some preliminary bullets that address each area.   b)   Identify journals by considering venues used by your advisor, colleagues, or one that you regularly cite. Read the information for authors for your chosen journals.
Workshop: Grants & Publications
Preparing for independent financial support and a fundable research plan. NIH: Specific Aims, NSF: Intellectual Merit, Broader Impacts, Q&A with a panel of program officers
Meeting journal editors, grant reviewers. Exercise: Start drafts based on the information for authors for a chosen journal
Future casting: Toward becoming a fellow.   How does one develop a career that is eventually recognized for academy fellow status?
Calendaring action plans for next steps: IRB/RCR, Contact collaborators, Meet program officers, talk with journal editors, Share draft with collaborators, Submissions
Meetings with UMB Science Faculty Mentoring teams

P2c) Teaching and Mentoring Workshops: The PROMISE Academy will include programming sponsored by the USM's Kirwan Center for Academic Innovation. In partnership with The PROMISE Academy, workshops and seminars will be open to all postdocs and new faculty. Salisbury and Towson will provide workshops that highlight faculty careers at comprehensive universities, and the focus on teaching and mentoring undergraduate and Master's students at these institutions. Further, because comprehensive universities enroll ~70% of all undergraduates attending four-year institutions, The PROMISE Academy must develop strategies to recruit and retain URM faculty to teach and mentor the diversity of students attending these campuses. While most of the fellows will have teaching assignments connected to their appointments, Towson University will also host workshops on managing research and teaching loads, and can offer adjunct teaching assignments to some PROMISE participants who are interested in additional teaching experience at a campus that primarily serves undergraduates.

P2d) USM-wide Discussions. The USM is committed to having regular discussions on faculty diversity with the presidents, provosts, and campus communities through the Board of Regents Committees on Education, Policy, and Student Life (EPSL), and Inclusion and Diversity (I&D). The USM will also have system-wide faculty diversity conferences where they will highlight best practices to share solutions and challenges with the attendees. The USM's Academic Affairs unit and the provosts commit participation from offices under their academic affairs units. This proposal for PROMISE Academy has been developed in collaboration with the USM provosts and STEM deans. Departments will be encouraged to recruit diverse faculty at every level (e.g., Post-doc, Visiting, Affiliate), to build both capacity and community, which is attractive to diverse scholars who are considering tenure-track careers. People want to go where others are, and they want to know that they have the option of having scholarly and personal communities on their chosen campus. Meetings convened by provosts, deans, and department chairs will tackle active recruitment of URM scholars for open tenure-track lines, as well as innovative transitional programs that start at junior levels and transition to tenure-track positions. The USM will take inventory of existing programs and will be assisting with the agile development of new initiatives that have conversion processes.

Rationale for P2: Development of The PROMISE Academy is providing opportunities for the USM to increase visibility of the topic of faculty diversity, and to openly address issues facing URM scholars that may be deemed uncomfortable. Overall, more support and tools are needed to navigate the pressure that comes with the "invisible" and tangible responsibilities, tenure and promotion that specifically affects faculty of color. For example, minority and particularly minority women faculty take on more service oriented roles along with teaching and research responsibilities. Institutions need support to ensure their institutions make diversity a priority in word and in deed," (Matthew, 2016). University leaders must maintain or establish policies and practices to support (recruit, retain, and promote) faculty/leaders of color, not just mainstream Academics. Han & Leonard, 2016; Cole, McGowan, and Zequera draw from analytical narratives to reframe how doctoral student socialization and new-faculty support systems are discussed, especially pertaining to first-year faculty of color (Cole, Mcgowan, & Zerquera, 2017). Research recommends that institutions of higher education examine policies and practices around recruitment of diverse faculty, offering competitive salary packages, providing mentorship to new faculty, and increased openness to addressing the concerns of faculty of color. The USM has agreed to discuss cultural issues, the importance of social connections, and countering pre-conceived notions of how a professor should look or sound. These include conversations around cultural differences, socialization, and protecting against nuanced assignments and the "invisible work" that results from the desire to have diverse representation on committees (Byrd & Tharps, 2014; Gordon, 2013; Lechuga, 2012; Patton, 2006).This plan for The PROMISE Academy of Maryland fits the NSF EHR/HRD vision of developing a well-prepared and competitive U.S. workforce of scientists, technologists, engineers, mathematicians, and educators that reflects the diversity of the U.S. population. The plan to increase the STEM professoriate and stimulate collaboration among the fellows and facilitate idea generation also fits HRD's mission to grow the innovative and competitive STEM workforce.

PROMISE Academy Social Science Research: Debunking the Myth of the Over-Recruited

The PROMISE Social Science research team, led by KerryAnn O'Meara, co-author of *"Advancing Faculty Diversity"* (Thomas, O'Meara, & Espy-Wilson, 2014) will examine myths surrounding the recruitment of underrepresented scholars into faculty positions. In our previous research, we piloted a survey based conceptually on Smith et al.'s (1996) oft-cited study of the "myths" that surround faculty recruitment. The Smith study interrogated the common assumption that diversity in the PhD pipeline is so limited that scholars from URM groups become highly sought after in the job market; that they receive multiple, competitive offers from prestigious institutions across the country. This myth often undermines faculty search committees from engaging in practices where they actively recruit URMs to faculty roles. However, Smith et al. found that, among recipients of prestigious Ford, Mellon, and Spencer fellowships at highly-ranked research institutions, there were few differences between the hiring experiences of URM and White scholars. Neither URM nor White scholars were highly encouraged to apply for or seek out tenure track faculty roles. As part of the social science research component of the prior University of Maryland AGEP grant, we conducted a pilot study where we extended and updated the Smith study by comparing the faculty job search experiences of AGEP participants to non-AGEP participants. In our survey, respondents were asked to identify their experiences in doctoral professional development programs and on the job market.

While our pilot study provided some preliminary evidence comparing the hiring experiences of URM scholars to White peers, our design had several limitations. First, the small sample size (N=160) limited our ability to recruit participants from different institutional type/rankings, disciplines, geographic regions, and other factors that would have enhanced the national representativeness of the pool. Second, while our study enabled us to assess the impact of doctoral professional development programs such as AGEP as a mediating factor that may enhance the likelihood that women and URMs are prepared for and hired to faculty roles, it did not allow us to determine the extent to which other organizational interventions aimed at diversifying the faculty (e.g. target of opportunity hiring, cluster hiring, dual career programs) also contribute to institutional diversity goals. Likewise, our survey provided little insight on how a candidate's experiences during on-campus interviews lead them to either accept or reject an offer.

As part of the PROMISE Academy project, we propose a larger, mixed-methods study to address these limitations and extend the body of social science research that provides evidence-based strategies to en-

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hance faculty diversity. The PROMISE Academy social science research plan will take advantage of system-wide coordination and commitment to diversity issues to study the issue of recruitment, hiring and retention across the UM system through four related studies. Our proposed research agenda includes four major research activities: 1) An expansion of our pilot study to a broader USM audience, 2) Qualitative interviews with new USM faculty hires, 3) An experiment examining bias in academic CV evaluation, and 4) A longitudinal case study of URM faculty departure.

First, building from our pilot study, we will recruit approximately 600 doctoral scholars within the University of Maryland System to complete a brief survey on their job search process. With a larger sample size, we will be able to recruit a sample that is representative of a range of fields/disciplines, geographic areas, institutional types, etc. We will then examine differences in hiring experiences between URM and White scholars, as well as women and men, in different disciplines and institutional types.

Second, we will conduct one-on-one interviews with new assistant professors in USM institutions about job search experiences. We will obtain a list of new hires each August from the institution and conduct random sampling to interview both white and URM new hires. There has been much attention given to institutions with specialized hiring initiatives, such as cluster hiring (Flaherty, 2017a, 2017b, 2015; Paxson, 2016; Urban University for Health, 2015; Severin, 2013), target of opportunity hiring programs (Flaherty, 2016; Smith et al., 2004; Paxson, 2016), and dual career resource centers (Jaschik, 2016; Schiebinger et al., 2008; Wolf-Wendel et al., 2004). In 2004, Smith et al. suggested that target of opportunity hiring and/or partner hire programs were effective in recruiting faculty from underrepresented groups. However, given that the faculty hiring landscape has changed and increasing faculty diversity is an institutional priority now more than ever, we know little about the extent to which these findings hold up ten years later, and whether their presence is important as women and URM faculty consider where to apply and accept offers. These interviews will also provide new evidence about faculty's interactions and experiences during the recruitment and hiring process. Only a handful of studies have examined faculty experiences as job candidates, and the extent to which these experiences make them likely to accept or reject a job offer from a specific institution. For example, Trower (2002) found that young faculty consider a range of factors, including geographic location, perceptions of work-life balance, institutional prestige and tenure availability, when considering potential job offers. Research on signaling theory suggests that URM candidates often receive and interpret signals about how successful and welcomed they will be at an institution over the course of the hiring process (Avery & McKay, 2006; Avery et al., 2013; Tuitt et al., 2007). Potential faculty who learn that an institution has relatively few URM faculty members or few diversity initiatives may thus perceive that the institution is a not a place that will facilitate their career success. Finally, a recent study of candidate job talks indicates that women are interrupted more frequently than men during on-campus academic job talks in engineering departments (Blair-Loy et al., 2017), which could lead to bias against women in the evaluation of faculty candidates. However, none of these studies indicated if real faculty candidates had been less likely to accept a job offer based on their experience during the recruitment and interview process. One-on-one interviews will us allow to identify the range of factors that candidates consider as they make their job choices, and add to the strategies that institutions can draw to attract - and ultimately hire - diverse faculty. The findings will shed light on which strategies are the most and the least effective in enhancing faculty diversity with tangible recommendations for faculty search committees.

Third, we will set up conditions for an experiment regarding hiring decisions with faculty from USM institutions. Social psychologists have completed a number of experiments showing that when committees review identical CVs they have a greater chance of choosing male over female candidates (Moss-Rascusin et al., 2012; Steinpreis, Anders, & Ritzke, 1999). Similar studies outside of higher education have revealed a preference for White candidates over African American candidates (Bertrand & Mullainathan, 2003) and heterosexual candidates over openly gay candidates (Tilcisik, 2011) in experimental conditions. However, when presented these studies, STEM faculty note candidate review is never this simple. Candidates will also have differences related to prestige of doctoral program and mentors, number of publications, fellowships and awards. We will design a social science experiment wherein a committee we recruit as part of on-campus conferences, receive identical candidate materials that differ by gender and race and one other factor (e.g. doctoral institution) and see what other factors contribute to or mitigate bias in hiring. The results of this study will add to the body of literature which examines the role of bias in academic hiring.
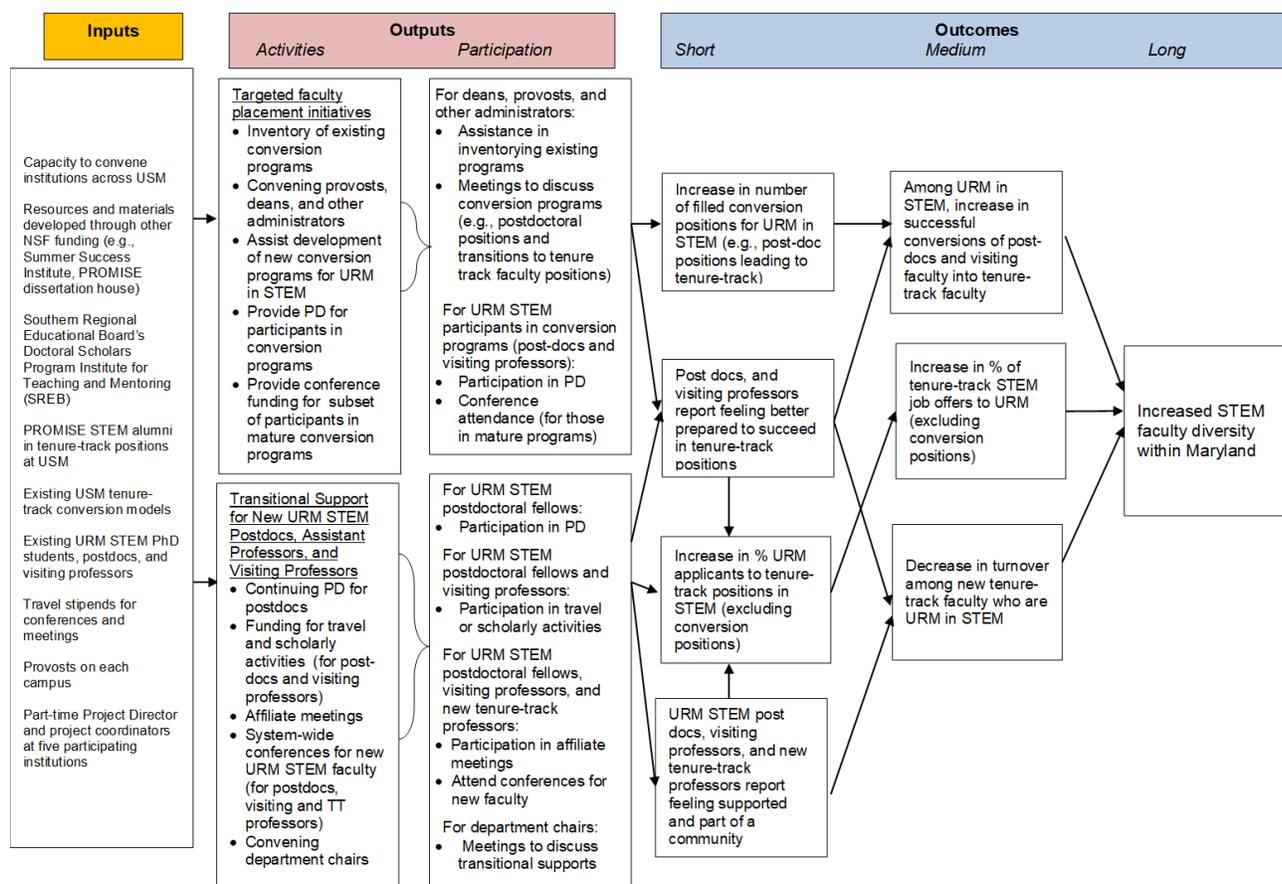
Fourth, we will engage in descriptive, longitudinal, case study analysis of high retention and revolving door departments for faculty of color. Scholars have reported a revolving door, where faculty of color are hired, but are recruited away by other institutions or leave before or after not receiving tenure (Ards et al., 1997; Connolly et al., 2015; Chambers, 2011; Griffin et al., 2013; O'Meara et al., 2014; Turner et al., 1999; Turner, 2002; Turner et al., 2008). For example, Turner et al.'s (2008) review of the literature on faculty of color provides substantive evidence that the research contributions of URM faculty tend to be undervalued, that faculty from these groups often receive negatively biased teaching evaluations, and that they often lack the mentorship needed successfully navigate the tenure process – factors that combine to create barriers to tenure and promotion. We will conduct a longitudinal analysis within the system of faculty of color who joined USM institutions between 2010 and 2017 and either stayed, resigned or were separated (did not receive tenure). Using a case study approach, we will then examine key factors present in the highest retention departments versus the greatest attrition departments. Examples of factors we will examine are workload policies, URM department chairs and deans, critical mass of women and URM faculty, hiring incentives, third year review experiences, and policies for and responses to outside offers. This research will allow us to identify the interventions and strategies than institutions can use to enhance faculty diversity as related to related to retention and representation.

PROMISE Academy Project Evaluation and Dissemination

Westat will serve as the independent evaluator of the PROMISE Academy project. The evaluation will provide actionable information for project improvement, as well as assessments of the outcomes and impact of the project. Dr. Jill Feldman and Dr. Jennifer Flynn will lead the evaluation. Both have worked with USM-wide projects in the past. The evaluation plan consists of both formative and summative components, each of which directly link to the logic model (Figure 1), designed by Westat for the assessment. Data sources (Table 4) will include focus groups held with project administrators and project participants, as well as administrative data collected by the project. To ease burdens on participants and make the most effective use of evaluation resources, focus groups will be held during convenings of project administrators or project participants (e.g., conferences). Feedback from focus groups will provide information for project improvement. For the analysis of extant administrative data, Westat will work closely with the PROMISE Academy leadership team to ensure that reliable uniform data are collected, building upon existing database structures used by the state to collect annual data from postsecondary institutions. Westat has extensive experience collecting system-wide administrative data. Working together with USM, Westat's approach to the PROMISE Academy evaluation will yield actionable evidence of the process and outcomes of the PROMISE Academy, in accordance with professional standards established by the Joint Committee on Standards for Educational Evaluation (JCSEE) and the American Evaluation Association (AEA).

Table 4: Evaluation Questions that Build upon the Logic Model

Questions	Data Source
1. Did participating institutions create or **support conversion programs** for URM STEM postdocs & visiting faculty to convert to tenure-track TT faculty)?	Program records of institutions/departments with conversion programs
	Focus groups of participating institution representatives (deans, provosts, department chairs, etc.)
2. What **supports were provided** to URM postdocs, visiting professors, or new TT professors in STEM (e.g., PD, conferences)?	Program records of individual participation
3. Did URM post docs and visiting professors in STEM feel **better prepared to apply** for TT positions?	Focus groups with URM postdocs, visiting professors, and new pre-tenure TT faculty in STEM
4. Did URM post docs, visiting **professors, and new TT faculty in STEM feel** part of a community?	
5. Did **turnover** among new URM STEM faculty decrease?	Program staff records (e.g., job offers, acceptances, turnover among TT URM STEM faculty, as available)
6. Did participating institutions **hire more URM faculty** in tenure-track STEM positions?	

Inputs

Outputs
Activities | *Participation*

Outcomes
Short | *Medium* | *Long*

Inputs:

Capacity to convene institutions across USM

Resources and materials developed through other NSF funding (e.g., Summer Success Institute, PROMISE dissertation house)

Southern Regional Educational Board's Doctoral Scholars Program Institute for Teaching and Mentoring (SREB)

PROMISE STEM alumni in tenure-track positions at USM

Existing USM tenure-track conversion models

Existing URM STEM PhD students, postdocs, and visiting professors

Travel stipends for conferences and meetings

Provosts on each campus

Part-time Project Director and project coordinators at five participating institutions

Outputs — Activities:

Targeted faculty placement initiatives
- Inventory of existing conversion programs
- Convening provosts, deans, and other administrators
- Assist development of new conversion programs for URM in STEM
- Provide PD for participants in conversion programs
- Provide conference funding for subset of participants in mature conversion programs

Transitional Support for New URM STEM Postdocs, Assistant Professors, and Visiting Professors
- Continuing PD for postdocs
- Funding for travel and scholarly activities (for post-docs and visiting professors)
- Affiliate meetings
- System-wide conferences for new URM STEM faculty (for postdocs, visiting and TT professors)
- Convening department chairs

Outputs — Participation:

For deans, provosts, and other administrators:
- Assistance in inventorying existing programs
- Meetings to discuss conversion programs (e.g., postdoctoral positions and transitions to tenure track faculty positions)

For URM STEM participants in conversion programs (post-docs and visiting professors):
- Participation in PD
- Conference attendance (for those in mature programs)

For URM STEM postdoctoral fellows:
- Participation in PD

For URM STEM postdoctoral fellows and visiting professors:
- Participation in travel or scholarly activities

For URM STEM postdoctoral fellows, visiting professors, and new tenure-track professors:
- Participation in affiliate meetings
- Attend conferences for new faculty

For department chairs:
- Meetings to discuss transitional supports

Outcomes — Short:

Increase in number of filled conversion positions for URM in STEM (e.g., post-doc positions leading to tenure-track)

Post docs, and visiting professors report feeling better prepared to succeed in tenure-track positions

Increase in % URM applicants to tenure-track positions in STEM (excluding conversion positions)

URM STEM post docs, visiting professors, and new tenure-track professors report feeling supported and part of a community

Outcomes — Medium:

Among URM in STEM, increase in successful conversions of post-docs and visiting faculty into tenure-track faculty

Increase in % of tenure-track STEM job offers to URM (excluding conversion positions)

Decrease in turnover among new tenure-track faculty who are URM in STEM

Outcomes — Long:

Increased STEM faculty diversity within Maryland

Figure 1: The PROMISE Academy Logic Model

Dissemination Plan: One of the most important avenues of dissemination for outcomes will be the USM itself, as universities within the state will seek to learn from The PROMISE Academy to develop their own approaches. The USM will convene special meetings where The PROMISE Academy will be shared such as a "USM Faculty Diversity Forum," to discuss plans and report results to the system. Externally, The PROMISE Academy will be taking advice of its advisory board and PIs to participate in more of the meetings that they attend, e.g., meetings of deans, meetings of provosts. The model will be shared at every stage: conceptualization, collaboration, implementation, and outcomes. In addition to sharing a meetings with STEM leaders, such as the Understanding Interventions That Broaden Participation in Research Careers (UI), Engineering Deans Institute (EDI), the work will be shared with audiences of higher education leaders such the American Educational Research Association (AERA), Association of American Colleges and Universities (AAC&U). Publications targets include: the Understanding Interventions (UI) Journal, Journal of Women and Minorities in Science and Engineering, and the Journal of Higher Education.

Managing The PROMISE Academy Alliance of 5 Institutions within Maryland

The National Academies (2011) recommended that leadership from all levels share responsibility in implementation actions for increasing participation of underrepresented groups. In this report from the Committee on Underrepresented Groups and Expansion of the Science and Engineering Workforce Pipeline, leadership from the "faculty, department chairs, deans, provosts, chancellors and presidents, and even regents and trustees" has been deemed "essential" for programs to work. The PROMISE Academy will have counsel from an Internal Steering Committee of USM Provosts, USM Academic Affairs Senior Staff, the USM STEM Deans Advisory Council (created under the PROMISE AGEP-T project), an External Advisory Board, and a Committee of Department Chairs and faculty who have fellows within their academic departments.

Internal Steering Committee (ISC): Members of the USM's Academic Affairs Advisory Council will serve as advisors for The PROMISE Academy. This council includes the provosts of the 12 USM institutions, and is chaired by the USM Sr. Vice Chancellor for Academic Affairs. *USM STEM Deans Advisory Council.* The Deans of the STEM-based colleges within the USM will serve on the STEM Deans Advisory Council. This council was developed as an initiative of PROMISE AGEP-T, and will include UMCP Engineering Dean Darryll Pines, who also serves as a Co-PI of the PROMISE Engineering Institute. *External Advisory Board.* The External Advisory Board from PROMISE AGEP-T helped to develop the ideas for The PROMISE Academy, therefore, we will maintain the built trust, consistency, and idea generation from that team. They include: Dr. Daryl Chubin (Co-Chair, Understanding Interventions), Dr. Louis Martin-Vega (Dean, NC State), Dr. Henry Frierson (Dean, University of Florida), Dr. Patricia Ordóñez (Associate Professor at UPR, PROMISE Alum), and Dr. Quincy Brown (Program Director for STEM Education Research at AAAS; former White House OSTP and former tenured professor at Bowie), and Dr. Stacey Williams (Assistant Professor, Notre Dame of Maryland.) A *Committee of STEM Department Chairs and Faculty* will comprise chairs of departments that house the PROMISE Academy's fellows as a means of monitoring fellows' successes, and facilitating their advancement. Provosts for each institution will be PIs (Table 5), and provide broad oversight to the alliance and facilitate faculty diversity efforts for the campuses. Tables 6-10 list Co-PIs and Senior Personnel for UMBC, UMCP, UMB, SU, and TU respectively.

Table 5: Provosts are the PIs of the Collaborative Leadership Team for the PROMISE Academy

Partners	Principal Investigators
UMBC	**Dr. Philip Rous,** Senior Vice President of Academic Affairs, Provost, and Professor - Physics
UMCP	**Dr. Mary Ann Rankin,** Senior Vice President and Provost, and Professor - Biology
UMB	**Dr. Bruce Jarrell,** Executive Vice President and Provost, and Professor - Surgery
Salisbury	**Dr. Karen Olmstead**, Vice President of Academic Affairs, Interim Provost, and Professor - Biology
Towson	**Dr. Timothy J. L. Chandler**, Executive Vice President for Academic Affairs, Provost, and Professor – Sport Science

Table 6: UMBC: PI: Provost Philip Rous

Co-PIs for UMBC (Student Population: Undergraduate: 11,243; Graduate: 2,596)
Janet C. Rutledge, PhD, Vice Provost for Graduate Education and Dean of the Graduate School, Associate Professor of Computer Science and Electrical Engineering, also PI of CGS' "Understanding PhD Career Pathways" project for UMBC and Morgan State
Renetta G. Tull, **PhD,** Associate Vice Provost for Strategic Initiatives, Professor of the Practice, College of Engineering and IT; Director - USM PROMISE AGEP, Director - USM Pipeline Professional Development- Office of Academic Affairs
Patrice McDermott, **PhD,** Vice Provost for Faculty Affairs, Professor – College of Arts, Humanities, & Social Sciences, National board of the Society for STEM Women of Color (SSWOC), Senior Fellow at the Association of American Colleges and Universities
William LaCourse, **PhD**, Dean of the College of Natural and Mathematical Sciences, Professor of Chemistry

Table 7: University of Maryland College Park (UMCP). PI: Provost MaryAnn Rankin

Co-PIs and Senior Personnel for College Park (Student Population: Undergraduate: 27,443; Graduate: 10,697)
Co-PI: Dr. Gerald S. Wilkinson, Interim Dean, College of Computer, Mathematical, and Natural Sciences; Prof. of Biology
Co-PI: Dr. Elisabeth Smela, Associate Dean for Faculty Affairs, A. James Clark College of Engineering; Prof. of Mech. Eng.
Co-PI: Dr. Gregory Ball, Dean, College Behavioral and Social Sciences; Professor, Psychology
Co-PI: Dr. John Bertot, Associate Provost for Faculty Affairs, and Professor in the iSchool, oversees the Presidential Postdoctoral Fellowship Program on behalf of Provost Rankin and manages the Fellowship review process. The Office of Faculty Affairs jointly directs the Office of Postdoctoral Affairs with the Graduate School, and as Associate Provost for Faculty Affairs, Dr. Bertot will facilitate the design and implementation of campus efforts to prepare the program postdocs for academic careers.
Senior Personnel & Research Lead: Dr. KerryAnn O'Meara, Associate Dean for Faculty Affairs & Prof. College of Education

UMBC (Table 6) will lead The PROMISE Academy. U.S. News & World Report has named UMBC the #1 up and coming national university in the country for three years in a row. Dr. Renetta Tull, Associate Vice Provost for Strategic Initiatives will be the Project Director. Tull will also work with the USM and the campuses to facilitate the activities. Dr. Janet Rutledge will share oversight of the Office of Postdoctoral Affairs with Dr. Patrice McDermott, Vice Provost for Faculty Affairs. Dr. McDermott's office oversees the Postdoctoral Fellowship for Faculty Diversity, and the Provost's Executive Committee for the Recruitment, Retention and Advancement of Underrepresented Minority Faculty. Dr. William LaCourse will direct the Natural Sciences Pre-Professoriate Fellowship. The University of Maryland College Park is Maryland's flagship campus. Provost Mary Ann Rankin will oversee the project for College Park, contribute resources for the Presidential Postdoctoral Fellowship Program and the accepted Fellows, and oversee campus efforts to prepare the participating postdocs for academic careers. STEM deans (Table 7) will oversee the placement of fellows within their respective departments, ensure appropriate access to facilities and resources to further

the research, and participate in the design and implementation of campus efforts to prepare the participating postdocs for academic careers. UMCP will leverage membership in the Big Ten Academic Alliance via participation in the NIH-funded National Research Mentoring Network (NRMN). The NRMN-CAN initiative supports the goal of diversifying the biomedical research workforce by leveraging consortium resources to provide professional development to aspiring scientists from underrepresented populations. UMB, founding campus of the USM (1807), has cutting-edge biomedical research. Dr. Erin Golembewski and Dr. Roger Ward (Table 8) will facilitate the faculty development conference (Table 3) and associated seminars. Dr. Natalie Eddington and Dr. James Kaper will be members of the Science Faculty Mentoring Team and will work the participants from UMB who will come from the basic science research departments within the School of Pharmacy, and the School of Medicine.

Table 8: University of Maryland Baltimore (UMB). PI: Provost Bruce Jarrell

Co-PIs for UMB (Student Population: Undergraduate: 866; Graduate and Professional: 5463)
Dr. Erin Golembewski, Senior Association Dean for the Graduate School.
Dr. Roger Ward, Chief Accountability Officer, Vice President of Operations and Planning, Vice Dean of the Graduate School
Dr. Natalie Eddington, Dean of the University of Maryland School of Pharmacy, Professor of Pharmaceutical Sciences. .
Dr. James Kaper, Sr. Assoc. Dean Academic Affairs, School of Medicine; Professor & Chair, Dept. of Microbiology/Immunology.

SU emphasizes undergraduate research and is among the Nation's best by U.S. News & World Report and The Princeton Review. SU's Office of Undergraduate Research and Creative Activity (OURCA) will train fellows to be strong faculty mentors. Towson is ranked as one of the nation's best regional public universities. TU's STEM Education Center will host workshops for the participants, and TU's Fisher College of Science and Mathematics' leaders are Co-PIs. The PROMISE Academy will also leverage partnerships and connections with ADVANCE programs at UMCP and UMBC, the President's Diversity Council at UMB, and the URM Executive Committee at UMBC. The PROMISE Academy will be further enhanced by the work of the UMBC-STRIDE faculty (modeled after the University of Michigan's ADVANCE STRIDE); College Park's Office of Diversity and Inclusion; SU's Office of Institutional Equity (OIE).

Table 9: Salisbury University (SU). PI: Provost Karen Olmstead

Co-PIs and Senior Personnel for Salisbury (Student Population: Undergraduate: 7,861; Graduate: 887)
Dr. Clifton Griffin, Dean of Graduate Studies and Research (Chief Research Officer, Central leading advocate for faculty research)
Dr. Michael Scott, Interim Dean of the Henson School of Science and Technology; Professor of Geography and Geosciences
Dr. Chrys Egan, Professor of Communication Arts, Academic specialty: Leadership and Diversity; Co-Director of OURCA
Dr. Jessica Clark, Assistant Professor of Biology, Co-Director of OURCA
Dr. Richard Wilkens, Associate Provost for Academic Affairs, will serve as Senior Personnel given his role in faculty affairs.

Table 10: Towson University (TU). PI: Provost Timothy Chandler

Co-PIs for Towson (Student Population: Undergraduate: 19,049; Graduate: 3,235)
Dr. David Vanko, Dean, Fisher College of Science and Mathematics; Professor, Physics, Astronomy and Geosciences
Dr. Cynthia Ghent, Director of the STEM Education Center, Fisher College, Assoc. Prof., Dept. of Biological Sciences

Results from Prior NSF Support. The leadership teams for The PROMISE Academy have been PIs and Co-PIs for ADVANCE grants, grants to assist with women faculty progression, and other AGEP grants for graduate students and postdocs. This section will highlight the PROMISE AGEP-T collaboration with PIs from UMBC, College Park, and UMB, and UMBC's "On-Ramps to Full Professor" project for faculty where targeted infusions and acceleration plans resulted in advancements in the careers of women in STEM.

(a) Award Numbers: 1309290, 1309264, 1309256. Award Amount: $1,739,940, 10/1/2013 – 03/31/18
(b) *Collaborative Research: AGEP - T: PROMISE AGEP Maryland Transformation*
(c) **Intellectual Merit:** The PROMISE AGEP has contributed research to professional development programming by describing the significance of psychological sense of community, STEM identity, and most importantly, the "Third Space," which facilitates retention of underrepresented graduate students in STEM. Further, professional development within "third spaces," with an egalitarian mentoring structure influences students' considerations for faculty positions. **Broader Impacts:** Students from underrepresented groups who participate in the PROMISE AGEP span 12 institutions within the USM. Signature programs (e.g., Summer Success Institute, Dissertation House) have been replicated at other schools.

(d,e,f) Outcomes and research have been shared in more than 40 publications, including policy briefs by the Council of Graduate Schools, and the Association of Public and Land Grant Universities, and papers and articles published by the American Society for Engineering Education, Physics Today, Academic Medicine, CBE Life Sciences Education, and others. Initiatives of the PROMISE AGEP have also been covered by press such as The Atlantic, *Why Do So Many Graduate Students Quit?* (Patterson, 2016)), The Christian Science Monitor, *How can universities keep minorities in STEM graduate programs?* (Velasco, 2016), and The Chronicle of Higher Education, *To Diversify the Faculty, Start Here* (McMurtrie, 2016). Publications represent evidence, and several of these are included in the "References Cited." This proposal for the PROMISE Academy builds upon recommendations from the May 2016 NSF Site Visit, the PROMISE advisory board, and the USM's leaders to build upon the foundation of the AGEP-T to develop an action plan for increasing faculty diversity within the State of Maryland.

(a) Award Number 1446406, Amount: $300,000, 07/01/2014 - 06/30/2017
(b) *"On Ramps" to Full Professor: Institutional Support for Post-Family Leave Faculty Research Reintegration*
(c) **Intellectual Merit:** Participants developed plans to consider ways to achieve full professor. Targeted infusions included domestic/international travel grants, RA/Postdoc, and a writing coach. The plans challenged awardees to identify actionable goals and metrics upon which to measure progress. These plans functioned as both a guideline and an accountability mechanism, with mentoring from chairs, and a peer support network. **Broader Impacts:** This grant started a campus-wide conversation about career-life balance (CLB), one of the keys for advancement, and showcased CLB initiatives that retain and advance women, including opportunities for professional collaboration. Results were disseminated on campus, and at conferences for women in STEM. The cohort of 8 garnered 32 publications, 10 presentations, $1.6M in grant funding, and increased leadership in scientific organizations, e.g. chair of international workshops.
(d,e,f) Papers that examined CLB such as *"Factoring Family Consideration into Female Faculty Choices for International Engagement in Engineering, IT, and Computer Science,"* (Brown, Tull, Medina (L.), Holder, & Medina (Y.), 2015) are included in the "References Cited." Renewal: N/A.

Intellectual Merit: The University System of Maryland serves 164,499 students, and seeks to have a diverse faculty to serve them, the state, and their disciplines with excellence. The PROMISE Academy will work to improve the representation of tenure-track STEM faculty to include more scholars from underrepresented groups, and be a model for a public higher education system. With the cooperation of 5 institutions (research and comprehensive), and support from each level of academic affairs administration, this alliance will collaborate on *tenure-track conversion models*, and connect across campuses to develop and share best practices in hiring. "PROMISE Academy Fellows" will participate in a career development program and receive "start-up" funds to facilitate independent STEM careers. Research will examine myths of "minority over-recruitment," and claims that pipelines are too small to have diverse STEM faculty will be challenged.

Broader Impacts: The PROMISE Academy has been collaboratively designed by stakeholders throughout the University System of Maryland (USM) to facilitate an increase in the numbers of underrepresented STEM faculty within 5 universities. USM Provosts, deans, and faculty provided input into the design of The PROMISE Academy by sharing existing demographics that demonstrate the need for a more diverse faculty, discussing existing procedures for hiring, contributing ideas for inviting and attracting underrepresented populations to engage with campuses, apply for positions, and choose to stay. Leaders across campuses have committed to supporting tenure-track conversion models, and to more active recruitment of diverse faculty overall. The USM has campuses that are urban, rural, and coastal, with students from all racial and socioeconomic backgrounds, and the Board of Regents wants demographics of the faculty to reflect the system's student population. The PROMISE Academy will contribute to the USM's strategic goal of collaborating across the system to support the recruitment and retention on underrepresented faculty, in accordance with the system's strategic plan, *"Powering Maryland Forward."* Externally, The PROMISE Academy will leverage the USM's leaders' involvement as influencers on national education stages to elevate the conversation of faculty diversity (and approaches to solutions), and to inform policy that could have effects on institutions and university systems in other states. The PROMISE Academy commits to disseminating promising practices and sharing outcomes from research through STEM and broader higher education journal and conference proceedings, and other forms of media that will foster conversation and encourage action.