

2023 Annual Report – BD Cohort I

Kentucky-West Virginia
Louis Stokes Alliance for
Minority Participation
(KY-WV LSAMP)
Bridge to the Doctorate (BD)



Submitted to
The National Science Foundation
2415 Eisenhower Avenue
Alexandria, VA 22314





KY-WV LSAMP Bridge to the Doctorate Cohort I

Pictured:

**Front L-R: JaMaya Wilson, Kayla Titalii-Torres, Xava Grooms, Edwina Barnett
Back L-R: Abelline Fionah, Alyssa Donawa, Ariel Robinson, Julia Parker, Andres Vindas
Melendez, E-Lexus Thornton**

Photo Credits: Mark Cornelison, UK photographer, took the picture above and many of the individual pictures found on pages 15-26 of this document.

Not Pictured:

Kai Davis, Dave-Preston Esoe, Alexis Smith, Aaron West

2023 Annual Report – BD Cohort I

Kentucky – West Virginia
Louis Stokes Alliance for Minority Participation
In Science, Technology, Engineering, and Mathematics
(KY-WV LSAMP STEM)

Submitted by

University of Kentucky
Host Institution

Robert DiPaola, M.D.
Principal Investigator

Johné Parker, Ph.D.
Martha Peterson, Ph.D.
Brett Spear, Ph.D.
Co- Principal Investigators

TABLE OF CONTENTS

Section	Page
Introduction.....	1
KY-WV LSAMP Alliance Personnel.....	2-3
KY-WV LSAMP BD Cohort I Personnel.....	4
Program Goals and Measurable Objectives.....	5
Program Activities.....	6
BD Cohort I Advisory Board.....	9-10
Partners and Affinity Programs.....	11
Project Evaluation / External Review.....	12-15
Dissemination and Outreach.....	15
Overview of Cohort and Individual Fellow Accomplishments.....	15-28

LIST OF TABLES

Table	Page
1. BD Fellow Fall 2021 Meetings.....	7
2. BD Fellow Spring 2022 Meetings.....	8
3. 2021 BD Speaker Series.....	9
4. BD Cohort I Advisory Board Members.....	10
5. Individual Accomplishments.....	16-28

INTRODUCTION

The Kentucky-West Virginia Louis Stokes Alliance for Minority Participation program (KY-WV LSAMP) is a ten-institution alliance led by the University of Kentucky. Alliance members include Bluegrass Community and Technical College (BCTC), Centre College, Jefferson Community and Technical College (JCTC), Kentucky State University (KSU), Marshall University, University of Kentucky (UK), University of Louisville (UofL), West Virginia State University (WVSU), West Virginia University (WVU), and Western Kentucky University (WKU). Alliance goals are to create, enhance, and expand programs designed to broaden participation and increase the quality and quantity of students from underrepresented (URM) populations who receive degrees in science, technology, engineering, and mathematics (STEM) disciplines.

In keeping with the overarching goal of increasing the number of URM STEM degrees, KY-WV LSAMP submitted a proposal to support a cohort of graduate students through the LSAMP Bridge to the Doctorate (BD) initiative. Funding for the first cohort in the alliance was granted to the University of Kentucky with a start date of June 1, 2020. Eight Fellows began receiving financial support Fall 2020. One Fellow began receiving financial support Spring 2021. Three Fellows began receiving financial support June 2021, and one Fellow began receiving financial support September 2021 for a total of 13 Fellows.

The **intellectual merit** of the BD project relates to the intellectual merit of the LSAMP program - the increased knowledge base related to teaching and learning practices for underrepresented students in STEM disciplines, practices for improved recruiting and retention of these students, and the development of improved curriculum materials and practices for STEM disciplines. As Scholars and BD Fellows pursue their degrees and participate in program activities, they develop the skills needed to succeed not only in their degree programs, but also in the professional community within their chosen field. They learn the skills necessary to be leaders and experts. BD Fellows and Scholars give and receive mentoring on multiple levels, from middle school and high school students to world-renowned researchers. In addition to increasing their knowledge and research skills, this multi-level mentoring also helps the Fellows and Scholars to build professional networks for current and future research, scholarly and professional presentations, educational and professional opportunities. Often, the connections made through the LSAMP program guide them to the next opportunity.

The **broader impact** is the increase in URM STEM degree production. This will broaden math, science, and engineering participation of underrepresented students from the two Established Program to Stimulate Competitive Research (EPSCoR) in these states and surrounding regions. Because of the skills developed and the connections made through LSAMP BD, Fellows are uniquely qualified for positions (including those of leadership) in academia, industry, and government. Their employment and advancement will increase the diversification of the STEM workforce and continue to broaden the participation of underrepresented students who seek and earn graduate degrees. As these BD Fellows progress in their careers, they mentor others and broaden the impact of the BD Project.

The increase in skilled workforce has the potential to significantly improve the competitive position of the two states and eventually to improve faculty diversity in STEM fields. In turn, participants will play key roles in educating their respective communities about STEM fields and encouraging younger students to pursue STEM disciplines. The multi-level mentoring gives BD Fellows a venue for serving as role models for future generations.

Though this project is located at and administered by the University of Kentucky, it has the support of and connection to each campus in the alliance. It is important to recognize the program leaders within the alliance. Therefore, a list of the program leaders and their contact information is listed on the next page.

KY-WV LSAMP ALLIANCE PERSONNEL

The Kentucky-West Virginia Louis Stokes Alliance was initially comprised of the following key personnel:

Eli Capilouto, DMD, Sc.D.

Principal Investigator
University of Kentucky
101 Main Building
Lexington, KY 40506-0032
pres@uky.edu

Kazi Javed, Ph.D.

Co-Principal Investigator
Kentucky State University
130 Carver Hall, 400 East Main Street
Frankfort, KY 40601
kazi.javed@kysu.edu

Lynn Michaluk, Ph.D.

Co-Principal Investigator
West Virginia University
329 White Hall
Morgantown, WV 26506
lynette.michaluk@mail.wvu.edu

David Miller, Ph.D.

Co-Principal Investigator
West Virginia University
PO Box 6310
Morgantown, WV 26508-6310
millerd@math.wvu.edu

Johné Parker, Ph.D.

Co-Principal Investigator
University of Kentucky
175 Ralph G Anderson Bldg.
Lexington, KY 40506-0503
johne.parker@uky.edu

Willie Pearson, Ph.D.

Program Evaluator
Georgia Institute of Technology
119 Old C.E.
Atlanta, GA 30318
kingvassie@comcast.net

Maurice Cooley

Campus Coordinator
Marshall University
Old Main, 107; One John Marshall Drive
Huntington, WV 25755-1055
cooley@marshall.edu

V. Faye Jones, MD, Ph.D., MSPH

Campus Coordinator
University of Louisville
323 East Chestnut Street
Louisville, KY 40202
vfjone01@louisville.edu

Hannah Payne

Campus Coordinator
West Virginia State University
2100 Toney House
Institute, WV 25112
hannah.payne@wvstateu.edu

Charles McGruder, Ph.D.

Campus Coordinator
Western Kentucky University
TCCW 220; 1906 College Heights Blvd #11077
Bowling Green, KY 42101-1077
mcgruder@wku.edu

Philemon Johnson

Campus Coordinator and Interim Project Director
March – December 2022
University of Kentucky
202 Bosworth Hall
Lexington, KY 40506
Philemon.johnson@uky.edu

Fara Williams

Project Director
June 2020 – March 2022
University of Kentucky
161-H Jacobs Science Building
Lexington, KY 40506-0174
fara.williams@uky.edu

Carlous Yates, Ed.D.

Campus Coordinator
Bluegrass Community and Technical College
500 Newtown Pike
Lexington, KY 40508
carlous.yates@kctcs.edu

Leonard Demoranville, Ph.D.

Campus Coordinator
Centre College
600 West Walnut Street
Danville, KY 40422
leonard.demoranville@centre.edu

KY-WV LSAMP BD COHORT I PERSONNEL

The Bridge to the Doctorate initiative at the University of Kentucky, Lexington, KY is and has been comprised of the following key personnel during its tenure:

Current Personnel:

Robert DiPaola, M.D.

Principal Investigator
Provost
105 Main Building
provost@uky.edu

Johné Parker, Ph.D.

Co-Principal Investigator
Acting Assoc. Dean, Diversity, Equity, Inclusion,
Stanley and Karen Pigman College of Engineering
Associate Professor of Mechanical & Aerospace
Engineering
175 Ralph G Anderson Bldg.
johne.parker@uky.edu

Martha Peterson, Ph.D.

Co-Principal Investigator beginning July 2021
Acting Dean of The Graduate School
Professor of Microbiology and Immunology
101 Ezra Gillis Building
Martha.peterson@uky.edu

Brett Spears, Ph.D.

Co-Principal Investigator
Professor of Microbiology, Immunology, and
Molecular Genetics
Director of the Integrated Biomedical Sciences
Ph.D. program in the UK College of Medicine
bspear@uky.edu

Willie Pearson, Ph.D.

External Evaluator
kingvassie@comcast.net

Former Personnel:

David Blackwell, Ph.D.

Principal Investigator June 2020 through June 2021
Professor of Finance and Former Provost
dblackwell@uky.edu

Sonja Feist-Price, Ph.D.

Co-Principal Investigator June – July 2020
Former Vice President for Institutional Diversity
304 Main Building

Brian Jackson, Ph.D.

Co-Principal Investigator through July 2021
Professor of Physiology
Senior Assoc. Dean and Former Interim Dean,
The Graduate School
101 Ezra Gillis Building
brian.jackson@uky.edu

George C. Wright, Ph.D.

Co-Principal Investigator August 2020 – May 2022
Professor of History
(Former) Interim VP for Institutional Diversity
311 Main Building
gcwright@uky.edu

Fara Williams

LSAMP Project Director through March 2022
161-H Jacobs Science Building

Philemon Johnson

Interim Project Director, March – December 2022
Campus Coordinator, October 2021 – Dec. 2022
1119 Patterson Office Tower

Raúl Torres

Campus Coordinator June 2020 – October 2021
202 Bosworth Hall

Mark Pittman

Financial Manager through June 2022
161-H Jacobs Science Building

PROGRAM GOALS AND MEASURABLE OBJECTIVES

The goals of the KY-WV LSAMP Bridge to the Doctorate program are to recruit, mentor, and support a cohort of twelve Fellows through completion of terminal degrees in STEM fields. Support includes academic, social, professional, and financial support.

Recruitment

In 2021 there was a short recruitment process to fill a 13th Fellow position. Because of time constraints and the formation of the initial cohort in August 2020, only students who were already graduate students at UK were considered. Three candidates were interviewed by the selection committee including Kendall Johnson, Anna Bushong and Dave-Preston Esoe. Dave-Preston was selected as the 13th fellow. *In 2022, Kai Davis, a prior competitive applicant, was selected as the 14th fellow under similar conditions and constraints; he began receiving BD funding in August 2022.*

Selection

Kai Davis became the 14th funded BD Fellow in August 2022.

To date, the selected Fellows are / have been:

Edwina Barnett, Biomedical Engineering
Kai Davis, Forest and Natural Resources Science
Alyssa Donowa, Computer Science
Dave-Preston Esoe, Forensic Toxicology
Abelline Fionah, Chemistry
Xava Grooms, Computer Science
Julia Parker, Biosystems Engineering
Ariel Robinson, Civil Engineering
Alexis Smith, Biochemistry
Kayla Titilii-Torres, Biology
E-Lexus Thornton, Mechanical Engineering
Andres Vindas Melendez, Mathematics
Aaron West, Biology
JaMaya Wilson, Materials Science and Engineering

Academic, Social, and Professional Support

Fellows began receiving academic, social, and professional support during a retreat that was held virtually the week of August 10-14, 2020. Beginning Monday, August 24, Fellows participated in weekly meetings. These meetings are planned as a rotation of professional development speakers, Fellow-led conversations, and time spent working on individual projects including grant writing, presentation and publication development, literature review, resume building and community

building efforts. The agenda from the retreat as well as a list of the meeting dates, speakers and topics can be found in the Program Activities section.

Financial Support

Of the first nine BD Fellows, seven began receiving financial support (stipend and cost of education) beginning August 2020, one began receiving financial support upon matriculation in September 2020, and one began receiving financial support January 2021. Three Fellows began receiving support June 2021 to complete the initial cohort, and one began receiving financial support September 2021 (due to funds to support a thirteenth fellow made available by fellows who graduated prior to utilizing their full two years of funding). All Fellows have received a monthly stipend. Tuition, single-person health insurance, and most fees were paid by the BD grant with additional support from a scholarship fund from the UK Graduate School. There were a few fees that are not allowable to be paid from those sources. In most cases, those additional fees were covered by the Fellow's department.

To aid in the processing of stipends and tuition, a meeting was held with administrative professionals from the Graduate School, Financial Aid, Grants and Contracts, Office of Institutional Diversity, and the KY-WV LSAMP project director. At this meeting, a standard operating procedure (SOP) was developed for processing stipends as well as other financial support for the BD Fellows. This procedure may be adjusted as needed throughout the course of the project and beyond.

To initiate communications between departments and BD administration, provide information about BD and LSAMP, and answer questions department personnel may have, introductory virtual meetings were arranged with each department upon acceptance of the BD Fellowship by the student. Additionally, a once a semester meeting has been held and will continue to be held with each department to communicate about issues relating to the Fellows including tuition and fee expenses. Persons invited to these meetings included but were and are not limited to the BD project director, the department chair, the DGS, the Fellow's faculty advisor/mentor, and persons responsible for graduate student stipend and cost of education processing within the department and/or college.

PROGRAM ACTIVITIES

Fall 2021

Group Meetings

A BD Retreat was held in August 2021. The agenda for the multi-day, virtual event can be found in the previous annual report. Sessions included introductions to members of the BD Co-PI team and Advisory Board as well as information about different support offices and programs on campus. Sessions also included opportunities for the Fellows to connect with and learn about one another to form a supportive community and a cohesive cohort.

BD Fellows were required to attend weekly meetings. During 2021/22, these meetings were held in person as well as virtually via Zoom. A list of the meeting speakers and topics can be found in

Tables 1 and 2. Speakers for some sessions held during the retreat as well as the weekly meetings were selected to fulfill Fellow requirements. Each meeting is documented. Details include the date and time, the speaker(s), the topic of conversation, announcements that are made, an attendance list, and notes from the discussions. The last meeting for Fall 2021 was held in person and was intended to increase community building and as a celebration of completing the Fall semester. This session was a bowling outing paid for by the Office of Institutional Diversity. The May 9th meeting was also held in person as a celebration to the end of the Spring semester. This consisted of casual conversation, games, and exiting questions for the semester as we look toward the summer meetings and Fall 2022 semester.

Table 1. BD Fellow Fall 2021 Meetings

	Date	Focus	Speaker/Led By	Specific Topic(s)
Week 1	August 23	Semester Kick-Off	NA	Take Time for Yourself
Week 2	August 30	Fellow Sharing / Q&A	Fara and Raul	
Week 3	September 13	Professional Development	Dr. Morris Grubbs and Dr. Ashely Sorrell	Grad Live! 3 Minute Thesis
Week 4	September 20	Grant Writing/Study Time		
Week 5	September 27	Professional Development	Fara Williams	Knowledge of LSAMP, etc.
Week 6	October 4	Fellow Sharing / Q&A	Dave-Preston Esoe	Questions and Answers
Week 7	October 11	Grant Writing/Study Time		
Week 8	October 18	Professional Development	Dr. Ben Braun	Recent Developments in STEM Teaching
Week 9	October 25	Fellow Sharing / Q&A	Celebrate Kayla and Raul	
Week 10	November 1	Grant Writing/Study Time		
Week 11	November 8	Sharing/Prof Development	Fara Williams	Fellowships and Scholarships
Week 12	November 15	Professional Development	Dr. Lisa Schroot	Writing Center and Writing Tips
Week 13	November 22	Fellow Sharing / Q&A	Fara Williams	Feedback for PI, Co-PIs, and Board?
Week 14	November 29	Grant Writing/Study Time	On Own - No Meeting	
Week 16	December 6	End-of-Semester Celebration	Date and/or time subject to change	

Spring 2022

Individual Meetings and Reports

In Fall 2021, each Fellow met for lunch with the project director to discuss their progress to date as well as any problems they were having. In late February/early March, each Fellow, again, met with the project director. Each Fellow also provided a written report of accomplishments for the reporting period. The second report covered the period March 1, 2021, to February 28, 2022.

Faculty Events

On Thursday, February 11, 2021, at 11:30 am, Dr. Brett Spear (BD Co-PI) presented to a group of faculty who are members of the Advisory Board and/or mentors to one or more BD Fellows. This session was on the topic of mentoring students.

Mentoring Undergraduates and Speaker Series

Beginning April 20, 2021, the BD Fellows served as speakers for a professional development series for the KY-WV LSAMP Scholars. A table of the dates and topics can be found in Table 3. Topics were selected by the BD Fellows and are subject to change. Sessions were recorded and will be posted to the program website.

Table 2. BD Fellow Spring 2022 Meetings

	Date	Focus	Speaker/Led By	Specific Topic(s)
Week 1	February 21	Semester Kick-Off	Fara Williams	Casual conversation; Tax, tuition
Week 2	February 28	Fellow Sharing/Q&A	Fara Williams	Casual conversation; information for reports.
Week 3	March 7	Professional Development	Molly McAndrew	Topics for professional development. Progress reports.
Week 4	March 14	Celebrate/Goodbyes to Fara	N/A	None. Announced a new BD fellow joining.
Week 5	March 21	Grant Writing/ Study Time	N/A	Working together. Introduced Kai Davis (new fellow)
Week 6	March 28	Fellow Sharing / Q&A	N/A	Community development
Week 7	April 4	Professional Development	Molly McAndrew	Marketing self.
Week 11	April 11	Study Session	N/A	Work Together.
Week 12	April 18	Fellow Sharing / Q&A	N/A	Questions for the rest of the semester.
Week 13	April 25	Professional Development	Molly McAndrew	Resume Building
Week 14	May 2	Study Session	N/A	Finals Preparations
Week 15	May 9	End-of-Semester Celebration	NA	Trivia/ Board Games

Table 3. BD Fellow 2021 Speaker Series

DATE	BD FELLOW	TOPIC
April 20	Andres Vindas Melendez	Fellowship Applications
May 18	Abelline Fionah	Work-Life Balance
June 1	Alexis Smith	Rotations - Mentors/Professors/Departments
June 15	JaMaya Wilson	Uncertainty in Programs
June 29	Kayla Titalii-Torres	Graduate School Interviews
July 13	Edwina Barnett	International Experiences
July 27	Julia Parker	Personal Statements
August 10	Alyssa Donawa	Securing Funding
August 24	Xava Grooms	Imposter Syndrome

Professional Development Requirements

As seen in the list of meetings, The BD Fellows took part in sessions to support their professional development. These consisted of trainings on writing a thesis, STEM development, professional writing, and marketing self for industry. Many of the students have been published since the start of the academic year, reflected in their individual progress reports below.

BD COHORT I ADVISORY BOARD

To facilitate the success of the KY-WV LSAMP BD initiative, an advisory board of faculty and administrators at the University of Kentucky was created. BD Advisory Board members provide expert advice on Fellow progress and program activities. They represent a variety of disciplines and backgrounds including science, technology, engineering, and mathematics as well as leaders in diversity, student success programming, and community engagement. Board members also represent a variety of career stages including senior administration, tenured faculty, new faculty, and senior staff. Members have been selected because of their proven record in mentoring URM STEM students in research as well as career advisement. Their collective experience is significant. Board Members are listed in Table 4.

Changes to the Advisory Board since the submission of the proposal are reflected in Table 4. Sonja Feist-Price, former co-PI and Vice President for Institutional Diversity, left UK shortly after the grant was funded to assume a position as Provost at another institution. Additionally, David Butts left the university around the same time. In March 2022, Fara Williams resigned her position as director of KY-WV LSAMP and the Bridge to the Doctorate program. Campus coordinator and Interim Project Director Philemon Johnson resigned at the end of 2022. Board chair and co-PI Parker has filled the role of Project Director for the BD program since March 2023, with remaining members of the Advisory Board filling the roles vacated by those members no longer at the university.

Primarily, Board Members were intended to constitute the selection committee for the Fellows. They reviewed the applications, interviewed the candidates, and selected the students who would be offered fellowships. Board Members have also given at least one presentation to the Fellows on a professional development topic of their choice.

Table 4: BD Advisory Board Members

Name	Title	Department/Office	Perspective
Johné Parker, Ph.D. Co-Chair	KY-WV LSAMP Co-PI; Acting Associate Dean and Associate Professor.	Mechanical and Aerospace Engineering	LSAMP; Engineering, Diversity Leadership
Sonja Feist-Price, Ph.D. Co-Chair, through July 31, 2021 (at which time she left UK)	Vice President; Professor	Institutional Diversity; Early Childhood, Special Education and Rehabilitation Counseling	Diversity Leadership; Social Sciences
George C. Wright, Ph.D., August 1, 2021 – December 2022.	Interim VP; Senior Advisor to the President	Institutional Diversity	Diversity Leadership; Social Sciences
Fara Williams Recorder, through March 2022	Project Director	KY-WV LSAMP	LSAMP; Student Success Programming
Corey Baker, Ph.D.	UK Assistant Professor; Former LSAMP Scholar and BD Fellow at CSU-LA	Computer Science	Technology; LSAMP
Luke Bradley, Ph.D.	Professor	Neurosciences	Science – Life Sciences
Benjamin Braun, Ph.D.	Professor	Mathematics	Mathematics
David Butts April -- July 2021	Associate Director	Center for Graduate and Professional Diversity Initiatives	Diversity Leadership; Student Success Programming
V. Faye Jones, MD, Ph.D., MSPH ex officio	KY-WV LSAMP UofL Campus Coordinator; Associate VP; Professor	Health Affairs – Diversity Initiatives; Department of Pediatrics	LSAMP; Science – Life Sciences
David Miller, Ph.D. ex officio	KY-WV LSAMP Co-PI and WVU Campus Coordinator; Professor	Mathematics	LSAMP; Mathematics
Lance Poston, Ph.D. through April 5, 2021	Assistant Vice President for External Relations & Operations	Office of the Vice President for Student Success	Diversity Leadership; Student Success Programming
Cleo Price, Ed.D.	Assistant Dean for Graduate Diversity Outreach and Student Records	Graduate School	Diversity Leadership; Student Success Programming
Eduardo Santillan- Jimenez, Ph.D.	Research Scientist Principle	Center for Applied Energy Research	Science – Physical Sciences, Chemistry

PARTNERS AND AFFINITY PROGRAMS

The following list represents partners and affinity programs that support and add value to the LSAMP Bridge to Doctorate programs fellows.

The National Science Foundation Graduate Research Traineeship (NRT) program is funded by grant #1922694. This program shares similar goals and activities with the BD program. Both programs work together to aid in creating a critical mass of diverse graduate talent at UK. In addition, BD applicants who are not selected as Fellows will be recommended for NRT support if their degree program and/or research project qualifies. NRT Co-PI, Dr. Eduardo Santillan-Jimenez, also serves on the BD Advisory Board. In 2020-21 and in the future, some events will be combined BD/NRT events. For example, the session Dr. Santillan presented on investing was attended by participants in both programs and made available to other students on campus.

STEM Through Authentic Research Training (START) program is funded by the National Institutes of Health grant #R25 GM132961. This program serves as a pipeline for potential future LSAMP and BD participants. Students in middle school and high school receive research experiences at the University of Kentucky. LSAMP undergraduates serve as near peer mentors. START participants may be invited to participate in activities involving BD Fellows as speakers and/or mentors. In addition, START PI, Dr. Luke Bradley, also serves on the BD Advisory Board.

Louis Stokes Midwest Regional Center of Excellence (LSMRCE) offer staff presentation and professional development opportunities for the BD Fellows as well as program administrator and faculty mentors. During this reporting period, COVID impacted participation in LSMRCE Conference participation. Though there was not a large KY-WV LSAMP participation at the conference, the project director and UK campus coordinator did host recruitment for BD at this event. BD Fellows were strongly encouraged to present and participate in the 2021 conference.

UK Center for Graduate and Professional Diversity Initiatives (CGPDI) has connections with opportunities such as scholarships and conference travel support. CGPDI also has physical space in which BD Fellows meet, study, and connect with other graduate students as well as faculty and staff.

UK Graduate School has many programs and activities that are beneficial to the BD Fellows. Many Fellows received financial support through a Graduate School Scholarship. BD Fellows are required to take the introductory course of the Preparing Future Faculty series. In addition, Dr. Cleo Price, Assistant Dean for Graduate Diversity Outreach and Student Records serves on the BD Advisory Board.

Other Office of Institutional Diversity (OID) Units continue to provide support for the BD Fellows. Units such as the M.L. King Center provide cultural and social opportunities. The center also provides a physical space for students, faculty, and staff. This includes outreach for the 100 Black Men event in collaboration with One Lexington. One student and the acting Director attended the event on Saturday November 20th, 2021.

PROJECT EVALUATION / EXTERNAL REVIEW

External evaluation team.

Dr. Willie Pearson, Jr., a prominent and well-respected scholar, and evaluator with extended experience in URM STEM education, continues to serve as the program evaluator. The role of the evaluation team is to help guide the Alliance to refine and improve the program over time, to advise on best practices in collecting key information without introducing undue administrative record-keeping burden, and to help the leadership team interpret and analyze the evaluations in terms of effective best practices. Dr. Cheryl B. Leggon and others assist Dr. Pearson in evaluating the program.

Evaluation method.

During the period 2020-22, the evaluation team has conducted interviews, focus groups, and/or surveys with persons involved in the Bridge to the Doctorate program. These persons include the Fellows (participants), the program administration (including the PI/Co-PI team and the project director), members of the advisory board, and the faculty mentors and advisors.

Methodology.

This formative evaluation focuses on the extent to which the program met its first-and second-year goals and objectives. Traditionally, the evaluation team employed a mixed methodology to collect both quantitative (survey) and qualitative (interviews) data. Because of COVID-restrictions and the resignations of the UKY LSAMP Campus Coordinator (who provided assistance to the BD program) and the LSAMP Program Director at a critical point in the evaluation process, data collection was limited to interviewing a random sample of Fellow (N=5; 1 person had to withdraw because of an emergency lab issue); research mentors (N=2); Interim Program Director (N=1); Interim Campus Coordinator (N=1), START Partner (N=1) and members of the Advisory Board (2). Additional qualitative data were derived from a review of relevant program documents and the Year 1 evaluation report and field notes. Given the number of interim senior administrators, no one was selected to be interviewed from the group. A total of twelve individuals were interviewed.

Recommendations from Evaluation Team.

Status of 2021 Recommendations

Orientation. Develop orientation modules to inform the various stakeholders of the goals and objectives of the program, as well as their roles and responsibilities in the program.

- Status: Completed

Communication with departments. It would be useful for the Program Director to discuss (or re-enforce) the goals and objectives of BD with Directors of Graduate Studies and Chairs of Departments. Specifically, the focus should be on the expectations and responsibilities of the Fellow, department, mentor and advisor. These discussions should highlight the importance of a welcoming and supportive environment.

- Status: Completed

Communication with focus group interviewees. Project Director should inform interviewees that they cannot participate in the focus group, if they arrive later than five minutes after the focus group starts, because consent is required before recording the interview.

- Status: Completed

Communication with other programs in the institution that support graduate student diversity and mentorship of underrepresented minorities. Opportunities to share what works and what could work better, and how these programs might leverage their resources by working together when feasible.

- Status: *In process. The program is working with the university communications office to develop materials regarding institutional collaborative opportunities and resources to enhance the educational and professional experiences of BD fellows.*

In-person events. Invite a diverse group of external speakers, especially women.

- Status during previous reporting periods: Plans being developed.
- Update following 2022-23: The second no-cost extension (submitted at the end of the 2022-23 academic year) includes plans for a mini-conference for cohort of fellows. This conference, along with programming for the 2023-24 academic year, will include a diverse group of external speakers that includes diverse women in STEM disciplines represented by the cohort of fellows.

Meetings. Fellows suggested a change in the frequency of meetings to bi-weekly.

- Status during previous reporting periods: Under discussion *We are sending a doodle poll to BD fellows to determine the best times to meet. We seek the fellows' input regarding prioritizing topics of interest to them.*
- Update following 2022-23: Fellows will be polled prior to the beginning of the 2023-24 academic year to determine the best times and cadence for meetings. Meetings will include opportunities for fellows to support each other in ways that are appropriate during this stage of the project, including writing sessions, practice for oral proposal and final dissertation examinations, applying for external and intramural fellowships, etc., in addition to having virtual and in-person speakers on topics relevant to and of interest to them.

Ethics. In the future, the Program Administration must avoid any semblance of conflict of interest and be more transparent. In the 2021 report, it was pointed out that one of the Fellows was the spouse of a LSAMP UKY staff member who had some responsibilities for the operation of the BD program.

- Status during previous reporting periods: *This matter will be reviewed, and appropriate policy enacted with concomitant training in conflict-of-interest situations provided.*
 - *The appropriate campus office has been consulted to develop and implement an ethics (and conflict of interest) plan for next year.*
- Update following 2022-23: The conflict of interest is no longer in place (and has not been since 2021); however, an appropriate policy will be developed, implemented and institutionalized for future cohorts at the University of Kentucky and other Alliance institutions.

Highlights of 2021-2022 Evaluation.

While there have been transitions throughout leadership with the program the Fellows have maintained an overall good experience. All rated the BD advisors (e.g., Program Director and campus coordinator) as a 5 on a 5-point scale. Most felt that they developed both professional and personal relationships with the two. In particular, the former Program Director was described as good listener and someone with whom they could trust keeping their personal struggles confidential.

Update for 2023-24: As previously mentioned, the many transitions of the leadership team, along with the resignation of the former Program Director during the 2021-22 academic year, presents an opportunity for the chair of the BD Advisory board and other co-PIs to fill the void left by the program director. As discussed in the update to the 2021 recommendations, the cadence and topics of meetings will be revised to reflect those more appropriate for the cohort at this stage. The BD Advisory Board will serve as and / or identify peer and additional faculty mentors for Fellows.

All Fellows rated the “coaching” activities and “research” training as 5, respectively. In general, all agreed that “coaching” enhanced their professional development and that research mentors provided exceptional skill development and instill confidence.

Recommendations (2022 Report) for 2022-23.

Weekly meetings.

- *Content.* Fellows raised concern that some topics of discussion are not clearly communicated and lack sufficient discussion time. Staff should collaborate with Fellows in planning meeting content and invited speakers. Fellows express disappointment that few of the speakers or presenters are members of underrepresented minority groups.
- *Frequency.* Fellows pointed out that many of them are involved in research labs where experiments run throughout the day. Staff should consider this in planning meetings.
- Update following 2022-23: (As previously mentioned) Fellows will be polled prior to the beginning of the 2023-24 academic year to determine the best times and cadence for meetings. The tentative meeting schedule will be determined in consultation with the BD Fellow cohort within the first two weeks of each semester with a cadence that is appropriate

for Fellows at this stage of the grant. Virtual and in-person speakers who are URM STEM Ph.D. doctoral students, postdoctoral scholars and faculty will be selected by the co-PI team, BD Advisory Board and BD fellows.

Social/Community-Building Activities. With current changes in COVID restrictions, staff should collaborate with Fellows in planning social activities.

Communicating Transitions. The trifecta of COVID restrictions, the resignation of the Program Director, and training of the interim campus coordinator resulted in a strong recommendation that a “no cost extension” be requested from the National Science Foundation and that stakeholders be provided an update on grant status now that the semester has ended. Several students are close to completing their degrees and the financial support from an extension would support the continued goals of the grant.

Update following 2022-23: The transition from COVID restrictions, several changes in key personnel, including the resignation of the Program Director and interim campus coordinator during the 2022 calendar year resulted in the strong recommendation that a second no cost extension be requested. That second no-cost extension was granted at the end of the 2022-23 academic year (just prior to the submission of this annual report). The revised leadership team and Advisory board will facilitate community building activities in collaboration with BD Fellows and ensure continued community building and satisfactory progress toward graduation.

DISSEMINATION AND OUTREACH

Information regarding the Bridge to the Doctorate initiative is included on the KY-WV LSAMP website. Contact cards have been disseminated at our cultural center to spread awareness. In addition, project administration will continue to seek opportunities to present on the activities and success of the BD project.

OVERVIEW OF COHORT AND INDIVIDUAL FELLOW ACCOMPLISHMENTS

The cohort has performed well and been resilient during the challenges of the pandemic and transitions in key personnel. Two Fellows have received their doctoral degrees, with a third fellow expected to defend her dissertation before the end of 2023. Two fellows have received MS degrees, with a third fellow expected to defend his thesis before the end of 2023. Unfortunately, one fellow left the program without attaining a degree and one fellow is currently on medical leave.

Several fellows presented a session on preparing for graduate school at the KY-WV LSAMP 2023 Research Symposium. A representative and cumulative list of individual accomplishments made by BD Fellows is presented in Table 5, with 2022-23 accomplishments highlighted separately.

Table 5. Individual Accomplishments, 2022-23 Academic Year Highlighted






Fellow	Accomplishments
 <p>Edwina Barnett, Biomedical Engineering</p>	<p>Began receiving BD funding August 2020. In 2020-22, Edwina: 1) was selected as treasurer of the Society for Biomaterials for 2021-22; 2) presented at the Center for Clinical and Translational Sciences, April 8, 2021; 3) served on a panel of graduate students at the KY-WV LSAMP 13th Annual Research Symposium, April 9, 2021; and 4) presented at the Society for Biomaterials 2021 Virtual Annual Meeting and Exposition, April 23, 2021. <i>Edwina left the BD program and the University of Kentucky in August 2021, voluntarily without attaining her pursuing degree.</i></p>
 <p>Kai Davis, Forest & Natural Resources Science</p>	<p>2022-23:</p> <p>Kai was a new BD fellow beginning in the 2022-23 Academic Year. He is a M.S. student in Forest and Natural Resources Science and is expected to defend his M.S. thesis in August 2023.</p> <p><u>Presentations:</u></p> <ul style="list-style-type: none"> • Davis, K., <i>Characterizing avian community response to two decades of urban reforestation in central Kentucky</i>. The Wildlife Society National Conference (Spokane, Washington; Nov. 6-10, 2022). Poster. • Davis, K., <i>Characterizing avian community response to two decades of urban reforestation in central Kentucky</i>. The Wildlife Society Kentucky Conference (Lucas, KY; Feb. 23-24, 2023). Poster.

Table 5. Individual Accomplishments, 2022-23 Academic Year Highlighted

	<p>Alyssa Donawa, Computer Science</p>	<p>2022-23:</p> <p><u>Awards:</u></p> <ul style="list-style-type: none"> • Awarded the prestigious Lyman T. Johnson Fellowship, University of Kentucky. • <i>One of ten UK Doctoral and Postdoctoral Researchers named as SEC Emerging Scholars (in 2021, but not previously disclosed).</i> <p><u>Presentations and Publications:</u></p> <ul style="list-style-type: none"> • Donawa, C. Powell, R. Wang, M. Chih, E. Aronoff-Spencer, C. Baker, “Note: Assessing Cancer Patient Usability of a Mobile Distress Screening App”, ACM Computing and Sustainable Societies (COMPASS) 2022. Invited. • A. Donawa, C. Powell, R. Wang, M. Chih, C. Baker, “Designing Mobile Distress Screening Apps for Technically Disadvantaged Patients with Apple’s ResearchKit and CareKit”, American Medical Informatics Association (AMIA) Clinical Informatics Conference 2022. Invited. <ul style="list-style-type: none"> • <i>This publication is also included in the 2022 report.</i> <p>Began receiving BD funding August 2020. In 2020-22, Alyssa 1) served as a poster judge at the Louis Stokes Midwest Center of Excellence (LSMRCE) 2020 virtual conference; 2) served as a graduate mentor for the Start to Finish Mentoring Program; 3) served as a panel speaker at the KY-WV LSAMP 13th Annual Research Symposium, April 9, 2021; 4) passed her qualifying exams in May 2021; 5) presented a poster, “Addressing the Need for Remote Patient Monitoring Applications in Appalachian Areas” at the Workshop for Interactive Systems in Healthcare (WISH) 2020 at the American Medical Informatics Association (AMIA) Annual Symposium; and 6) presented a poster, “Utilizing Sidechains to Improve Blockchains for Healthcare” at the ACM Richard Tapia Celebration of Diversity in Computing 2020. Furthermore, 7) Alyssa presented a poster, “<i>Tailoring UI/UX Design for Rural Remote Patient Monitoring</i>” at an Invited Research Presentation (Oral) in Porto, Portugal, September 2021; 8) Alyssa presented, “<i>Designing Mobile Distress Screening Apps for Technically Disadvantaged Patients with Apple’s Research Kit and Care Kit</i>” at American Medical Informatics Association (AMIA) Clinical Informatics Conference (2022) in Houston, Texas.</p>
---	---	--

 <p>Dave-Preston Esoe, Forensic Toxicology and Cancer Biology</p>	<p>2022-23:</p> <p><u>Presentation:</u></p> <ul style="list-style-type: none"> • Esoe, DP, "Using EZH2 Inhibition as a tool for targeting pulmonary disease, " Markey Cancer Center Research Day (May 12, 2023) <p><u>Publication:</u></p> <ul style="list-style-type: none"> • Chen F, Byrd AL, Liu J, Flight RM, DuCote TJ, Naughton KJ, Song X, Edgin AR, Lukyanchuk A, Dixon DT, Gosser CM, Esoe DP, Jayswal RD, Orkin SH, Moseley HNB, Wang C, Brainson CF. Polycomb deficiency drives a FOXP2-high aggressive state targetable by epigenetic inhibitors. Nat Commun. 2023 Jan 20;14(1):336. doi: 10.1038/s41467-023-35784-x. PMID: 36670102; PMCID: PMC9859827. <p><u>Other:</u></p> <ul style="list-style-type: none"> • Completed requirements for M.S. in Forensic Toxicology and Analytical Genetics. <p>Began receiving BD funding in Sept 2021. 1) Presented poster for Department of Toxicology and Cancer Biology's IBS Student Orientation 2021(Poster). 2) Presented poster for Department of Toxicology and Cancer Biology Annual Retreat 2021 (Poster).</p>
 <p>Abelline Fionah, Chemistry</p>	<p>2022-23:</p> <p><u>Awards:</u></p> <ul style="list-style-type: none"> • 2023 North American Membrane Society Elias Klein Travel Supplement. • 2023 ACS Women Chemists Committee Travel Award sponsored by Eli Lilly & Company: <ul style="list-style-type: none"> • https://acswcc.org/awards/eli-lilly-travel-award/. • National Science Foundation NRT IN_FELLOWS Fellowship. <p><u>Presentations (continued on next page):</u></p> <p>Fionah A, IC. Escobar (May 2023). Microcystin-LR destruction and removal from water via enzymatic biodegradation and ultrafiltration, North American Membrane Society Annual Meeting, Tuscaloosa, Alabama.</p>




<p>Continued ...</p>  <p>Abelline Fionah, Chemistry</p>	<p>Fionah A., I.C. Escobar (June 2022). Liquid separations membranes made of functionalized poly-ether ether ketone blended with polysulfone via Non- Solvent Induced Phase Inversion. 37th EMS Summer School Symposium. Alentejo, Portugal. Poster Presentation.</p> <p><u>Publications:</u></p> <p>Fionah A., K. McLarney, A. Judd, and I.C. Escobar (submitted June 2023). Effects of Applied Potential on the Performance of Polysulfone Membranes functionalized with Sulfonated Polyether Ether Ketone Polymers, submitted to <i>Membranes</i>.</p> <p>Fionah A., C. Hackett, H. Aljewari, L. Brady, F. Alqhtani, I.C. Escobar and A.K. Thompson (2022). Microcystin-LR destruction and removal from water via enzymatic biodegradation and ultrafiltration, <i>Toxins</i>, 14(4), 231; https://doi.org/10.3390/toxins14040231</p> <hr/> <p>Began receiving BD funding January 2021. Abelline 1) served as a poster judge at the Louis Stokes Midwest Center of Excellence (LSMRCE) 2020 virtual conference; 2) published an article in <i>CrystEngComm</i>; 3) served as a panel speaker at the KY-WV LSAMP 13th Annual Research Symposium, April 9, 2021; and 4) served as a panel speaker at the Careers in Science and Engineering Symposium, August 29, 2020. <i>Best Oral Presentation at the 2021 Louis Stokes Midwest Regional Center of Excellence (LSMRCE) Virtual Conference: Empowering Diverse STEM Innovators.</i></p>
 <p>Xava Grooms, Computer Science</p>	<p>Began receiving BD funding August 2020. Xava served as a poster judge at the Louis Stokes Midwest Center of Excellence (LSMRCE) 2020 virtual conference. <i>Currently on leave from the Ph.D. program</i></p>


Table 5. Individual Accomplishments, 2022-23 Academic Year Highlighted

<div data-bbox="302 386 472 638" data-label="Image"> </div> <p data-bbox="220 641 556 738">Julia Parker, Biosystems & Agricultural Engineering</p> <p data-bbox="210 771 567 901">Received M.S., Biosystems and Agricultural Engineering, December 2022</p> <p data-bbox="220 941 556 1071">Employed: Center for Applied Energy Research (CAER), University of Kentucky</p>	<p data-bbox="598 224 724 251">2022-23:</p> <p data-bbox="598 289 1890 354">Parker, Julia, “Lignin Valorization via Reductive Depolymerization using Promoted Nickel Catalysts and Sub- and Supercritical Methanol,” MS Thesis, University of Kentucky, November 2022.</p> <p data-bbox="598 389 1092 418"><u>Other Presentations and Publications:</u></p> <ul data-bbox="619 462 1890 698" style="list-style-type: none"> • Parker, Julia, ACS Green Chemistry & Engineering Conference, June 2022. Poster • Parker, Julia, UK Sustainability Poster Competition, October 2022. • Vorisek, F.E., Ji, Y., Hillis, M.H., Parker, J.E., Thompson, J., Liu, K. and Crocker, M., Towards an Integrated Process for CO₂ Capture and Utilization: Cultivation of <i>Scenedesmus acutus</i> Using Gaseous CO₂ and NH₃. <i>Bioenerg. Res.</i> (2023). https://doi.org/10.1007/s12155-023-10592-9 <p data-bbox="598 734 1890 1133">Began receiving BD funding August 2020. In 2020-21, 1) Julia was selected as a member of the advisory committee for an NRT grant; and presented, “IN FELLOWS & an Academy of Innovators at the Nexus of Food, Energy, & Water Systems (INFEWS)” at the NSF Research Traineeship (NRT) Annual Meeting, January 28-29, 2021. 2) Julia also conducted poster presentations, “Synthesis and application of biochar-based membranes in water treatment around Martin County KY” and “Lignin valorization via reductive depolymerization using promoted nickel catalysts and supercritical conditions” at NRT Food, Energy, & Water Symposium. 3) She also presented “Crafting a better personal statement” <u>Virtual presentation</u> at our Bridge to Doctorate Fellow Summer Speaker Series. 4) In addition to presentations, she published “<i>Description, Assessment, and Outcomes of Three Initial Interventions Within a National Science Foundation Research Traineeship (NRT): Onboarding Event, Career Exploration Symposium, and Multidisciplinary Introductory Course</i>” Paper presented at 2021 ASEE Virtual Annual Conference Content Access, Virtual Conference. 10.18260/1-2—36900”</p>
--	--

Table 5. Individual Accomplishments, 2022-23 Academic Year Highlighted

	<p>2022-23:</p> <p>Ariel is expected to present her Ph.D. proposal and progress to candidacy during Fall 2023.</p> <p><u>Presentations:</u></p> <ul style="list-style-type: none"> • Robinson, A., Gutierrez, A., and Pennell., K.G. (2023) “Using geospatial analysis to assess per- and polyfluoroalkyl substances (PFAS) in water systems in Kentucky.” Environmental and Water Resources Institute (EWRI) Congress, Las Vegas, NC. May 2023. Oral Presentation. • Robinson, A., Knappe, DRU., and Pennell., K.G. (2022) “Per- and polyfluoroalkyl Substances (PFAS) sampling and analysis for characterization of sewer systems in Kentucky.” 35th Anniversary Superfund Research Program (SRP) Annual Meeting., Raleigh, NC. December 2022. Oral Presentation. • Robinson, A., Ojha, S., and Pennell., K.G. (2022) “PFAS in Kentucky: Using GIS as a tool for predicting potential contamination “hotspots.” National Research Traineeship (NRT) Food, Energy, and Water Symposium, Lexington, KY, December 2022. Poster Presentation. • Robinson, A., Ojha,S., and Pennell., K.G. “Identification and characterization of per-and polyfluoroalkyl substance (PFAS) contamination in Kentucky.” 42nd International Symposium on Halogenated Organic Pollutants (Dioxin)., New Orleans, LA. October 2022. Poster Presentation. • Robinson, A., Ojha, S., and Pennell., K.G. (2022) "Investigating Per- and Polyfluoroalkyl Substances (PFAS) water contamination in “hot spot” counties in Kentucky," Association for Environmental Engineering and Science Professors (AEESP) Research and Education Conference., St. Louis., MO. June 2022. Poster Presentation. • Ojha, S., Li, Y., Rezaei., N., Frazar., M., Robinson, A., and Pennell., K.G. (2022) "A Geospatial Approach for Identifying, Assessing and Managing PFAS Risks in Drinking Water," Oral Presentation (by Ojha). Association for Environmental Engineering and Science Professors (AEESP) Research and Education Conference., St. Louis., MO. June 2022. <p><u>Publications:</u></p> <ul style="list-style-type: none"> • Ojha, S., Li, Y., Rezaei, N., Hoover, A., Robinson, A., and Pennell, K.G. (2022) "A Geospatial and Binomial Logistic Regression Model to Prioritize Sampling for Per- and Polyfluorinated Alkyl Substances in Public Water Systems” Integrated Assessment and Environmental Management. <ul style="list-style-type: none"> • https://doi.org/10.1002/ieam.4614
---	--

Ariel Robinson,
Civil Engineering

<p>Continued ...</p>  <p>Ariel Robinson, Civil Engineering</p>	<p><u>Service:</u></p> <ul style="list-style-type: none"> • UKY Black Graduate Professional Student Association (BGPSA) Treasurer, April 2022-May 2023 <ul style="list-style-type: none"> • Create budgets for programming for 2022 academic year; • Manage current organization funds; • Create corporate sponsorship packet and develop relationships with sponsors. • NERD Squad Inc. (50(c)3 non-profit), Lexington, KY, Engineering Director, January 2021-Present <ul style="list-style-type: none"> • Host activities and conferences to advance STEM knowledge in the community, • Communicate with Board to create activities for elementary students, • Create tools for effective science communication for different learning styles, and • Create and facilitate activities for STEM Club, an after-school activity for minority students. <p>Began receiving BD funding June 2021. She began attending the weekly BD meeting two months prior to allow her to begin building relationships with the other BD Fellows and receive professional development. 1) NIH K.C Donnelly award winner (June 2021). 2) Ariel became a College of engineering diversity and inclusion committee member, College of engineering education committee team member, and a NSBE graduate student liaison. 3) She will be presenting at the AEESP Conference, on June 28-30, 2022, in St. Louis, Missouri. 4) And, at the Water Professionals Conference, on July 17-July 20, 2022, in Lexington, KY. She also was published in, "Modeling Fate and Transport of Volatile Organic Compounds (VOCs) Inside Sewer Systems." https://doi.org/10.1111/gwmmr.12449.</p>
<p>Alexis Smith, Molecular and Cellular Biochemistry</p>	<p>2022-23:</p> <p><u>Awards and Media (continued on next page):</u></p> <ul style="list-style-type: none"> • 24th University of Kentucky Gill Heart and Vascular Institute Cardiovascular Research Day Travel Award. Oct. 28, 2022. • Carl Storm Underrepresented Minority (CSURM) Fellowship recipient for 2022 Gordon Research Conference on Hemostasis. July 31-Aug. 5, 2022. • International Society on Thrombosis and Haemostasis 2022 Congress Early Career Travel Award. July 9-13, 2022.

Continued ...



Alexis Smith, Molecular and Cellular Biochemistry,

Expected to graduate with Ph.D. in 2023.

- UKNow article in March 2023 as mentor in the CGPDI's Start to Finish mentoring program. Link: [Start to Finish Mentoring Program proves that mentoring matters | UKNow \(uky.edu\)](#)

Presentations:

- **Smith, A.N.**, Joshi, S., Chanzu, H., Alfar H., Prakhya S., Omali L., and Whiteheart, S.W. (2022), **The Effects of Secretion Regulators, α -Synuclein and Cysteine String Protein- α , on Thrombosis and Hemostasis**. 90 Second Poster Pitch presented at the 24th University of Kentucky Gill Heart and Vascular Institute Cardiovascular Research Day. **Oct. 28, 2022**. (Oral)
- **Smith, A.N.**, Omali, L., Joshi, S., Whiteheart S. (2022) **The Role of α -Synuclein and Cysteine String Protein- α in Platelet Function**. Oral Communication Session at the 2022 Congress of the International Society on Thrombosis and Haemostasis held in London, England, U.K. (Link: <https://abstracts.isth.org/abstract/the-role-of-%ce%b1-synuclein-and-cysteine-string-protein-%ce%b1-in-platelet-function/>) **July 9, 2022**. (Oral)
- **Smith, A.N.**, Joshi, S., Chanzu, H., Alfar H., Prakhya S., Omali L., and Whiteheart, S.W. (2023), **The Effects of Secretion Regulators, α -Synuclein and Cysteine String Protein- α , on Thrombosis and Hemostasis**. Poster Session presented at the 14th Annual University of Kentucky College of Medicine Trainee Poster Session. **Apr. 11, 2023**. (Poster)
- **Smith, A.N.**, Joshi, S., Chanzu, H., Alfar H., Prakhya S., Omali L., and Whiteheart, S.W. (2022), **The Effects of Secretion Regulators, α -Synuclein and Cysteine String Protein- α , on Thrombosis and Hemostasis**. Poster Session presented at the 24th University of Kentucky Gill Heart and Vascular Institute Cardiovascular Research Day. **Oct. 28, 2022**. (Poster)
- **Smith, A.N.**, Joshi, S., Chanzu, H., Alfar H., Prakhya S., Omali L., and Whiteheart, S.W. (2022), **The Effects of Secretion Regulators, α -Synuclein and Cysteine String Protein- α , on Thrombosis and Hemostasis**. Poster Session presented at the 18th Midwest Platelet Conference at the University of Michigan, Ann Arbor Michigan. **Oct. 6, 2022**. (Poster)
- **Smith, A.N.**, Joshi, S., Chanzu, H., Alfar H., Prakhya S., Omali L., and Whiteheart, S.W. (2022), **The Effects of Secretion Regulators, α -Synuclein and Cysteine String Protein- α , on Thrombosis and Hemostasis**. Poster Session presented at the Hemostasis Gordon Research Conference on "Regulation and Molecular Dynamics of Hemostasis and Thrombosis" at Waterville Valley, New Hampshire. **Aug. 3, 2022**. (Poster)
- **Smith, A.N.**, Joshi, S., Chanzu, H., Alfar H., Prakhya S., Omali L., and Whiteheart, S.W. (2022), **The Effects of Secretion Regulators, α -Synuclein and Cysteine String Protein- α , on Thrombosis and Hemostasis**. Poster Session presented at the Hemostasis Gordon Research Seminar on

Continued ...



Alexis Smith, Molecular and Cellular Biochemistry,

Expected to graduate with Ph.D. in 2023.

“Structure, Biochemistry, and Physiology of Hemostasis” at Waterville Valley, New Hampshire. **July 31, 2022.** (Poster)

Publications:

- **Smith, A.N.**, Joshi, S., Chanzu, H., Alfar, H., Prakhya S., Omali, L., and Whiteheart S.W. “ α -Synuclein is the Major Platelet Isoform but is Dispensable for Activation, Secretion, and Thrombosis” (Submitted) June 2023.
- Joshi, S., Prakhya K.S., **Smith, A.N.**, Chanzu, H., Zhang, M., Whiteheart, S.W. “The Complementary Roles of VAMP-2,-3, and -7 in Platelet Secretion and Hemostasis” (Submitted) April 2023.
- Joshi, S., **Smith, A.N.**, Prakhya, K.S., Alfar, H.R., Lykins J., Zhang, M., Pokrovskaya I., Aronova, M., Leapman R.D., Storrie, B., and Whiteheart S.W. “Ferric Chloride-Induced Arterial Thrombosis and Sample Collection for 3D Electron Microscopy Analysis” *J. Vis. Exp.* 2023 (193).
 - (Link: <https://www.jove.com/t/64985/ferric-chloride-induced-arterial-thrombosis-sample-collection-for-3d>)

Began receiving BD funding August 2020. In 2020-21, Alexis: 1) was co-chair of the Advisory Council on Diversity and Inclusion Council for the Department of Molecular and Cellular Biology at the University of Kentucky; 2) was co-chair of the Students Embracing Equity in Molecular Sciences; 3) presented a poster at the College of Medicine Poster Session, April 1, 2021; and 4) completed her qualifying exams, November 2020. In April 2021, 5) Alexis was a VAMP Chaperone in the Platelet Release Action. at the University of Kentucky College of Medicine Poster Session, Lexington, Kentucky. 6) She presented at the KY-WV Louis Stokes Alliance for Minority Participation (LSAMP) 13th Annual Research Symposium on Apr. 9-10, 2021. 7) Alexis did a 5 Minute Oral Slide Recording presented at the International Society on Thrombosis and Haemostasis Virtual Congress on July 17-21, 2021. 8) She also conducted a Poster Session presentation at the International Society on Thrombosis and Haemostasis Virtual Congress. July 17-21, 2021. 9) And presented at the University of Kentucky Gill Heart and Vascular Institute Cardiovascular Research Day on Sept. 10, 2021. 10) Alexis was also published twice; **Smith, A.**, Joshi, S. and Whiteheart, S.W. (2021), **α -Synuclein: a VAMP Chaperone in the Platelet Release Action.** E-Poster Session presented at the International Society on Thrombosis and Haemostasis Virtual Congress. Link: <https://abstracts.isth.org/abstract/%ce%b1-synuclein-a-vamp-chaperone-in-the-platelet-release-reaction/>. **July 17-21, 2021.** **Smith, A.N.**, Joshi, S. and Whiteheart, S.W. (2020), **α -Synuclein’s Role in Platelet Exocytosis.** *The FASEB Journal*, 34: 1-1. **Apr. 4-7, 2020.** (Poster) (Cancelled). Link: <https://doi.org/10.1096/fasebj.2020.34.s1.06219>


<p>Continued ...</p> <p>Alexis Smith, Molecular and Cellular Biochemistry</p>	<p>Student member of the Molecular and Cellular Biochemistry Academic Department Periodic Review 2021. Sept. 2021. 11) Member of the Women in Medicine and Science Finance and Philanthropy subcommittee, Jan. 2021-present.</p>
 <p>E-Lexus Thornton, Mechanical Engineering,</p> <p>Received M.S., Mechanical Engineering May 2023</p> <p>Quality Engineer, Toyota Motor Manufacturing (TMMK), Georgetown, KY</p>	<p>2022-23:</p> <p><u>Publications:</u></p> <ul style="list-style-type: none"> • Thornton, E. L., Zannoun, H., Vomero, C., Caudill, D., & Schoop, J. (2023). A Review of Constitutive Models and Thermal Properties for Nickel-Based Superalloys Across Machining-Specific Regimes. <i>Journal of Manufacturing Science and Engineering</i>, 145(8), 080801. • Thornton, E. L., & Schoop, J. (2022). Thermal process signature in machining of Ti-6Al-4V with worn tools. <i>Procedia CIRP</i>, 108, 868-872. • Thornton, E. L., Hartley, A., Caudill, D., Gamesu, M., Schoop, J., & Badurdeen, F. (2022, October). Evaluating the Sustainability of Paper and Plastic Substitute Material LimeX. In <i>Global Conference on Sustainable Manufacturing</i> (pp. 1082-1090). Cham: Springer International Publishing. <p>Began participating in program activities April 2021 and began receiving BD funding June 2021.1) E-Lexus has completed department math requirements. 2) Wrote and submitted a conference paper for peer review. <i>Changed from Ph.D. to M.S.</i></p>

Table 5. Individual Accomplishments, 2022-23 Academic Year Highlighted





 <p>Kayla Titiali-Torres, Biology</p> <p>Received Ph.D., December 2021</p> <p>Postdoctoral Researcher, NIH</p>	<p>Began receiving BD funding August 2020. In 2020-21, Kayla: 1) received a travel scholarship, served as an undergraduate poster judge, presented a poster, and received an “Exemplary Poster Presentation Award” at the Society of Chicanos and Native Americans in Science (SACNAS) National Conference; 2) served as director of NERD SQUAD, Inc., a community outreach program that provides services including hands-on science activities for K-12 students; 3) served on the Mentoring and Advising Policies Committee for the Department of Biology; 4) served on the Graduate Affairs Committee for the Department of Biology; 5) served on the LSMRCE 2020 virtual conference planning committee; 6) served on the Research Affairs Core Committee for the Endocrine Society; 7) served as vice president of the Biology Graduate Student Association; 8) received an iCURE Postdoctoral Fellowship; 9) was a finalist for a PEO Scholarship; and 10) published in <i>Frontiers of Cell and Developmental Biology</i>. Kayla received her Ph.D. in December 2021. She received a post-doc fellowship at the National Institutes of Health (NIH) and is now in Maryland.</p>
 <p>Andres Vindas Melendez, Mathematics</p> <p>Received Ph.D., August 2021</p> <p>Postdoctoral Researcher, University of California, Berkeley</p>	<p>Began receiving BD funding September 2020. In 2020-21, Andres: 1) received a travel scholarship, gave an oral presentation, and received a presentation award at the Society of Chicanos and Native Americans in Science (SACNAS) National Conference; 2) made a dozen other presentations including as an invited speaker at the Applied Algebra Seminar at York University (Toronto, Canada) and an American Mathematics Society (AMS) Special Session; 3) was selected as a 2020 Latinxs & Hispanics in the Mathematical Sciences Honoree; 4) received a 2020-21 Tensor-SUMMA (Strengthening Underrepresented Minority Mathematics Achievement) grant from the Mathematical Association of America; 5) submitted two postdoctoral fellowship applications; 6) served as a reviewer/referee for Algebraic and Geometric Combinatorics proceedings, the Journal of Combinatorial Theory Series A, the Association for Women in Mathematics 50th Anniversary Volume, zbMath, and Testimonies: Stories of Latinx and Hispanic Mathematicians; 7) was a student author for, “Math SWAGGER: Building a Virtual Community” for <i>Notices of the American Mathematical Society</i>; 8) contributed to blogs including “A Reflection on Giving ONLINE Talks;” and 9) contributed to <i>2020 Lathisms: Latinxs and Hispanics in the Mathematical Sciences</i>. Andres received his Ph.D. in August 2021. He is now a post-doc at the University of California, Berkeley</p>

Table 5. Individual Accomplishments, 2022-23 Academic Year Highlighted

 <p>Aaron West, Biology</p>	<p>2022-23:</p> <p><u>Presentations and Publications:</u></p> <ul style="list-style-type: none"> • West AK, Xu EM, Nelson MD, Hart TR, Stricker EM, Cones AG, Martin GM, Strickland K, Lambert DL, Burman L, Zhu BH, Schneider ER. Quantitative Evaluation of Tactile Foraging Behavior in Pekin and Muscovy Ducks. <i>Frontiers in Physiology</i>, 2022, 13:921567. • Aaron K. West, Emily M. Xu, Mitchell D. Nelson, Thomas R. Hart, Emelia M. Stricker, Alexandra G. Cones, Grace M. Martin, Kourtney Strickland, Devin L. Lambert, Lainey Burman, Bailey H. Zhu, Eve R. Schneider. (2022, June 29). <i>Comparison of foraging performance between Pekin and Muscovy Ducks</i>. American Ornithology Society and Birds Caribbean Conference. San Juan, Puerto Rico. <hr/> <p>Began participating in program activities April 2021 and began receiving BD funding June 2021.</p>
 <p>JaMaya Wilson, Civil Engineering</p>	<p>2022-23:</p> <p><u>Award:</u></p> <ul style="list-style-type: none"> • \$2,000 student scholarship from the Joint Student Committee’s Clean Water Professionals of Kentucky & Tennessee (CWP-KT) and the Kentucky/Tennessee Section of the American Water Works Association (KY/TN Section AWWA). <p><u>Presentation:</u></p> <ul style="list-style-type: none"> • Wilson, J.; Byrne, D.M., Life cycle assessment (LCA) for green infrastructure: Urban tree soil cells. 2022 Food, Energy and Water Symposium. University of Kentucky; Lexington, KY; December 8, 2022. (Poster) <p><u>Other:</u></p> <ul style="list-style-type: none"> • Currently completing industry internship

<p>Continued ...</p> <p>JaMaya Wilson, Civil Engineering</p>	<p>Began receiving BD funding August 2020 (as Materials Engineering Ph.D. student). In 2020-21, JaMaya applied for the Graduate Research Fellowship Program (GRFP) and a GEM Fellowship. 1) Jamaya also presented a poster, “Quantifying the environmental impacts of Poly (Lactic Acid) Production facility in Belize” at the University of Kentucky Sustainability Poster Competition. Sept. 23, 2021. 2) She was also published in “Cradle to Gate Environmental Footprint and Life Cycle Assessment of Poly(Lactic Acid)” 2021. Poly(Lactic Acid) pp. 431-441 https://doi.org/10.1002/9780470649848.ch26. Transferred to Civil Engineering and changed from Ph.D. to M.S.</p>
---	--