



2019 Indianapolis Project SEED, Photo Courtesy of Elmer Sanders

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### Project SEED Mission Statement

To assure that students from economically disadvantaged backgrounds have opportunities to experience the challenges and rewards of chemically-related sciences



# Project SEED

## Executive Summary

Project SEED, a program of the American Chemical Society (ACS) started its journey towards the next 50 years by leveraging the momentum built from the anniversary campaign last year. The Project SEED Committee and staff used feedback taken throughout 2018 to start laying the groundwork towards a new Strategic Plan.

The program provides high school students from economically disadvantaged families an opportunity to participate in research and learn what it is like to work in science-related fields through a hands-on experience. Students are placed in academic, industry, and government laboratories for 8 to 10 weeks during the summer and are paid stipends for their work. This summer, 427 volunteer scientists and coordinators from more than 164 institutions in 36 states, the District of Columbia, and Puerto Rico mentored a total of 454 students. This record number of students is fully attributed to the effective marketing and promotion of Project SEED during the 50-year anniversary. Since the inception of Project SEED, a program from the American Chemical Society (ACS), more than 11,000 students have participated.

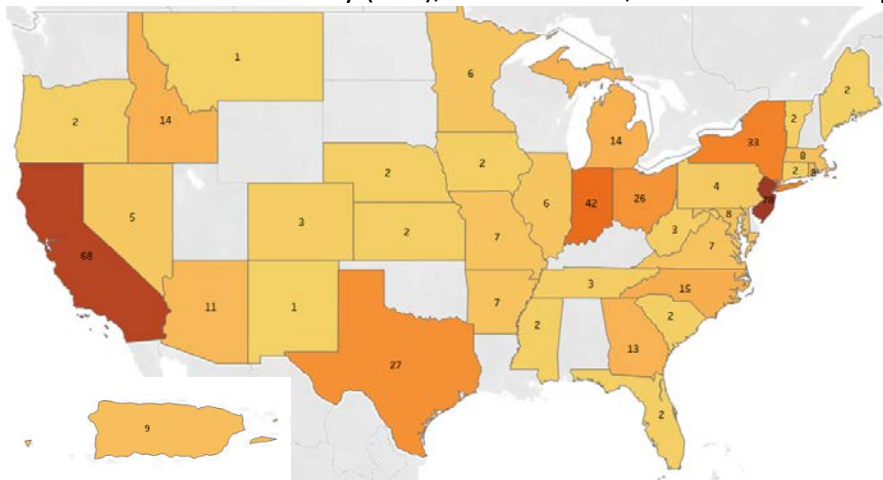


Figure 1. Map of Project SEED student participants by state, including Puerto Rico and the District of Columbia.

The student participants from 2019 provided feedback on the program at the end of the summer. Seventy-six percent of the respondents indicated that the Project SEED experience helped them decide to pursue a career in science, and 96% indicated that Project SEED helped them develop new skills and abilities. Eighty-seven percent noted that

Project SEED was successful in improving their self-confidence; and 76% indicated that SEED encouraged them to pursue a degree in a chemistry-related field. When asked to evaluate their experience with their mentor, 95% agreed that they learned new skills from their mentors, and 91% stated that their SEED mentor provided feedback on their performance in the lab and made them feel like part of the team. Most of the respondents rated the overall experience with Project SEED as “Excellent”.

Industries, foundations, academic institutions, ACS Local Sections, and ACS friends and members helped to financially support student fellowship expenses as well as provide

additional student enhancement experiences, such as career panels, poster sessions, campus tours, writing workshops, and more. This funding, combined with ACS and the ACS Project SEED Endowment provided a total of \$1,194,000 in student fellowships.

At the beginning of the summer, the Committee on Project SEED evaluated the 2018 surveys from coordinators, mentors, and students, and worked together to craft and vote on a new strategic plan. This plan is intended to guide the Committee for the next 3-5 years, and was an opportunity to refresh the committee's mission and vision statements. The revised vision is *"Empowering students through transformative research experiences"* while the new mission is *"to ensure the quality, sustainability, and growth of the Project SEED (Summer Experiences for the Economically Disadvantaged) Programs"*. This strategy encompasses three goals: (1) Foster sustainability of Project SEED, (2) Identify and establish working relationships with stakeholders to promote growth, and (3) Identify, implement, and promote essential elements of a high quality SEED program. Each goal has several implementation plans to support them, several of which will start coming online starting in 2020.

### Committee on Project SEED Strategic Plan

**Vision:** Empowering students through transformative research experiences

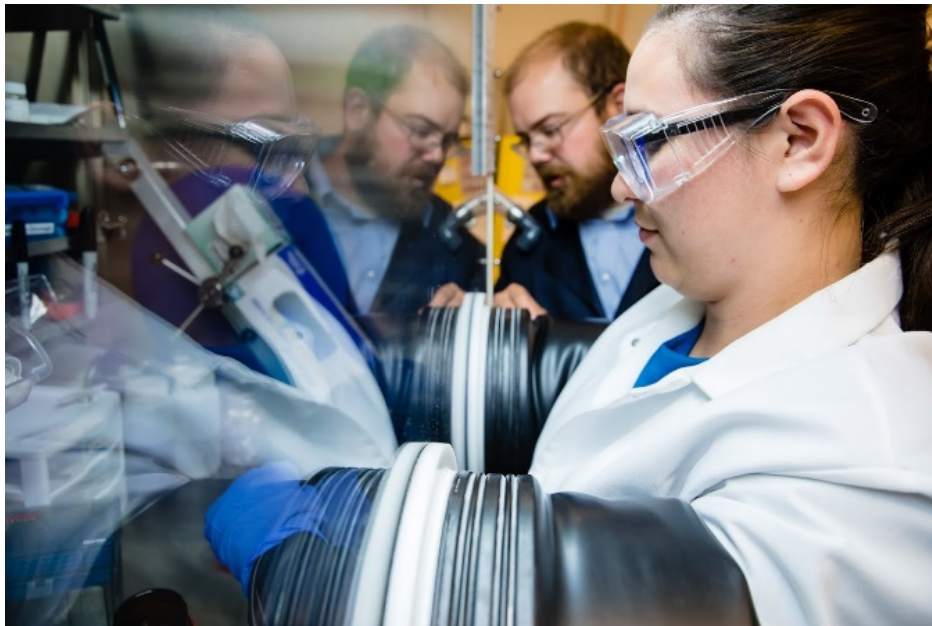
**Mission:** To ensure the quality, sustainability, and growth of the Project SEED (Summer Experiences for the Economically Disadvantaged) Programs.

**Goal 1:** Foster sustainability of Project SEED.

**Goal 2:** Identify and establish working relationships with stakeholders to promote growth.

**Goal 3:** Identify, implement, and promote essential elements of a high quality SEED program.

The Project SEED Committee and staff would like to thank the many coordinators, mentors, and additional volunteers that helped to bring the 2019 SEED program to fruition. Bringing students into the lab is no small undertaking, and we do not take for granted the hard work and extra time invested into the lives of over 450 high school students.



*2019 Snake River Local Section Project SEED, Photos Courtesy of Jerome Pollos Photography*



# 2019 Project SEED Summer I & II Programs

The Summer I program is for first-time Project SEED students who are given a scientific research project in chemistry under the direct supervision of a scientist-mentor. The Summer II program provides returning Project SEED students with an additional summer of research.

## Institutions, Coordinators

### Mentors

#### ARIZONA

##### **Northern Arizona University, Naomi Lee**

Andrew Koppish

Archana Varadaraj

Gabe Montano

Gerrick Lindberg

Jani Ingram

Jennifer Martinez

Naomi Lee

Narendiran Rajasekaran

Stephanie Hurst

##### **Summer I**

Fernand Soto

Carrina Tran

Emma Hull

Tia Smallcanyon

Kanyon Gleason

Tamia Stos

Alexandra Harvey

Haylin Wheeler

Milton Katoney

Tristan Navajo

Leshawn Klah

#### ARKANSAS

##### **NYITCOM at Arkansas State University, Rajendram Rajnarayanan**

Hashim Ali

Rajendram Rajnarayanan

##### **Summer I**

Makiya Hines

Rabeya Rajoni

Shakya Winston

##### **University of Arkansas at Pine Bluff, Grant Wangila**

Daoyuan Wang

Grant Wangila

Qinglong Jiang

Zeeshan Habeeb

##### **Summer I**

Makiya Hines

Rabeya Rajoni

Shakya Winston

Kaleigh Howard

#### CALIFORNIA

##### **California Local Section, Elaine Yamaguchi**

Maryam Deldar

Chevron Energy Technology Company

Rachel Mohler

Toni Miao

##### **Summer I**

Andrea Melendez

Stefany Miranda

Emily Guerrero

Gerald Lee

Chevron Products Company

Isabel Mitchell

Joy Goto

Fresno State University

Zaid Vervantes

Gennady Borinshteyn

Libby Labs

Yael Gutierrez

# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

Mentors		Students
Kenneth Forbes	Nexeo Solutions, LLC	Ashley Ruiz Carlos Ruiz
David Matucha	Novvi, LLC	Henry Lee
Andrew Ichimura	San Francisco State University	Emma Schumacher Xianzhi Hua
Joanna Chiu	University of California, Davis	Jonathan Llanas
Anand Subramaniam	University of California, Merced	Isabel Prado Torres
Andy LiWang		Ana Plascencia
Maria Zoghbi		Priti Kaur
Shahar Sukenik		Kiefer Deen Villacruels
Patti LiWang		Giselle San Ramen
Eva de Alba Bastarrechea		Diana Chang
Liang Shi		Nasier Muldrow
Victor Munoz		Jenasis Yarrell
John Livesey	University of the Pacific	Khang Ho
Joseph Harrison		Ter Thao
Liang Xue		Hue Man Dang
O. Sparkman		Alanda Nguyen Nico Blum Enrique Mendez
David Obenland	USDA ARS Water Management Research Lab	Alex Lu
Gary Banuelos		Luis Fernando Santos
Jianchi Chen		Nancy Serrano
Rachel Naegele		Ashley Lopez-Guerrero Gustavo Banda
Spencer Walse		Luis Felipe Santos
Yuzhu Zhang		Gilmarc Duldulao
Jennifer Bragg	USDA Western Regional Laboratory	April Nguyen
Niu Dong		Milagro Adom
Ron Haff		Sandra Wang Steven Chen
Les Jackowski	Chevron Energy Technology Company	<b>Summer II</b> Jose Alfaro
Misty Kuhn	San Francisco State University	Huixin Ma
Weiming Wu		Donglin Song
Zheng-Hui He		Shuzhen (Diana) Li
Don Tilley	University of California, Berkeley	Pei Qiao Xie

# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

Mentors		Students
Barbara Blanco-Ulate	University of California, Davis	Ozaliqe Williams
Hrant Hratchian	University of California, Merced	Kaneen Muldrow Stacey Conley
Son Nguyen		Ixchel Gonzalez
Andy Franz	University of the Pacific	Qi Deng
Jerry Tsai		Christine Tran
<b>California State University, Los Angeles, Frank Gomez</b>		<b><u>Summer I</u></b>
Frank Gomez		Catherine Dezha
Michael Hayes		Anny Flores
Robert Vellenoweth		Ryan Rivas
Xin Wen		Josefina Arroyo
<b>California State University, San Bernardino, Dennis Pederson</b>		<b><u>Summer I</u></b>
Jingsong Zhang	University of California, Riverside	George Arevalo
<b>Lucent Technologies, Bell Laboratories, Valerie Kuck</b>		<b><u>Summer I</u></b>
Jacqueline Trischman	California State University San Marcos	Esthela Barriga
Jeffrey Gustafson		Salma Abdullahi
Erica Forsberg	San Diego State University	Tayer Pham
Manal Swairjo		Katie Vu
<b>Stanford University, Maiken Bruhis</b>		<b><u>Summer I</u></b>
Matias Horst		Leslie Reyes
Wesley Michaels		Xin Yan Mai
<b>University of California, Davis, Shota Atsumi</b>		<b><u>Summer I</u></b>
Shota Atsumi		Yazmin Villanueva
Susan Kauzlarich		Areesha Majid
		<b><u>Summer II</u></b>
Louise Berben		Anh Vo
Xi Chen		Ihuoma Ihejirika
<b>University of La Verne, Nixon Mwebi</b>		<b><u>Summer I</u></b>
Andrew Rice		Evan Cheung
Nixon Mwebi		Zuoning Zhang

# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

### Mentors

#### University of San Diego, Jessica Bell

Anthony Bell  
Christopher Daley  
Jessica Bell

Eleanor Gillette

### Students

#### Summer I

Amran Mohamed  
Adriana Sanchez Mendez  
Homairah Bi Mohamed  
Osman Ghani

#### Summer II

Hamsa Ali

## COLORADO

#### Colorado State University - Pueblo, David Dillon

David Lehmpuhl  
Matthew Cranswick

Sandra Bonetti

#### Summer I

Jordan Zhang  
Seth Wesolowski

#### Summer II

Maelah Robinson-Castillo

## CONNECTICUT

#### University of Connecticut, Alfredo Angeles-Boza

Jie (Jay) He  
Rebecca Quardokus

#### Summer I

Milan Patel  
Damarys Luna

## DISTRICT OF COLUMBIA

#### Chemical Society of Washington, Judith Faye Rubinson

K. Travis Holman  
Kaveh Jorabchi

Georgetown University

#### Summer I

Shreyas Pant  
Abheek Pant

Akos Vertes

George Washington University

Mahia Rahman  
Soufiane Badri

Zeeshan Ahmad

National Institute of Standards and Technology

Dorcas Ogba

Akos Vertes

George Washington University

#### Summer II

Abarca Edwin

Andrew Davis

Library of Congress

Darlin Paredes Hernandez

Marie Christine & Daniel Onuta

University of Maryland, Baltimore County

Kevin Hu

#### Gallaudet University, Tugba Kucukkal

Tugba Kucukkal

#### Summer I

Gulsima Karsli  
Yigit Simsek



# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

### Mentors

### Students

## Florida

### Barry University, George Fisher

Rajeev Prabhakar

University of Miami

### Summer I

Carrie Alfonos

Sofia Melgar

## GEORGIA

### ACS Georgia Local Section, Ajay Mallia

David Pursell

Georgia Gwinnett College

### Summer I

Izza Tirmizi

Neville Forlemu

Yaesung Lee

Myqui Nguyen

Thomas Gluick

Jehan Sheikh

Vicky Mody

Philadelphia College of Osteopathic Medicine

Mariam Drammeh

Ajay Mallia

Georgia Gwinnett College

### Summer II

Jennifer Kim

Joel Suazo

### Clark Atlanta University, Ishrat Khan

Ishrat Khan

### Summer I

Kasha Salia

Kimberly Heard

Michael Williams

Ofuan Oyakhire

### Georgia College and State University, Catrena Higginbotham Lisse

Catrena Higginbotham Lisse

### Summer I

HeketTumRe Mitchell

Tony Vargas-Miguel

### Spelman College, Kimberly Jackson

Michelle Gaines

### Summer I

Andrea Mancia

## IDAHO

### Idaho State University, Andrew Holland

Andrew Holland

### Summer I

Isabel Badillo

Caryn Evilia

Adrian Chavez

Joshua Pak

Cassidy Baeman

Chase Olson

### Snake River Local Section, Don Warner

David Estrada

### Summer I

Dalton Moone

Don Warner

Joshua Trombley

Eric Brown

Sara Alsaifi

# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

### Mentors

Hui (Claire) Xiong		Blayze Bernal
Kevin Ausman		Caitlyn Ruiz
Lisa Warner		Lieo Mullin
Mike Hurley		Ying Yin Zhu
Jerry Harris	Northwest Nazarene University	Carter Hall
Jeunghoon Lee	Boise State University	<b>Summer II</b> Maura Dresner-Pfau
Scott Phillips		Sydney Walker

## ILLINOIS

### Chicago Local Section, Raelynn Miller

Daniel Becker Loyola University Chicago

### Summer I

Soren Dunn

Hee Yeon Cho Loyola University Chicago

### Summer II

Megan Lay  
Kristine Hwang

### Illinois State University, A. Jean-Luc Ayitou

A. Jean-Luc Ayitou

### Summer I

Makaela Johnson

### Southern Illinois University of Carbondale, Mohtashim Shamsi

Mohtashim Shamsi

### Summer I

James Heath  
Sara Pense

## INDIANA

### Indianapolis Project SEED, ACS Indiana Local Section, Elmer Sanders

Feng Pan Eli Lilly & Company

### Summer I

Ali Miller  
Yonas Tewelde  
Chantal Murekio

Michael Pugia IBRI Indiana Biosciences Research Institute

Lucia Maragno

Steven Haney

lydvine Adjahouisso

Victor Wroblewski

Emeri McCann

Christoph Naumann Indiana University Purdue University Indianapolis

Linda Tial

Stephen Wasall

Tiffany-Chau Le

Chin Chien Lin IUPUI School of Engineering & Technology

Anthony Tam

Hiroki Yokota

Mercy Cuai

Jing Zhang

Kieven Tsegai

Mangilal Agarwal

Diavyan Eldridge

Robyn Fuchs IUPUI School of Health and Human Sciences

Juanita Tate

# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

Mentors		Students
		Mamadou Diallo
Ann Kimble-Hill	IUPUI School of Medicine	Semhar Araya
Charlie Dong		Robert Sorsor
Joseph Bidwell		Grace Atilola
		Omolade Olofintoyi
Karen Pollok		Adedamola Adehinmoye
Lynda Bonewald		Senait Nega
Moanaro Biswas		Wina Aaron
Raghu Mirmira Mirmira		Angell Gomez
		Juan Aguilar
Teresa Zimmers		Dania Tsegai
Bill Gilhooly	IUPUI School of Science	Farhanaz Qureshi
		Ridwan Ahmed
James Marrs		Amiyah Robinson
Jing Liu		Cokeb Gebrehiwet
John Goodpaster		Nabila Abdoukadi
Lixin Wang		Fortuna Gerezgher
		Julianna Cooper
		<b><u>Summer II</u></b>
Anthony Borel	Eli Lilly & Company	Terrianna Lyles
Stanley Kolis		Alondra Salazar
L. Jack Windsor	Indiana University Purdue University Indianapolis	Aron Gebre
Jing Zhang	IUPUI School of Engineering and Technology	Alexander Gordon
Lilian Plotkin	IUPUI School of Medicine	Jose Alfredo Ponce
Frederique Deiss	IUPUI School of Science	Mohamed Naji
Horia Petrache		Run Rem Sang Bau
Partha Basu		Feven Welde
Rajesh Sardar		Ismail Siddeeq
<b>Purdue University, Corey Thompson</b>		<b><u>Summer I</u></b>
Vivek Narsimhan		Audrey Britton
		<b><u>Summer II</u></b>
Suzanne Bart		Georgette Britton

# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

### Mentors

### Students

## IOWA

### Iowa State University, Javier Vela

Emily Smith

Jared Anderson

### Summer I

Natalie Gonzalez

Carlos Merlos

## KANSAS

### Wichita State University, Syed Taher

Syed Taher

Syed Taher

### Summer I

Nadia Sumaita

### Summer II

Fauzia Sumaita

## MAINE

### University of Maine, Mitchell Bruce

Alice Bruce

### Summer II

Marina Mohawass

## MARYLAND

### Morgan State University, Louise Hellwig

Maurice Iwunze

Pumtiwitt McCarthy

### Salisbury University, Anthony Rojas

Anthony Rojas

### University of Maryland Eastern Shore, Victoria Volkis

Deborah Sauder

Victoria Volkis

### Summer I

Johnny Uroza-Ramierz

### Summer II

Rudys Diaz

### Summer I

Christian Waldner

Madison Pruitt

### Summer I

Leonard Wang

Rajih Ahmed

## MASSACHUSETTS

### Northeastern University, Penny Beuning

Jason Guo

Penny Beuning

### Summer I

Gilvert Cruz

Kwali Jenkins

Lucia Seide

# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

### Mentors

Penny Beuning

#### **Stonehill College, Cheryl Schnitzer**

Louis Liotta

#### **University of Massachusetts at Amherst, Michael Knapp**

D.V. Venkataraman

### Students

#### **Summer II**

Victoria Chaparro

#### **Summer I**

Aliza Oliveira

Emily Morrison

#### **Summer I**

Jin Change

Natalie Nixon

## MICHIGAN

#### **Delta College, Bernadette Harkness**

Anja Mueller

Central Michigan University

#### **Summer I**

Michael Powers

#### **Kalamazoo ACS Local Section, P. Douglas Williams**

Dwight Williams

Kalamazoo College

#### **Summer I**

Rainnat Sanusi

Kelly Teske

Western Michigan University

Yanari Raines

#### **Michigan State University, Chrysoula Vasileiou**

Angela Wilson

James Jackson

Karen Draths

Robert Maleczka

#### **Summer I**

Noor Al Haidari

Ridwan Sheikh-Omar

Amina Salem

Ali Al Haidari

#### **Summer II**

Shams Ezz

Sahar Aljazi

Bandana Rawal

Mirran Salem

Babak Borhan

Milton Smith

Robert Ferrier

Xuefei Huang

#### **Wayne State University, Keith Williams**

Aaron Rury

Howard Mathew

Sarah Trimpin

#### **Summer I**

Allison Ritz

Tyler Johnson

Eramelo Oleita

## MINNESOTA

#### **3M Company, Sarah Mullins**

Phil Buhlmann

University of Minnesota

#### **Summer I**

John Vue

# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

### Mentors

William Pomerantz

### Students

Diamond Thlang

Edgar Arriaga

University of Minnesota

### Summer II

Meena Sae-Chao

Lee Penn

Brian Saldana Almaraz

Mark Distefano

Qeng Xiong

Marc Hillmyer

University of Minnesota – Twin Cities

Chitra Xiong

## MISSISSIPPI

### **The University of Southern Mississippi, Douglas Masterson**

Matthew Donahue

### Summer I

Jordhan Bocth

Song Guo

Enas Beauti

## MISSOURI

### **Kansas City Section ACS, Michelle Paquette**

Michelle Paquette

University of Missouri – Kansas City

### Summer I

Mikkel Taylor

William Gutheil

UMKC School of Pharmacy

Elizabeth Hopkins

Sarah Zanders

Stowers Institute for Medical Research

### Summer II

Riley Keyes

Leonard Dobens

University of Missouri – Kansas City

Mary Ghebreselassie

Paul Rulis

Aseya Siddiqua

### **Saint Louis University, Ryan McCulla**

Piotr Mak

### Summer I

Ezarion Grant

Ryan McCulla

Elijah Robinson

## MONTANA

### **Helena College University of Montana, John Hartman**

John Hartman

### Summer II

Abigayle Bibeau

## Nebraska

### **Creighton University, Sade Kosoko-Lasaki**

Eric Haas

### Summer I

Erlinda Ramirez



# 2019 Project SEED Summer I & II Programs

Institutions, Coordinators

Mentors

Yaping Tu

Students

**Summer II**

Jude Kouassi

## NEW JERSEY

**Fairleigh Dickinson University, Marion McClary and**

**Susan Fahrenholtz**

Israelite Dauphin

Marion McClary

**Summer I**

Alba Reyes

Abraham Reyes

Shadel Ayerbe

Miguel Barrera

Sixto Mahecha

Brenda Bernal

Jessenia Salto

**Summer II**

Catherine Daugherty

Mina Youssef

**High Tech High School, Nina Lavlinskaia and Susan Fahrenholtz**

Marcin Iwanicki

Stevens Institute of Technology

**Summer I**

Fernanda Velasco

**Kean University, Michael Tocci**

Dil Ramanathan

New Jersey Center for Science, Technology, &  
Mathematics

**Summer I**

Isis Gonzalez

Sabran Evangelista

James Merritt

James Ramos

Tyra Redwood

Marshall Hayes

Emely Pozo

Thomas Vurvella Vicente

Salvatore Coniglio

De'zire Farrell

Haliyat Oshodi

**Summer II**

Marshall Hayes

New Jersey Center for Science, Technology, &  
Mathematics

Erika Calle

Salvatore Coniglio

Shanel Calle

**New Jersey City University, Robert Aslanian and Susan Fahrenholtz**

Bumjung Kim

Reed Carroll

Robert Aslanian

**Summer I**

Irving Castillo

Isaac DelVillar

Elizabeth Sandoval

Rosicela Luna

# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

### Mentors

### Students

#### **North Jersey Section, Bobbi Gorman and Susan Fahrenholtz**

Alexei Khalizov New Jersey Institute of Technology

---

David Fisher

---

Don Schaffner

---

Rutgers University

---

Frieder Jaekle

---

Michal Szostak

---

Joseph Badillo

---

Seton Hall University

---

Brian Ayee

---

Rutgers University

---

David Ribnicky

---

Edward Bonder

---

Huixin He

---

#### **Summer I**

Bernice Owusu

---

Esther Oko

---

Alicia Lopez Corpeno

---

Katherine Ferrer

---

Maria Gutierrez

---

Neyssa Deriphonse

---

Kayla Plummer

---

#### **Summer II**

Shayla McQueen

---

Ernesto De Jesus Martinez

---

Kelly Quijije

---

Frank Peparah

---

#### **Ramapo College of New Jersey, Sandra Suarez and Carol Frishberg**

Catalin Martin

---

#### **Summer I**

Kennedy Rodriguez

---

Shubon Husan

---

Catalin Martin

---

#### **Summer II**

Maliha Yeasmin

---

#### **Rowan University, Gregory Caputo**

Gustavo Moura-Letts

---

#### **Summer I**

Yilmarie Torres

---

Lei Yu

---

#### **Summer II**

Sarymar Perez Carrero

---

#### **Rutgers University, Ola Elshorafa and Susan Fahrenholtz**

Enver Igzu

---

#### **Summer I**

Aisha Mansoor

---

Muhammad Sharaf

---

#### **Academy for Enrichment & Advancement, Amanda Smith and Susan Fahrenholtz**

Kevin Olsen

---

Montclair State University

---

Yang Deng

---

#### **Summer I**

Jacobo Arteaga

---

Javier Lopez

---

Jinshan Gao

---

Montclair State University

---

Yang Deng

---

#### **Summer II**

Alexa Hernandez

---

Yeimi Mendoza

---

# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

### Mentors

### Students

#### **Union City High School**

#### **Academy for Enrichment and Advancement, Judith Barrios**

Amanda Smith

---

Jennifer Donnelly

Johanna Moreno

---

Judith Barrios

Nadia Makar

---

Peter Drozd

---

Amanda Smith

---

Jennifer Donnelly

---

Judith Barrios

---

Nadia Makar

---

Peter Drozd

#### **Summer I**

Sebastian Delgado

Yajat Doshi

---

Ramzi Saber

Fabiana Rodriguez

Kaylee Lopez

---

Aisha Martinez

Andres Zuniga

Milly Orozco

---

Dalia Poblano

#### **Summer II**

Alina Guerrero

Victoria Gonzales

---

Jenifer Perez

Monica Salgado

---

Frederick Martinez

Taisha Martinez-Gomez

---

Precious Perez

Samantha Ordonez

---

William Estrada

#### **Union City High School Academy for Enrichment and Advancement, Mina Armani and Susan Fahrenholtz**

Alexi Khalizov

New Jersey institute of Technology

---

Dibakar Datta

Trevor Tyson

---

Mina Armani

Union City High School

---

Dibakar Datta

New Jersey Institute of Technology

---

Trevor Tyson

#### **Summer I**

Lesly Mejia

---

Justin Vasquez

Elam Mesa

---

Emily Delgado

Katherine Bernal Parra

#### **Summer II**

Manuel Guzman

---

David Felix

#### **Union City High School Academy for Enrichment and Advancement, Nadia Makar and Susan Fahrenholtz**

Marc Cohen

Beth Israel Medical Center

---

Gerard Parkin

Columbia University

---

Paul Bologna

Montclair State University

---

Anthony Esposito

New Jersey City University

#### **Summer I**

Natalie Rivera

---

Johan Ayala

---

Andy Martinez

---

Emmely Texuccano

# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

### Mentors

### Students

Jyhcheng Liu		Natan Ceballos
Karina Schafer	Rutgers University	Kyleen Argueta
Debing Zeng	Saint Peters University	Josue Martinez
George Collins	New Jersey Institute of Technology	<b><u>Summer II</u></b> Victoria Rodriguez
Steven Levison	New Jersey Rutgers Medical School	Gonzalo Alarcon
Dr. Blanford	Queens College	Henry Liu
Debing Zeng	Saint Peters University	Angie Tamayo

## Nevada

### University of Nevada, Reno, Ian Wallace

Dylan Kosma  
Ian Wallace  
Laina Geary  
Matthew Tucker  
Sage Hiibel

### **Summer I**

Alisa Starr  
Amika Starr  
Anya Mikesell  
Erick Cheng  
Edward Cheng

## NEW YORK

### Eastern New York Section of ACS, Peter Bonitatibus

George Barnes                      Siena college

### **Summer I**

Amy Chen

Madushi Raththagala	Skidmore College	Trinity Rich
---------------------	------------------	--------------

Zhang Wang Jia Sheng	University at Albany, SUNY	Rayan Singh Bethany Matala
-------------------------	----------------------------	-------------------------------

K. Lakshmi	Rensselaer Polytechnic Institute	<b><u>Summer II</u></b> Mason Lampron
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### Ellis Preparatory Academy, Jeremy Heyman and Susan Fahrenholtz

Chris Boyce                      Columbia University, School of Engineering and Applied Sciences

### **Summer I**

El-Hossin Salem

Lauren Marbella Karen Kasza		Issaka Dabre Aboubakar Dabre Makaela Johnson
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# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

### Mentors

### Students

Debra Laefer	New York University, Tandon School of Engineering	Emely Lopez
<b>Research Foundation CUNY, Advanced Science Research Center, Adam Braunschweig</b>		<b><u>Summer I</u></b>
Adam Braunschweig	City University of New York, Advanced Science Research Center	Ian Jimenez
Rein Ulijn		Gabriel Mekonen
Shana Elbaum-Garfinkle		Jaylie Alexander
Xi Chen		William John
<b>Rochester Institute of Technology, Lea Vacca Michel</b>		<b><u>Summer I</u></b>
Callie Babbitt	Rochester Institute of Technology	Channing Harrell
Christy Tyler		Nayelie Olivo
Lea Michel		Karett Cooper
Matt Miri		Idafsa Mohamed
Michael Gleghorn		Mariana Webster-Hubbard
Kara Bren	University of Rochester	Halima Salat
Todd Krauss		Tony Ezzat
		<b><u>Summer II</u></b>
Gerald Takacs	Rochester Institute of Technology	Tyshawn Roundtree
Hans Schmitthenner		Faduma Abdi
<b>Syracuse University, Miriam Gillett-Kunnath</b>		<b><u>Summer I</u></b>
Huiting Mao	State University of New York	Hana Althour
Theodore Dibble		Kwanmuang Thanthima
Ivan Korendovych	Syracuse University	Ngoc Huynh
Olga Makhlynets		Queyen Pham
Weiwei Zheng		Michael Vu
Miriam Gillett-Kunnath		Mohammed Zokari
		<b><u>Summer II</u></b>
Miriam Gillett-Kunnath	Syracuse University	Ahlam Zokari
		Zau N-Hkum

## NORTH CAROLINA

### High Point University, Comfort Boateng

Comfort Boateng

### **Summer I**

Ryann McMaster

### **Summer II**

Ruta Tekle

Comfort Boateng

# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

### Mentors

### Students

#### **North Carolina ACS Local Section, J. Stewart Witzeman**

Nathan Wymer North Carolina Central University  
Omar Christian

#### **Summer I**

Sri Soumitri Kanduri  
Delena Teklay

Alan Tonelli North Carolina State University

Aram Amassian

Caroline Proulx

Ericka Ford

Vincent Lindsay

Jehlan White

Quincy Cornish

Sophia Cornish

Devonya Davis

Jamin Flores

Jeffrey Dick University of North Carolina at Chapel Hill

Jillian Dempsey

Taha Saleh

Royal Smith

Jie Liu

Duke University

#### **Summer II**

Leah Zachary

Melissa Pasquenelli

North Carolina State University

Masita Wicaksana

#### **University of North Carolina – Charlotte, Michael Walter**

Christopher Bejger

Kirill Afonin

#### **Summer II**

Afrah Faraz

Samantha Eisen

## OHIO

#### **Case Western Reserve University, Carlos Crespo-Hernandez**

Carlos Crespo-Hernandez

#### **Summer I**

Justin Creary

Carlos Crespo-Hernandez

Chris Dealwis

Daniel Scherson

Genevieve Sauve

#### **Summer II**

Rayele Malone

Christina Smith

Mays Moukdad

Manal Faleh

#### **Case Western Reserve University, Laura Bruckman**

Jennifer Carter

Laura Bruckman

Roger French

#### **Summer I**

Gabriel Rosa

D'Ara Beckwith

Raelinn Reid

Russell Krofta III

#### **Hiram College, Carol Shreiner**

Hanbin Mao

Kent State University

#### **Summer I**

Bekarys Dukenbaev



# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

Mentors		Students
Ali Dhinojwala	University of Akron	Kaleb Wells
Chrys Wesdemiotis		Rylan Gisentaner
David Modarelli		Sean'Nea Sullivan-Jefferys
		<b><u>Summer II</u></b>
Yaorong Zheng	Kent State University	Cole Strekal
Kevin Cavicchi	University of Akron	Emmanuel Myers
Li Jia		Daphnie Kennedy
<b>University of Cincinnati, Anna Gudmundsdottir</b>		<b><u>Summer I</u></b>
Anna Gudmundsdottir		Nwame Kitil
Edward Merino		Ocheved Ocho
		<b><u>Summer II</u></b>
James Mack		Jeri Avery
Ryan White		Sufyaan Ali
<b>University of Toledo, Ajith Karunarathnef</b>		<b><u>Summer I</u></b>
Cora Lind-Kovacs		Seham Abutaha
Emanuela Gionfriddo		Isaac Kim
Jianglong Zhu		Aiden Archambault
Michael Young		Stuart Wells
		<b><u>Summer II</u></b>
Wei Li		Joseph Do
<b>Youngstown State University, Sherri Lovelace-Cameron</b>		<b><u>Summer I</u></b>
Tom Oder		Michael Yang

## Oregon

### Portland Local Section, Angela Hoffman

Marilyn Mackiewicz                      Portland State University  
Theresa McCormick

### **Summer I**

Citlali Nieves Lira  
Oreana Mendez Galue

## PENNSYLVANIA

### Covestro LLC, Marie Urick

Todd Smith

### **Summer I**

Aryanna Arrington

### Philadelphia Water Department, Adam Eyring

Earl Goodwin

### **Summer II**

Krystal Roche

# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

### Mentors

#### **Saint Joseph's University, Molly Southwell**

Catalino Arango

#### **Solvay, Tiffany Chen**

Linda Adamson

### Students

#### **Summer I**

Avery Clark

#### **Summer I**

Rachel Bojorquez

## PUERTO RICO

#### **University of Puerto Rico, Ingrid Montes**

Lisandro Cunci

Universidad Ana G. Mendez, Gurabo Campus

#### **Summer I**

Denishel Rosa Curet

Arthur Tinoco

University of Puerto Rico, Rio Piedras Campus

Natanael Rodriguez Rodriguez

Jorge Colon

Julian Morales

Jose Rodriguez

Emily Duclos Polanco

Marvin Bayro

Miguel De Jesus Roman

#### **Summer II**

Arthur Tinoco

University of Puerto Rico, Rio Piedras Campus

Juan Rodriguez

Carlos Cabrera

Sylvette Pagan

Dalice Pidero-Cruz

Rafael Luna

Marvin Bayro

Camille Collazo

## RHODE ISLAND

#### **Brown University, Jerome Robinson**

Brenda Rubenstein

Brown University

#### **Summer I**

Vishwas Duggirala

Vaibhav Duggirala

Gerald John

Bryant University

Sophia Piperata

Brenton DeBoef

University of Rhode Island

Chantel Van Heyningen

Jiyeon Kim

Adaliza Espinoza

Mindy Levine

Daniel Cambranes

#### **Summer II**

Christopher Reid

Bryant University

Robin Fidel

Jamie Towle-Weicksel

Rhode Island College

Sandy Lastor

# 2019 Project SEED Summer I & II Programs

Institutions, Coordinators

Mentors

Students

## SOUTH CAROLINA

**University of South Carolina, Chuanbing Tang**

Morgan Stefik

**Summer I**

Kayleigh Van Alstine

## TENNESSEE

**LeMoyne-Owen College, Yahia Hamada**

Yahia Hamada

**Summer I**

Yasmeen Hamada

Joel Hayes

## TEXAS

**Baylor College of Medicine, Erik Malmberg**

Kjersti Aagaard-Tillery

Lindsay Burrage

Salma Kaochar

**Summer I**

Martin Torres

Sarah Feleke

Faith Pena

Kenia Guevara Avalos

**Greater Houston Local Section, Carolyn Burnley**

Gina Chiarella

Prairie View University

Yingchun Li

Yunxiang Gao

Harshica Fernando

**Summer I**

Kaytlen Moore

Samuriel Jackson

Tiara Ware-Miller

Kaliyah Jackson

David Thompson

Sam Houston State University

Marvin Menendez

Melissa Zastrow

University of Houston

Jose Alvarado

Hua-Jun Fan

Prairie View University

**Summer II**

Kaleb Small

Jakoah Brgoch

Zainab Abolade Lawson

Mehmet Orman

University of Houston

Victoria Quach

Melissa Zastrow

Timothy Osazuwa

Praveen Bollini

Maria Bolanos

**Lamar University, Sylvestre Twagirayezu**

Sylvestre Twagirayezu

**Summer I**

Syed Amir

**San Antonio Local Section, E. Robert Fanick**

Sushma Ramsinghani

Feik School of Pharmacy at UIW

**Summer I**

Jelisha Perera

Adeola Coker

Yarmina Cortinas

Heather Bonduris

Southwest Research Institute

Jagger Torres

Krista Favela

Giovon Colon

# 2019 Project SEED Summer I & II Programs

## Institutions, Coordinators

Mentors		Students
Pias Adelani	St. Mary's University	Arturo Bernal
Kathryn Mayer	University of Texas San Antonio	Luisa Rodriguez
Gary Jacobs	University of Texas San Antonio	<b><u>Summer II</u></b> Jonathan Castro
Kelly Nash		Cheyenne Fields
Zachary Tonzetich		Savannah Rios
Paulo Carvalho	University of the Incarnate Word	Michael Trimble

## VERMONT

### University of Vermont, Rory Waterman

Giuseppe Petrucci

Matthias Brewer

### **Summer II**

Hessain Tamang

Zachary Taylor

## VIRGINIA

### Longwood University, Sarah Porter

Sarah Porter

### **Summer I**

Antonio Harvey

Katelynn McCrillis

### Virginia Commonwealth University, Michael Hunnicutt

Christopher Kelly

Joshua Sieber

Mohammed El-Shall

### **Summer I**

Elli Leon-Vitervo

Bre'Shon Dunson

Bryant Marsh

Hani El-Kaderi

Katharine Tibbetts

### **Summer II**

Milan Marsh

Amazin Bullock

## WEST VIRGINIA

### West Virginia State University, Michael Fultz

Eric King

MATRIC

### **Summer I**

Chayton Hawks

Michael Fultz

West Virginia State University

Brianna Hill

Megan Spelock

## 2019-2020 Scholarship Recipients

The Project SEED College Scholarship is a first-year nonrenewable scholarship for Project SEED participants entering their freshman year majoring in a chemical science field. In 2019, 27 students who have demonstrated a high potential to succeed in chemistry were awarded the college scholarships for the 2019-2020 academic year. Additionally, three SEED College Scholarship recipients were awarded a three-year renewable college scholarship for the 2019-2021 academic years. Congratulations to the recipients of the College Scholarships; ACS wishes all students continued success in their future studies.

### CIBA SPECIALTY CHEMICALS SCHOLARS

**CIBA Specialty Chemicals** was a leading global chemical company acquired by BASF in 2008. The Ciba Foundation made a generous legacy gift to the American Chemical Society to establish the Ciba Specialty Chemicals Scholars Endowment, a new component added to the Project SEED college scholarship program, which expanded the one-year Project SEED college scholarships to a three-year renewable scholarship. As of today, 13 of the 21 awardees have graduated in the chemical sciences.



**Richard Nwakamma** is attending Emory University, majoring in Chemistry. Richard is part of the honor society Phi Eta Sigma at his university. His goals are to pursue a Ph.D. in medicinal chemistry. He wants to do his research in new drug development.



**John Rezk** is attending Princeton University, majoring in Chemistry. John undertook a summer research project exploring electrochemical carbon dioxide reduction. His goals are to pursue a Ph.D. in Chemistry or Chemical and Biological Engineering.

### LOCONTI SCHOLAR

The **Joseph D. Loconti Endowment** is a new addition to the scholarship offerings for Project SEED. Joseph Loconti was a 78-year member of ACS and contributed annually from 2009 to 2013. He was a professor at Cornell University (1946) and founded the Paper Thermometer Company in 1953. Upon his passing in early 2019, he bequeathed \$500,000 towards both Project SEED summer research fellowships and college scholarships. Of the gift, \$450,000 was used to create the Joseph D. Loconti Endowment. Starting in 2020, this renewable scholarship will be issued each year to an incoming freshman, and will continue through their senior year.



**Mirka Ortiz** is attending New Jersey City University, majoring in Chemistry. Mirka is currently a student researcher in the organic chemistry department. Mirka's goal is to pursue a Ph.D. in Chemistry and one day work for a pharmaceutical company.

# 2019-2020 Scholarship Recipients

## ALFRED AND ISABEL BADER SCHOLARS

**Alfred Bader** is one of the founders of the Sigma-Aldrich Company. Alfred and Isabel Bader have generously contributed to Project SEED over the years. In 1992 their support started the Summer II program and since 1997, supported the Project SEED college scholarships.

**Aysha Zaher** graduated from Elizabeth High School and participated in Project SEED in 2018. Under the guidance of Salvatore Coniglio at Kean University, Aysha worked on a research project titled "Group Summer Scholars Research Program-CCR1." Aysha will attend Rutgers University - New Brunswick and major in Chemistry in hopes to become a Neurosurgeon in the future.



**Chelsea Sims** is a graduate of Dollarway High School and participated in Project SEED in 2018. Chelsea worked on a project titled "Effects of Free Radicals on the Stability of Photoelectrodes during Photoelectrochemical Water" under the guidance of Grant Wangila at University of Arkansas, where she will also attend college and major in Chemistry.



**Bawi Sung** is a graduate of Southport High School and participated in Project SEED in 2018. Under the guidance of Bill Gilhooly at Purdue University Indianapolis School of Science, Bawi worked on a research project titled "Using Geochemistry to Study the Microbial Ecology of Lakes." Bawi is majoring in Biochemistry at Indiana University Bloomington.

**Calvin Nguyen** is a graduate of Capital High School and participated in Project SEED in 2018. Under the guidance of Kevin Ausman at Boise State University, Calvin worked on a research project titled "Stability of Aqueous Buckminsterfullerene Colloids." Calvin is pursuing a degree in Chemical Engineering at Arizona State University.



**Chui Yi Ho** graduated from Lowell High School and participated in Project SEED in 2018. She worked on a research project titled "Engineering Enzymes for Biomass Degradation toward Biofuels" under the guidance of Sarah Throne at United States Department of Agriculture Western Research Center. Chui Yi is majoring in Biochemistry at University of California, Davis.



## 2019-2020 Scholarship Recipients



**Claire Gray** is a graduate of Northview High School and participated in Project SEED in 2018. Under the guidance of Ajith Karunaratne at University of Toledo, Claire worked on a research project titled "Measurement of Retinal and Sunlight Induced Photodamage to Cells." Claire is majoring in Chemistry at Brown University where she hopes to conduct academic research.

**Cole Strekal** graduated from Parma Senior High and participated in Project SEED in 2018. Under the guidance of Yaorong Zheng at Kent State University, Cole worked on a research project titled "Mitochondria-Targeted Platinum-Based Anticancer Agents Designed to Eliminate Cancer Stem Cells and Overcome Drug Resistance in Ovarian Cancer." Cole is majoring in Chemistry at Ohio State University and wants to work in drug research.

**Cylah Bailey** is a graduate of James M. Bennett High. Previously, she participated in Project SEED in 2017 at the University of Maryland Eastern Shore. In 2018, under the guidance of James Fedchak at National Institute of Standards and Technology, Thermodynamic Metrology Group, Cylah worked on a research project titled "Absorption and Outgassing Properties of Materials." Cylah is majoring in Chemistry at Stevenson University.



**Darla Martinez** graduated from Saginaw Arts and Sciences Academy and participated in Project SEED in 2016. Darla worked on a research project titled "Computing with Molecules" under the guidance of Jennifer Chaytor at Saginaw Valley State University. Darla is pursuing a degree in Materials Science and Engineering at Michigan State University. She plans to pursue a career in research.



**Diana Angeles Ramos** is a graduate of Tigard High School and participated in Project SEED in 2017. Diana worked on a research project titled "Bioactivity-Guided Purification of Active Compounds from Common Plants" under the guidance of Angela Hoffman at University of Portland. Diana is majoring in Biochemistry at Portland State University and plans to pursue a MD/PhD in Biochemistry.



**Emily Xu** is a graduate of Gwinnett School of Mathematics, Science, and Technology and participated in Project SEED in 2017. Under the guidance of Neville Forlemu at Georgia Gwinnett College, Emily worked on a research project titled "Homology Modeling of Antimalarial Protein Targets." Emily is majoring in Biochemistry at University of Michigan - Ann Arbor.

## 2019-2020 Scholarship Recipients



**Feven Welde** graduated from Brownsburg High School and participated in Project SEED in 2018. Under the guidance of Partha Basu at Indiana University Purdue University Indianapolis School of Science, Feven worked on a research project titled "Expression and Purification of Periplasmic Nitrate Reductase." Feven is majoring in Biochemistry at Johns Hopkins University and hopes to move on to medical school or pursue a MD/PhD.

**Giancarlo Irizzary** is a graduate of Colegio Marista de Guaynabo and participated in Project SEED in 2018. Under the guidance of Lilian Plotkin at Indiana University Purdue University Indianapolis School of Medicine, Giancarlo worked on a research project titled "Study of Bone Cells in the Absence of FMR1, a Molecule Associated with Autistic Spectrum Syndrome" which he presented at the ACS National Meeting in Fall 2018. Giancarlo is majoring in Chemistry at Providence College.

**Ihuoma Ihejirika** participated in Project SEED in 2018. Under the guidance of Xi Chen at University of California, Davis, she worked on the research project "Chemoenzymatic Synthesis of Carbohydrates." She is attending UC Davis and majoring in Biochemistry.



**Juan Rodriguez** is a graduate of Escuela Secundaria Especializada en Ciencias, Matemáticas y Tecnología and participated in Project SEED in 2018. Under the guidance of Arthur Tinoco at University of Puerto Rico, Rio Piedras, Juan worked on a research project titled "Stability of Peptide-Conjugated Anticancer Ti(IV) Complexes (PCA-TiC) in a Human Serum Protease." In addition, he participated in the Intel International Science and Engineering Fair and the China Adolescent Science and Technology Innovation Contest, winning 2nd place in chemistry. Juan is majoring in Chemistry at Stanford University.



**Leilani Garcia** is a graduate of Union City High School and participated in Project SEED in 2018. Leilani worked on a research project titled "Exploring Alkali Promotion for Carbon Dioxide Activation and Catalyst Coke Suppression" under the guidance of Elaine Gomez at Columbia University. Leilani is majoring in Chemical Engineering at New Jersey Institute of Technology and is interested in pursuing a PhD.

**Maelah Robinson-Castillo** is a graduate of Centennial High School and participated in Project SEED in 2018. Under the guidance of Sandra Bonetti at Colorado State University - Pueblo, Maelah worked on a research project titled "Effects of Zn and Cu on Fungal Hydrolase Activities" and learned 23 new chemistry techniques. Maelah is pursuing a degree in Chemistry and Molecular Biology at University of Denver.

## 2019-2020 Scholarship Recipients



**Maliha Yeasmin** is a graduate of John F. Kennedy High School and participated in Project SEED in 2018. Under the guidance of Catalin Martin at Ramapo College of New Jersey, Maliah worked on a research project titled "Deposition of Monolayers of Metallic Nanoparticles Using the Langmuir-Blodgett Technique." Maliah is majoring in Environmental Engineering at Rutgers University - New Brunswick where she wants to pursue molecular-level research.

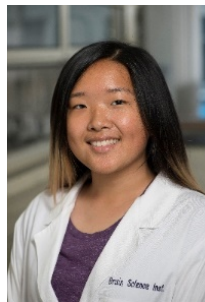
**Mohamed Naji** graduated from Bloomington North High School and participated in Project SEED in 2018. Mohamed worked on a research project titled "Electrochemical Paper-based Devices for Ion Quantification" under the guidance of Frederique Deiss at Indiana University Purdue University Indianapolis School of Science. Mohamed is majoring in Chemical Engineering at Indiana University Purdue University Indianapolis.

**Nikki Dodd** is a graduate of North Central High School and participated in Project SEED in 2018. Under the guidance of Hiroki Yokota at Indiana University Purdue University Indianapolis School of Engineering and Technology, Nikki worked on a research project titled "Analysis of Bone-Tumor Interactions Using Mouse Mammary Tumor Cells." Nikki is majoring in Biochemistry at Indiana University Purdue University Indianapolis and hopes to pursue a MD/PhD program.

# 2019-2020 College Scholarship Recipients

## ASHLAND SCHOLARS

**Ashland Inc.** is a leading global company which provides specialty chemicals, technologies and expertise to customers worldwide. Since 2011, Ashland Inc. has sponsored Project SEED alumni.



**Shun Shueh** is a graduate of Centennial High School and participated in Project SEED in 2017. Under the guidance of Takashi Tsukamoto at Johns Hopkins University, Shun worked on a research project titled "Drug Discovery Driven by Chemistry." Shun is majoring in Chemical Engineering at University of Maryland. She plans to research environmental sustainability



**Sokobe Chuong** graduated from Bear Creek High School and participated in Project SEED in 2018. Under the guidance of Jerry Tsai at University of the Pacific, Sokobe worked on a research project titled "Effects of Protein Sequence on Protein Structure through Modern Molecular Biology Techniques." Sokobe is majoring in Chemical Engineering at California State University, Long Beach.

## BAYER SCHOLARS

**The Bayer Foundation** contributed to the Project SEED Endowment. Bayer is a research based company with major businesses in health care and life sciences as well as chemicals and imaging technologies. Since 1993, Bayer has supported Project SEED alumni.

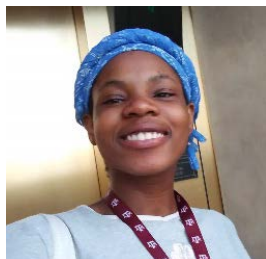


**Prachee Roy Mazumder** graduated from Cambridge Rindge and Latin School. Under the guidance of Joshua Sacher at Broad Institute, Prachee Roy worked on a research project titled "Selective Sodium Channel Modulators for Neuropsychiatric disease." Due to her experience with medicinal chemistry, Prachee Roy has decided to major in Biochemistry at Colby College.

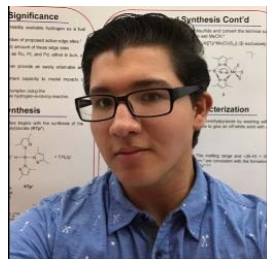
# 2019-2020 College Scholarship Recipients

## FOSBINDER SCHOLARS

**The Estate of Elizabeth Ernest Fosbinder**, wife of late ACS member, Dr. Russel J. Fosbinder stipulated the establishment of an endowment in honor of Dr. Fosbinder to fund college scholarships for graduates of Project SEED. Since 2004, the endowment has supported Project SEED alumni.



**Zainab Abolade Lawson** graduated from George Bush High School and participated in Project SEED in 2018. Under the guidance of Andrew Barron at Rice University, Zainab Abolade worked on a research project titled "Interactions of Nanomaterials with Plants." Zainab Abolade is majoring in Biochemistry at Texas A&M University.



**Zek Kelly** graduated from East High School and participated in Project SEED in 2018. Under the guidance of Matthew Cranswick at Colorado State University-Pueblo, Zek worked on a research project titled "Modeling the Activity of Mo/W-Containing Nitrate Reductase of *Pyrobaculum Aerophilium*." Zek is majoring in Chemistry at Colorado School of Mines.

## ULLYOT SCHOLARS

**Glenn and Barbara Ullyot.** Glenn Ullyot worked for Smith, Kline & French Laboratories. He was a major contributor to the discovery and manufacture of new drugs to the medical world. Barbara Ullyot had a management career at ACS and was a valuable member. Glenn and Barbara provided college scholarships to Project SEED students over their lifetime.

**Camryn Franke** is a graduate from Washington Tech High School and participated in Project SEED in 2017. At University of Minnesota under the guidance of Romas Kazlauskas, she worked on a research project titled "Characterization of Ancestral Enzymes." Camryn is attending Stanford University to study Biochemistry.



**Oluwapelumi Oguntade** is a graduate of Rufus King High School. Under the guidance of Blake Hill at Medical College of Wisconsin, Oluwapelumi worked on a research project titled "Protein Residue Identification and Research." Oluwapelumi is pursuing a degree in Chemistry at Marquette University and hopes to become a translational scientist in the future.



## 2019-2020 College Student Testimonials



**Emily Xu**

University of Michigan, Ann Arbor

“Before participating in Project SEED, I didn’t know what I wanted to do with my life. I had no idea what I wanted to pursue in the future, but I always knew it would be related to science. In a typical fashion, my parents wanted me to become a doctor. Instead, I found a passion for medical research through this experience.”



**Darla Martinez**

Michigan State

“Project SEED has really enhanced my love and passion for research and it has given me exposure to lab procedures and insight into new scientific principles I would have learned later on. I completed SEED summer I and II and through both summers I feel I really got a good taste of how real research works.”



**Juan Rodriguez**

Stanford University

“At first, I was not sure what to expect from SEED, since working in a lab alongside highly recognized professionals was uncharted territory for me, even with my prior experience. Nevertheless, little did I know that those thrilling and arduous eight weeks in that small lab in the University of Puerto Rico would change my perspective of chemistry forever.”



**Oluwapelumi Oguntade**

Marquette University

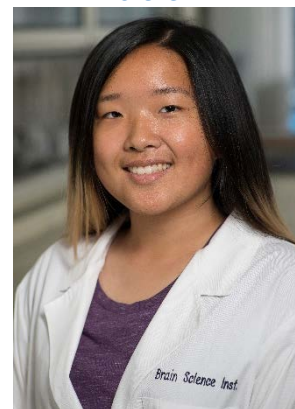
“Project SEED has allowed me to be more observant and ask clearer questions that further my understanding. I know I live in a world where there’s so much to learn and the urge is to try and learn everything. However, I want to start reflecting more frequently on the things I’ve learned in and out of the classroom and trace how they connect.”



**Sokobe Chuong**

California State University, Long Beach

“After being a part of Project SEED and doing research, I have noticed that my curiosity about the world has risen. There is a saying that research is just formalized curiosity. My SEED mentor has taught me to expand my thought bubble, be open to many options. My strong interest in chemistry has lured me towards furthering my education in chemistry.”

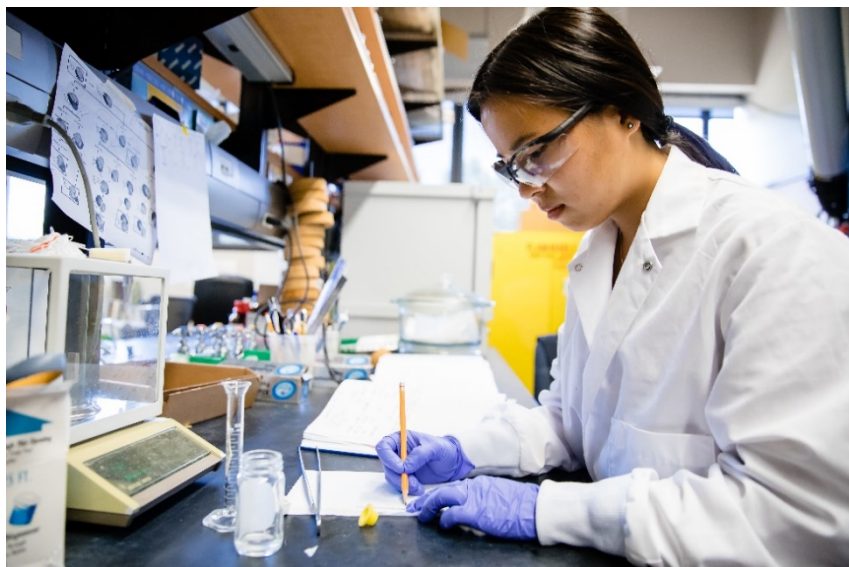


**Shun Shueh**

University of Maryland

“When I was given the opportunity to participate in Project SEED, I didn’t fully realize how much it would change my life; however, after two summers interning in the medicinal chemistry laboratory of Johns Hopkins Drug Discovery, its impact on my life is undeniable.”

## Students Speaking from the Lab



Snake River Local Section, Don Warner. Photo Courtesy of Jerome Pollos Photography

### Erika Calle, NJ

"I am very grateful for Project SEED since this scholarship allowed me to pursue my passion for science. I was able to do hands-on research in a university lab, which is something I never thought I could be able to do. This experience showed me that I want to become a biochemist working on research in labs. This was an amazing experience that I will never forget! Thank you so much!!"

### Trinity Rich, NY

"The overall experience was amazing, being exposed to college level research and being part of a team was extremely valuable."

### Diavyon Eldridge, IN

"I had a great experience this summer and met a lot of incredible people. Project SEED allowed me to explore research outside of the classroom and I was able to conduct an independent experiment with the help of my mentor and lab members. I made a lot of new friends and we all had a common interest, science. I would love to be involved in this program next summer and I always encourage other people who are interested in the science field to look into Project SEED."

### Henry Liu, NY

"My Project SEED experience this summer was very rewarding as I got to learn new lab techniques and meet amazing new people like the professors at the university I worked at. Also I learned what it truly entails to be a scientist. A scientist is a person resilient individual that uses his knowledge to improve various drawbacks of this world."

### Seham Abutaha, OH

"Project SEED is a great program for high school students to be introduced to work in a chemistry/biochemistry research lab. The most valuable lesson that I learned from my summer research experience is the amount of time and effort that needs to be put forth in order to be a successful researcher. Through dedication and commitment, research can definitely be one of the most enjoyable experiences. I definitely recommend this program to other high school students!"

### Daniel Cambranes, RI

"Project SEED was a great experience for me. It was very educational and informative. I developed new skills and I learned new things in the organic chemistry field."

### PeiQiao Xie, CA

"Project SEED has revolutionized my understanding of academic research. Through building a close-knitted relationship with my mentor and peer researchers, I now feel encouraged and empowered to explore science and face the unknowns."

### Meena SaeChao, MN

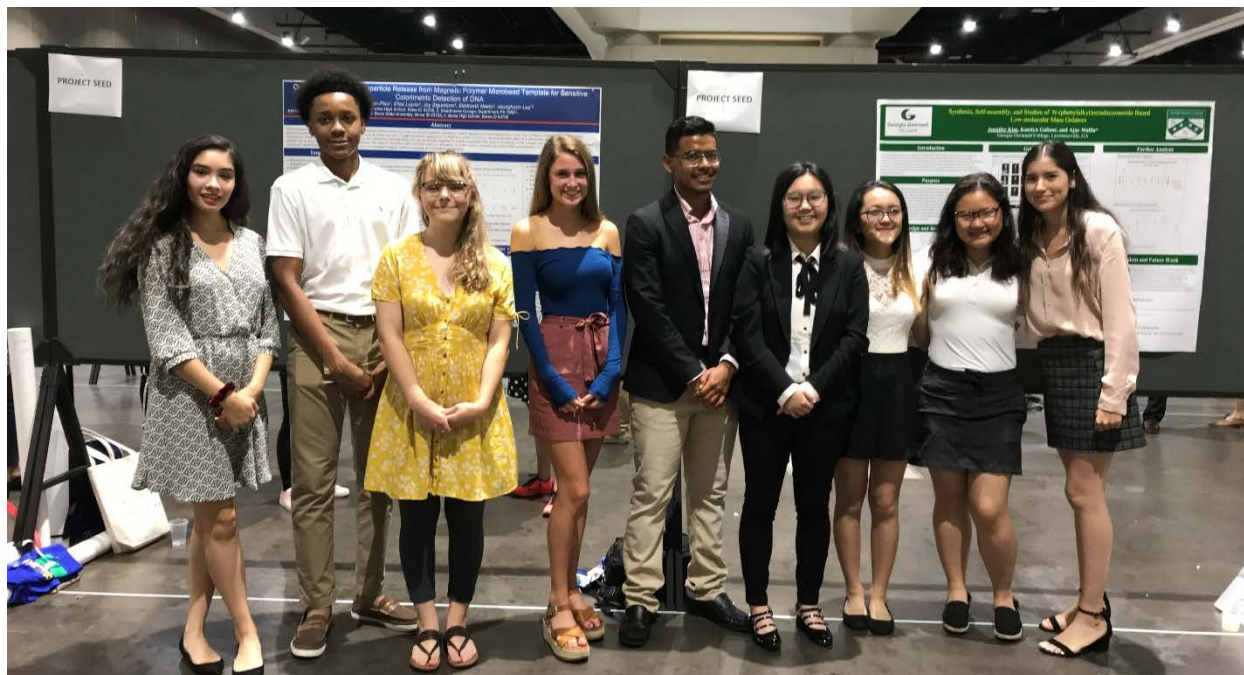
"A lab that fits you & your interest results in the best work effort. Project SEED is an excellent opportunity for low income kids, like me, who doesn't have as much connections and resources. Project SEED can prepare you in the future by helping you find out what you would want you work in and what you won't want to work in in the field of chemistry."

### Shubon Husan, NJ

"It was a great experience. I was able to learn so many things. I got to learn new lab safety rules, what I can do if something goes wrong during the experiment. I also got to learn about some of the new instrument like Atomic Force Microscopy, Spectroscopy and other. But after all the most important thing that I got to learn was no matter what happens do not give up on something that you got wrong because one way or another you will get it right today or tomorrow you will get it right."

## Project SEED Students at Sci-Mix

Project SEED students from California, Georgia, and Idaho local sections presented posters of their research at the Sci-Mix poster session at the 258<sup>th</sup> ACS Fall National Meeting in San Diego, CA.



*Photo taken by ACS Staff, Kelechi Uzo-Okoro*

### **California Local Sections**

Minh Pham

Esthela Barriga

### **Georgia Local Sections**

Andrea Mancina

Jennifer Kim

Joel Suazo

Myqui Nguyen

### **Idaho Local Section**

Maura Dresner-Pfau

Sydney Walker

### **Coordinators: Erica Forsberg and Jacqueline Trischman**

Chromatography Optimization for Metabolomics

Identification of Biofilm Inducing Molecules from Marine Bacteria

### **Coordinators: Ajay Mallia and Kimberly Jackson**

Polymer-Protein Biomaterial Scaffolds for Wound Healing

Design and Study of Molecular Gels

Design and Studies of Deep Eutectic Solvents

Homology Modeling of Antimalarial Protein Targets

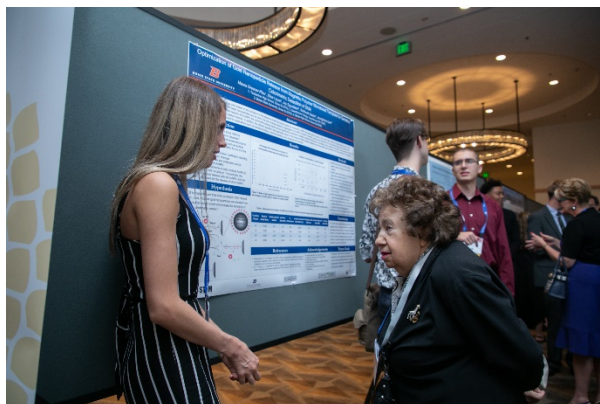
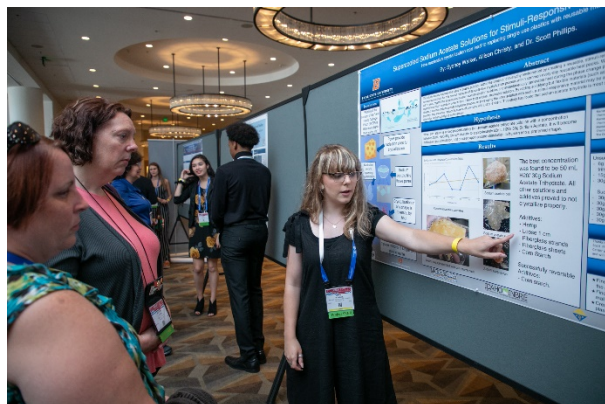
### **Coordinator: Don Warner**

Rapid Colorimetric Detection Via Disassembly of Gold Nanoparticle Aggregates

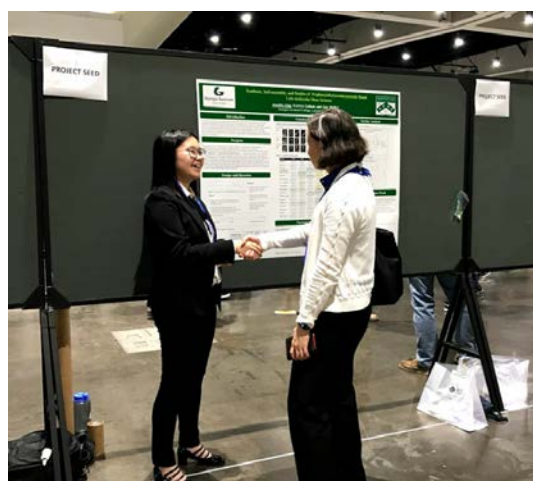
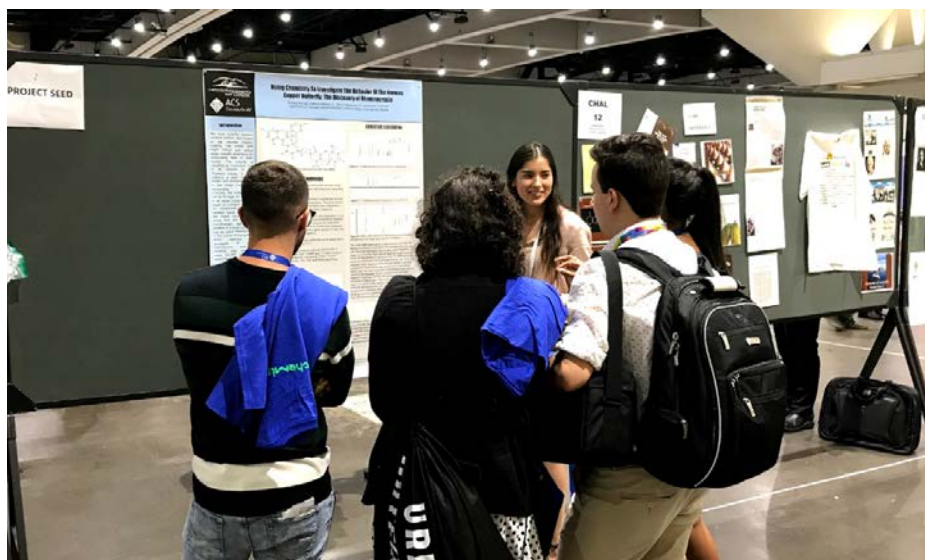
Re-moldable and Re-usable Polymeric Materials



## Project SEED Students at Sci-Mix



*Photos Courtesy of Snake River Local Section, Don Warner*



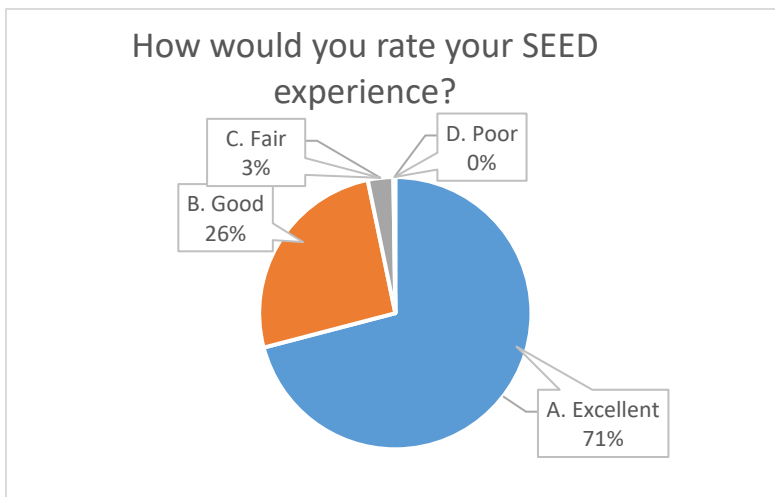
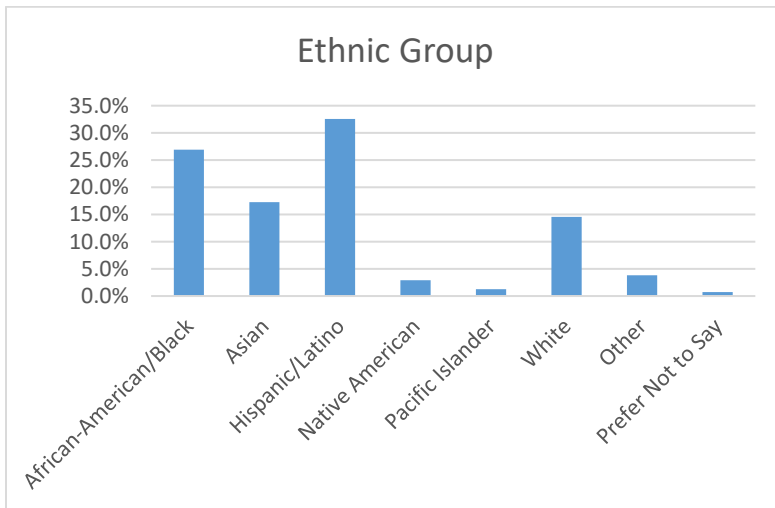
*Photos taken by ACS Staff, Kelechi Uzo-Okoro*

# 2019 Student Survey Results

The survey is designed to assess the success of the program. The results of the survey provide information on the background of the students, their educational aspirations, and their assessment about Project SEED. This information is useful in determining whether ACS Project SEED is serving its target population and if it is achieving its goals. Of the 454 students in the program, 430 students responded.

Student Gender	Summer I	Summer II	Total %
Female	190	79	62.6%
Male	122	38	37.2%
Non-binary	1	0	0.2%
<b>Grand Total</b>	<b>313</b>	<b>117</b>	<b>100.0%</b>

Family Income Level	Summer I	Summer II	Total %
A. \$10,000 per year or less	38	13	12%
B. \$10,001 - \$16,000 per year	47	14	14%
C. \$16,001 - \$26,000 per year	73	34	25%
D. \$26,001 - \$50,000 per year	117	43	37%
E. \$50,000 per year or more	38	13	12%
<b>Grand Total</b>	<b>313</b>	<b>117</b>	<b>100%</b>



Demographics by State	Summer I	Summer II
Arizona	11	0
Arkansas	7	0
California	54	15
Colorado	1	1
Connecticut	1	0
Florida	2	0
Georgia	10	2
Idaho	9	3
Illinois	3	2
Indiana	28	11
Iowa	2	0
Kansas	1	1
Maryland	8	5
Massachusetts	7	1
Michigan	11	4
Minnesota	2	5
Mississippi	2	0
Missouri	4	2
Montana	0	1
Nebraska	1	1
Nevada	5	0
New Jersey	46	23
New York	24	5
North Carolina	10	5
Ohio	16	10
Oregon	1	1
Pennsylvania	3	1
Puerto Rico	5	4
Rhode Island	5	2
South Carolina	1	0
Tennessee	2	0
Texas	19	8
Vermont	0	2
Virginia	9	2
West Virginia	3	0
<b>Grand Total</b>	<b>313</b>	<b>117</b>

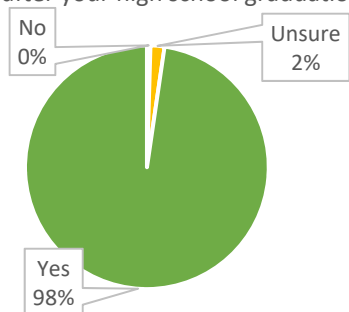
# 2019 Student Survey Results

After High School Which Do You Plan to Pursue?	Summer I	Summer II	Total %
Attend a four-year college	268	106	87.0%
Attend community college	10	0	2.3%
Attend community college with a plan to transfer to a four-year college	31	7	8.8%
Pursue vocational/technical training	3	3	1.4%
Military	1	1	0.5%
<b>Grand Total</b>	<b>313</b>	<b>117</b>	<b>100.0%</b>

Students Agreed that Project SEED Helped:	Summer I	Summer II	Total %
Develop skills and abilities	298	115	96%
Increase confidence	265	107	87%
Increase sense of responsibility	289	113	93%
Increase my understanding of the ethical responsibility of scientists	282	112	92%
Encourage me towards a college degree	285	106	91%
Encourage me towards a degree in a chemistry related field	234	92	76%

I would recommend Project SEED to other high school students	Summer I	Summer II	Total %
Strongly Agree	253	108	84.0%
Somewhat Agree	47	9	13.0%
Neutral	9	0	2.1%
Somewhat Disagree	3	0	0.7%
Strongly Disagree	1	0	0.2%

Do you plan to attend college or technical/vocational school after your high school graduation?



Top 3 Major Choices	Summer I	Summer II
<i>Agricultural studies</i>	0.5%	0.3%
<b>Biochemistry</b>	<b>11.6%</b>	<b>15.0%</b>
<i>Biology</i>	11.4%	13.4%
<i>Biomedical Engineering</i>	5.3%	5.2%
<i>Business and Economics</i>	4.2%	2.7%
<i>Chemical Engineering or Material Science</i>	4.6%	7.9%
<b>Chemistry</b>	<b>13.7%</b>	<b>15.6%</b>
<i>Environmental Engineering</i>	1.9%	2.5%
<i>Education</i>	1.9%	1.1%
<i>English and Communication Studies</i>	1.0%	0.5%
<i>Engineering</i>	6.1%	3.6%
<i>Fine Arts</i>	2.0%	1.1%
<i>Forensic Science</i>	3.9%	4.4%
<i>History</i>	0.9%	0.5%
<i>International and/or Language studies</i>	0.7%	0.3%
<i>Mathematics, Computer Science, Physics, Astronomy</i>	8.3%	6.6%
<i>Pre-professional</i>	10.6%	9.3%
<i>Psychology and Sociology</i>	4.9%	4.9%
<i>Public Affairs, Political Science, or Pre-Law</i>	2.5%	0.8%
<i>Religion/Philosophy</i>	0.4%	0.5%
<i>Technical or Vocational School</i>	0.1%	0.3%
<i>Other</i>	3.5%	3.6%

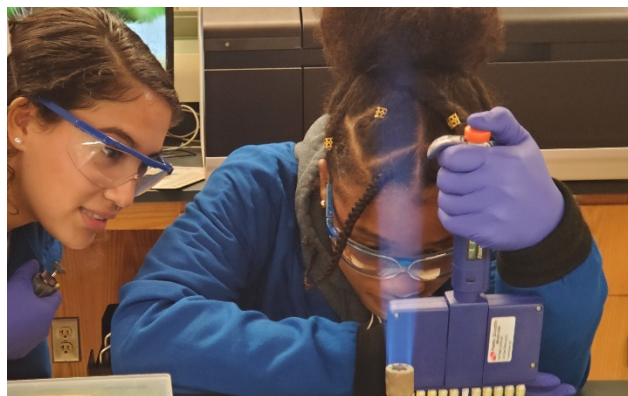
## 2019 Student Survey Results

<b>My Mentor...</b>	<b>Strongly Agree or Agree</b>	<b>Strongly Disagree or Disagree</b>
Taught me new skills in the lab	95%	2%
Was easy to talk to and available	87%	3%
Had quality discussions about career paths	77%	9%
Clearly communicated their expectations	90%	4%
Made me feel like part of the team	91%	2%
Provided feedback on my performance in the lab	91%	3%

<b>Please rate your overall relationship with your mentor</b>	<b>Total</b>	<b>Total %</b>
A. Very good	306	71%
B. Good	92	21%
C. Fair	26	6%
D. Poor	6	1%



*North Carolina Local Section Project SEED, Photo Courtesy of Vincent Lindsay*



*Northeastern University Project SEED, Photo Courtesy of Penny Beuning*

# 2019 Project SEED Major Contributions

## DIAMOND

### Donors of \$50,000 - \$99,999

Estate of Inara Brubaker  
Edward Weil

## PLATINUM

### Donors of \$25,000 - \$49,999

Estate of Robert Couch\*  
Gilead Sciences, Inc.

## GOLD

### Donors of \$10,000 - \$24,999

3M  
Chevron Products Company  
BOA, Joan Kaminski  
Masaki Tan

## SILVER

### Donors of \$5,000 - \$9,999

The Robert and Carol Adams Foundation  
Schwab, Richard and Leslie Anderson Fund  
AstraZeneca\*  
Bio-Rad Laboratories  
Boehringer Ingelheim  
Arindam Bose  
Harry Gray\*  
Alice Hudson\*  
Darren Magda\*  
Cynthia and Bruce Maryanoff  
Carolyn Orthner

## COPPER

### Donors of \$2,500 - \$4,999

ACS Middle Atlantic Region  
CME ACS\*  
Michael Dumas  
John Halsey  
Tamejiro Hiyama\*  
Carl Johnson  
Mary Kirchhoff  
Merck & Co., Inc.  
Nicholas Miller  
Schwab, Dennis and Moira Hogan Murphy  
Charitable Account  
Stephen Rodemeyer  
Helmut Schwab\*  
Sandra Tillin\*

## IRON

### Donors of \$1,000 - \$2,499

Anonymous  
Pamela Ayre\*  
Phillip Beazley  
Edwin Becker\*  
Ronald Brown  
Cynthia Burrows\*  
Fidelity, Bertie and Susan Butts Family Fund\*  
Fidelity, Canova-Davis Giving Account  
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Pfizer Global Research and Development  
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Alexander Scangas  
Stewart Stabley  
Strem Chemicals, Inc.  
Robert Taller  
James Visintainer

**Thank you to Project SEED donors and friends.  
We are grateful for your commitment to helping  
economically disadvantaged high school students  
experience the possibilities of a career in chemistry.**

**We appreciate your continued generosity!**

\*Gifts made in December 2018

Donations made through December 3, 2019



## 2019 Local Contributions

Most returning Project SEED sites fundraise to cover a portion or all of student stipends. This ensures that Project SEED can grow the program to include more students. This year's total local contributions came to over \$350K, which contributed to the large number of students supported for the summer. A huge thank you to the many ACS Local Sections, university departments and provosts, and the multitude of personal contributions that helped to make this program happen!

State	Site	Funding Sources
AL	Jacksonville State University	<ul style="list-style-type: none"> <li>Jacksonville State University, Department of Chemistry and Geosciences</li> </ul>
AR	NYITCOM at Arkansas State University	<ul style="list-style-type: none"> <li>NYITCOM at Arkansas State University, Office of Research</li> <li>Arkansas Biosciences Institute</li> </ul>
AZ	Northern Arizona University	<ul style="list-style-type: none"> <li>Northern Arizona University start-up funds - Naomi Lee (PI)</li> <li>Northern Arizona University start-up funds - Jennifer Martinez (PI)</li> <li>Department of Enetery, Frontiers in research centers - Gabriel Montano (PI)</li> <li>Northern Arizona University pilot grant 1U54MD012388, Andrew Koppish (PI)</li> <li>Rapid Innovation Fund Grant (speed chart 2950001) - Stephanie Hurst (PI)</li> <li>Northern Arizona University pilot grant 1U54MD012388 - Naren Rajasekaran (PI)</li> <li>Northern Arizona University start-up funds - Archana Varadaraj (PI)</li> </ul>
CA	California State University, San Bernardino	<ul style="list-style-type: none"> <li>San Gorgonio Section</li> </ul>
CA	California ACS Local Section	<ul style="list-style-type: none"> <li>Bio-Rad</li> <li>University of California, Merced</li> <li>Chevron</li> <li>California ACS Local Section</li> <li>California ACS Local Section, member contributions</li> <li>Personal contribution from Sandi Tilli</li> </ul>
CA	California State University, Los Angeles	<ul style="list-style-type: none"> <li>Alliance Marc &amp; Eva Stern Math and Science School</li> </ul>
CA	University of San Diego	<ul style="list-style-type: none"> <li>San Diego ACS Local Section</li> </ul>
CA	San Diego ACS Local Section	<ul style="list-style-type: none"> <li>San Diego ACS Local Section</li> </ul>
CA	Stanford University	<ul style="list-style-type: none"> <li>Silicon Valley ACS Local Section</li> <li>Amgen Foundation</li> </ul>
CA	University of LaVerne	<ul style="list-style-type: none"> <li>University of LaVerne</li> </ul>
CA	University of California, Davis	<ul style="list-style-type: none"> <li>University of California, Davis Early Academic Outreach Program</li> </ul>
CO	Colorado State University, Pueblo	<ul style="list-style-type: none"> <li>Colorado State University, Pueblo Provost Mohamed Abdelrahman</li> <li>Personal Contribution from Sandra Bonetti</li> </ul>
CT	University of Connecticut	<ul style="list-style-type: none"> <li>University of Connecticut Chemistry Department</li> </ul>
DC	Chemical Society of Washington, ACS Local Section	<ul style="list-style-type: none"> <li>Chemical Society of Washington</li> </ul>
FL	Barry University	<ul style="list-style-type: none"> <li>South Florida ACS Local Section</li> </ul>
GA	Georgia ACS Local Section	<ul style="list-style-type: none"> <li>Georgia ACS Local Section</li> </ul>
GA	Georgia College and State University	<ul style="list-style-type: none"> <li>Middle Georgia ACS Local Section</li> </ul>
GA	Clark Atlanta University	<ul style="list-style-type: none"> <li>Clark Atlanta University, Department of Chemistry</li> </ul>

## 2019 Local Contributions

State	Site	Funding Sources
IA	Iowa State University	<ul style="list-style-type: none"> <li>• National Science Foundation grants awarded to               <ul style="list-style-type: none"> <li>○ Emily Smith</li> <li>○ Jared Anderson</li> </ul> </li> </ul>
ID	Boise State University/Snake River ACS Local Section	<ul style="list-style-type: none"> <li>• Boise State University               <ul style="list-style-type: none"> <li>▪ College of Arts and Sciences</li> <li>▪ Department of Chemistry and Biochemistry</li> <li>▪ Micron School of Materials Science and Engineering</li> <li>▪ Vice President for Research and Economic Development</li> </ul> </li> <li>• Snake River ACS Local Section</li> </ul>
ID	Idaho State University	<ul style="list-style-type: none"> <li>• Idaho ACS Local Section</li> <li>• Idaho State University, Department of Chemistry</li> </ul>
IL	Illinois State University	<ul style="list-style-type: none"> <li>• Personal contribution from Xiaofan Li</li> </ul>
IL	Southern Illinois University of Carbondale	<ul style="list-style-type: none"> <li>• Southern Illinois University of Carbondale, Department of Chemistry and Biochemistry</li> </ul>
IL	Chicago Local Section	<ul style="list-style-type: none"> <li>• Chicago ACS Local Section</li> </ul>
IN	Purdue University	<ul style="list-style-type: none"> <li>• Purdue University               <ul style="list-style-type: none"> <li>▪ College of Engineering</li> <li>▪ College of Science</li> <li>▪ Davidson School of Chemical Engineering</li> <li>▪ Department of Chemistry</li> </ul> </li> <li>• Purdue ACS Local Section</li> </ul>
IN	Indianapolis Project SEED, ACS Indiana Local Section	<ul style="list-style-type: none"> <li>• Indiana ACS Local Section member contributions</li> <li>• Indiana Biosciences Research Institute</li> <li>• Wells Center for Pediatric Research</li> <li>• Personal contributions from               <ul style="list-style-type: none"> <li>▪ Rosie Bonjouklian</li> <li>▪ Carmel Egan</li> </ul> </li> </ul>
MA	Stonehill College	<ul style="list-style-type: none"> <li>• Northeastern Section of ACS</li> </ul>
MA	University of Massachusetts at Amherst	<ul style="list-style-type: none"> <li>• University of Massachusetts at Amherst               <ul style="list-style-type: none"> <li>▪ Department of Chemistry: Head, Richard Vachet</li> <li>▪ Director of LSAMP, Tracie Gibson</li> </ul> </li> </ul>
MA	Northeastern University	<ul style="list-style-type: none"> <li>• National Science Foundation Funding to Penny Beuning</li> <li>• Northeastern University, Department of Chemistry and Chemical Biology</li> <li>• Northeastern University</li> </ul>
ME	University of Maine	<ul style="list-style-type: none"> <li>• Maine ACS Local Section</li> </ul>
MI	Delta College	<ul style="list-style-type: none"> <li>• Midland ACS Local Section</li> </ul>
MI	Michigan State University	<ul style="list-style-type: none"> <li>• Michigan State University, College of Nursing Dean's Office</li> </ul>
MI	Wayne State University	<ul style="list-style-type: none"> <li>• ACS Detroit Local Section</li> </ul>
MI	Kalamazoo ACS Local Section	<ul style="list-style-type: none"> <li>• Western Michigan University, Project SEED Fund</li> </ul>
MI	3M Company	<ul style="list-style-type: none"> <li>• Minnesota ACS Local Section</li> <li>• 3M Gives</li> </ul>
MO	Kansas City ACS Local Section	<ul style="list-style-type: none"> <li>• Personal contributions from               <ul style="list-style-type: none"> <li>▪ Michelle Paquette</li> <li>▪ Sarah Zanders</li> <li>▪ Paul Rulis</li> <li>▪ Leonard Dobens</li> <li>▪ Shin Moteki</li> <li>▪ William Gutheil</li> </ul> </li> </ul>
MO	Saint Louis University	<ul style="list-style-type: none"> <li>• United Way of Greater St. Louis</li> </ul>

## 2019 Local Contributions

State	Site	Funding Sources
		<ul style="list-style-type: none"> <li>• Bayer</li> <li>• Personal contribution from Dan Seyer</li> </ul>
MS	University of Southern Mississippi	<ul style="list-style-type: none"> <li>• Mississippi ACS Local Section</li> <li>• University of Southern Mississippi Vice President for Research</li> </ul>
MT	Helena College, University of Montana	<ul style="list-style-type: none"> <li>• Montana ACS Local Section</li> <li>• Helena College</li> </ul>
NC	North Carolina ACS Local Section	<ul style="list-style-type: none"> <li>• Golden Corral Foundation</li> <li>• Civent Chem</li> <li>• North Carolina ACS Local Section</li> </ul>
NC	University of North Carolina at Charlotte	<ul style="list-style-type: none"> <li>• Carolina-Piedmont ACS Local Section</li> </ul>
NE	Creighton University	<ul style="list-style-type: none"> <li>• Center for Promoting Health and Health Equity</li> </ul>
NJ	Farleigh Dickinson University	<ul style="list-style-type: none"> <li>• New York ACS Local Section</li> </ul>
NJ	New Jersey City University	<ul style="list-style-type: none"> <li>• New York ACS Local Section</li> </ul>
NJ	Rowan University	<ul style="list-style-type: none"> <li>• South Jersey ACS Local Section</li> </ul>
NJ	North Jersey ACS Local Section	<ul style="list-style-type: none"> <li>• North Jersey ACS Local Section</li> </ul>
NJ	Union City High School/Academy for Enrichment & Advancement	<ul style="list-style-type: none"> <li>• Union City Board of Education</li> <li>• New York ACS Local Section</li> <li>• Personal contribution from Nadia Makar</li> </ul>
NJ	High Tech High School	<ul style="list-style-type: none"> <li>• Hudson County Schools of Technology</li> </ul>
NJ	Ramapo College of New Jersey	<ul style="list-style-type: none"> <li>• Ramapo College of New Jersey, Upward Bound Math Science Program</li> </ul>
NJ	Rutgers University	<ul style="list-style-type: none"> <li>• North Jersey ACS Local Section</li> </ul>
NJ	North Jersey ACS Local Section	<ul style="list-style-type: none"> <li>• North Jersey ACS Local Section</li> </ul>
NM	Sandia National Laboratories	<ul style="list-style-type: none"> <li>• Sandia National Laboratories</li> <li>• APS Education Foundation</li> </ul>
NV	University of Nevada, Reno	<ul style="list-style-type: none"> <li>• University of Nevada, Reno, Center for Chemical Ecology</li> <li>• Sierra Nevada ACS Local Section</li> <li>• Personal contributions from                             <ul style="list-style-type: none"> <li>▪ Ian Wallace</li> <li>▪ Laina M. Geary</li> </ul> </li> </ul>
NY	Research Foundation CUNY, Advanced Science Research Center	<ul style="list-style-type: none"> <li>• Army Educational Outreach Program</li> </ul>
NY	ELLIS Preparatory Academy, NYC Department of Education	<ul style="list-style-type: none"> <li>• Columbia University, Engineering Outreach Programs</li> </ul>
NY	Rochester Institute of Technology	<ul style="list-style-type: none"> <li>• National Science Foundation Grants awarded to                             <ul style="list-style-type: none"> <li>▪ Kara Bren</li> <li>▪ Todd Krauss</li> <li>▪ Callie Babbitt</li> </ul> </li> <li>• Personal contribution from Larry Peckham</li> </ul>
NY	Syracuse University	<ul style="list-style-type: none"> <li>• Syracuse University                             <ul style="list-style-type: none"> <li>▪ Department of Chemistry Chair Timothy Korter</li> <li>▪ Avik P. Chatterjee Chair of Chemistry Department</li> <li>▪ Dean of Arts and Sciences, Karin Ruhlandt</li> </ul> </li> <li>• Syracuse University REU</li> </ul>

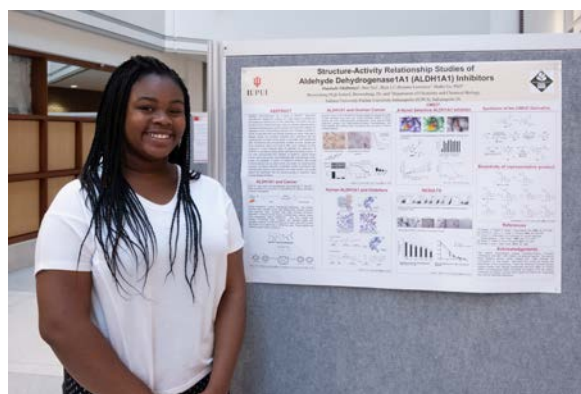
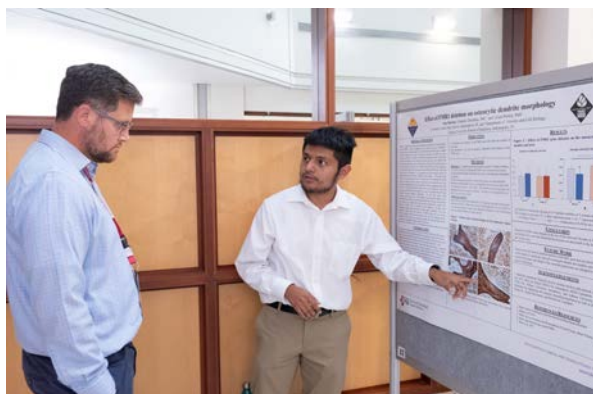
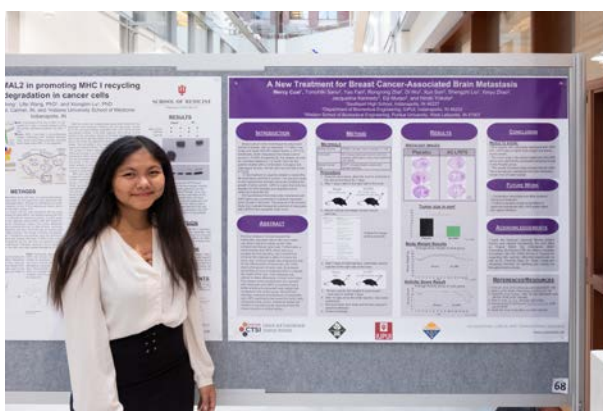
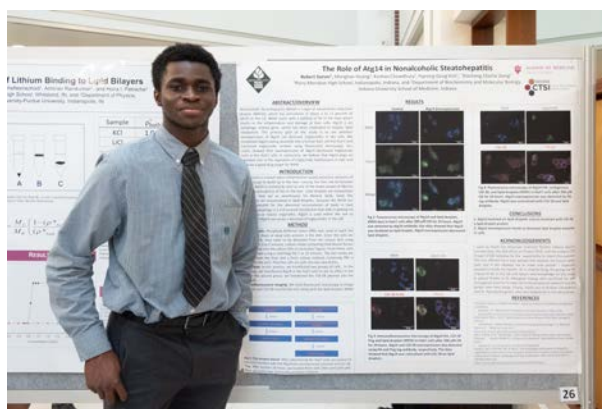


## 2019 Local Contributions

State	Site	Funding Sources
		<ul style="list-style-type: none"> <li>Central New York ACS Local Section</li> </ul>
NY	Eastern New York ACS Local Section	<ul style="list-style-type: none"> <li>Eastern New York ACS Local Section</li> </ul>
OH	Case Western Reserve University	<ul style="list-style-type: none"> <li>Case Western Reserve University, College of Arts and Sciences</li> </ul>
OH	Hiram College	<ul style="list-style-type: none"> <li>Omnova Solutions Foundation</li> </ul>
OH	University of Cincinnati	<ul style="list-style-type: none"> <li>National Science Foundation grants awarded to               <ul style="list-style-type: none"> <li>Anna Gudmundsdottir</li> <li>James Mack</li> <li>Eddie Merino</li> <li>Ryan White</li> </ul> </li> <li>Cincinnati ACS Local Section</li> </ul>
OH	University of Toledo	<ul style="list-style-type: none"> <li>Personal contributions from               <ul style="list-style-type: none"> <li>Jianglong Zhu</li> <li>Emanuela Gionfriddo</li> <li>Cora Lind-Kovacs</li> <li>Michael C. Young</li> <li>Wei Li</li> <li>Ajith Karunaratne</li> </ul> </li> <li>University of Toledo               <ul style="list-style-type: none"> <li>Department of Chemistry and Biochemistry</li> <li>Research and Sponsored Programs</li> <li>College of Natural Sciences and Mathematics</li> </ul> </li> <li>Toledo ACS Local Section</li> </ul>
OH	Youngstown State University	<ul style="list-style-type: none"> <li>Youngstown State University Foundation</li> <li>Penn-Ohio Border ACS Local Section</li> </ul>
OR	Portland ACS Local Section	<ul style="list-style-type: none"> <li>Portland ACS Local Section</li> </ul>
PA	Philadelphia Water Department	<ul style="list-style-type: none"> <li>City of Philadelphia</li> </ul>
PA	Covestro, LLC	<ul style="list-style-type: none"> <li>Covestro, LLC</li> </ul>
PA	Solvay	<ul style="list-style-type: none"> <li>Solvay</li> </ul>
PR	University of Puerto Rico	<ul style="list-style-type: none"> <li>University of Puerto Rico, Rio Piedras, Deanship of College of Natural Sciences</li> </ul>
SC	University of South Carolina	<ul style="list-style-type: none"> <li>University of South Carolina</li> </ul>
TX	Greater Houston ACS Local Section	<ul style="list-style-type: none"> <li>Greater Houston ACS Local Section</li> </ul>
TX	San Antonio ACS Local Section	<ul style="list-style-type: none"> <li>University of Texas at San Antonio</li> <li>Oryxe International</li> <li>California Fueling</li> <li>San Antonio ACS Local Section</li> </ul>
TX	Baylor College of Medicine	<ul style="list-style-type: none"> <li>Personal Contributions from               <ul style="list-style-type: none"> <li>Kjersti Aagaard</li> <li>Salma Kaochar</li> <li>Lindsay C. Burrage</li> <li>Xander Wehrens</li> <li>Pavel Sumazin</li> </ul> </li> </ul>
TX	Lamar University	<ul style="list-style-type: none"> <li>Sabine-Neches ACS Local Section</li> <li>Lamar University Department of Chemistry and Biochemistry</li> </ul>
VA	Virginia Commonwealth University	<ul style="list-style-type: none"> <li>Virginia Commonwealth University Department of Chemistry</li> <li>Virginia ACS Local Section</li> </ul>

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