



Presented by
Baylor Undergraduate Research & Scholarly Achievement

2018 LEADERSHIP AWARD

Dr. Sinda Vanderpool

Associate Vice Provost for Academic Enrollment Management
Executive Vice President and Provost Office
Paul Foster Success Center

For efforts, in concert with the McNair granting and organizational team, in preparing a successful application for Baylor's first McNair grant, thereby making a major contribution to available funding supporting undergraduate research and opening new opportunities for students from first generation, low income or under-represented groups.

With this award URSA also recognizes and thanks key members of the McNair team, including Baylor administrators, faculty, staff, graduate students, and non-Baylor consultants: Susan Bratton, Shirl Brown, Michelle Cohenour, Jewell Lockridge, Lisa McKethan, Elizabeth Palacios, Rachel Renbarger, Sarah Jane Murray, Lakia Scott, Joanna Spitz, Jasmine Stovall, Jorge Vielledent, Meaghann Wheelis, Emma Wood and Capri Woolridge.

Dr. Rizalia Klausmeyer

Senior Lecturer
Program Director, Science Living and Learning Center
Director, Science Research Fellows, College of Arts and Sciences

For repeated contributions to expanding undergraduate research opportunities, including organizing numerous events for pre-health students, for foundational leadership of the Science Living and Learning Center, for efforts to establish the Science Research Fellows major track in the College of Arts and Sciences, for administrative support of the B-TRUE program, and as a founder of WISE, for assistance to female students in constructively addressing the social barriers they encounter in entering scientific research careers.

Baylor Undergraduate Research in Science and Technology

Officers and the Events Committee

Courtney Smith, William Chan, Jianna Lin, Paul Early,
Zachary Pranske, Grace Kohn, Kiersten Scott, and Emily Ziperman
Advisors: Dr. Tamarah Adair, Dr. Susan Bratton, Dr. Brian Raines

For further developing the fall workshop orienting undergraduate colleagues towards summer research opportunities and internships, for the continued improvement of Scientia, and for outstanding efforts to enrich the educational experience of fellow undergraduates.

2018 LEADERSHIP AWARD

Baylor Undergraduates @ The Veterans Administration Center of Excellence Research Program

Dr. Sara Dolan, Dr. Paul Fillmore, and Dr. Richard Sanker
(Baylor University)

Dr. Richard Seim, Dr. Laura Zambrano-Vazquez, Dr. Justin Benzer,
Dr. Bryann DeBeer, Dr. Sheila Frankfurt, Dr. Evan Gordon,
Dr. Rakeshwar Guleria, Dr. Geoffrey May, Dr. Eric Meyer,
Dr. Joseph Mignogna, Dr. Steven Nelson, and Dr. Yvette Szabo
(Veterans Administration VISN 17 Center of Excellence)

For expanding professionally and socially meaningful research opportunities for Baylor undergraduates in the pre-health program and in health-related majors, for providing mentorship for research presentations and publications of exceptional quality, and for opening routes to future careers.

With this award URSA also recognizes the Department of Psychology and Neuroscience, the Department of Speech and Communication Disorders, Baylor Pre-health Programs, and the Co-operating Staff and Physicians at the Doris Miller Veterans Administration Medical Center.

2018 MENTORS OF THE YEAR

Dr. Mikeal Parsons

Arts and Humanities
Department of Religion
College of Arts and Sciences

Dr. Melanie Sekeres

Science, Technology, Engineering and Mathematics
Department of Psychology & Neuroscience
College of Arts and Sciences

Dr. Karen Melton

Professional Fields
Department of Family and Consumer Sciences
College of Arts and Sciences

2018 SCHOLARS WEEK OUTSTANDING PLATFORM PRESENTATIONS

ANTHROPOLOGY

Fernando Centeno

Faculty Mentor: Dr. Sara Alexander

Bolivarian Revolution in Retreat: Understanding the Venezuelan Crisis, its Human Toll and its Outlook

Lexi Gage

Faculty Mentor: Dr. Carol Macaulay

The BSB Garden- Home to more than just flowers

Sarah Jones and Sam Houghton

Faculty Mentor: Dr. Carol Macaulay

Slums Beneath the SLC

Mark Cole Sutton

Faculty Mentor: Dr. Carol Macaulay

Homestead Heritage: A Subculture Engaging to Disengage

ART

Emily Starr

Faculty Mentor: Dr. Sean DeLouche

Daumier and Les Gens des Justice

ECONOMICS

Samuel Kang

Faculty Mentor: Dr. Scott Cunningham

Identifying Differential Effects of Mass Incarceration on Substance Addiction

Rebecca Peirce

Faculty Mentor: Dr. Jason A. Aimone

Charitable Giving and Its Effects on Altruistic Behavior

GEOSCIENCES

Michaela Donahoo

Faculty Mentor: Dr. Dan Peppe

Applying Paleobotanical Paleoclimate Proxies: A Case Study of Tropical African Floras

2018 SCHOLARS WEEK OUTSTANDING PLATFORM PRESENTATIONS

POLITICAL SCIENCE

John Ryan Isaacson

Faculty Mentor: Dr. Ivy Hamerly

Popular or not so Popular? Offensive Structural Realist and Institutional
Predictions of German Neighbors in Regards to German Power

Andrew Patterson

Faculty Mentor: Dr. Ivy Hamerly

Debunking the Twitter Revolution: A Rationalist Approach to the Arab Spring

RELIGION

C. Carter Barnett (Arabic and Middle East Studies)

Faculty Mentors: Dr. David Whitford and Dr. Abjar Bahkou

Paul, Peter, and the Sword: Matta El Meskeen on Submission and Romans 13

Ethan Bryant

Faculty Mentor: Dr. Mikeal Parsons

Leviathan: A Novel Use of an Ancient Figure

Lily Pellegrini

Faculty Mentor: Dr. Mikeal Parsons

I Am Lilith, Hear Me Roar

Christian Sessa

Faculty Mentor: Dr. Mikeal Parsons

Dancing David

2018 SCHOLARS WEEK OUTSTANDING POSTER PRESENTATIONS

ANTHROPOLOGY

1st Place

Alexandria Assenheimer, Lauren Sides, and Maddi Tipping

Faculty Mentor: Dr. Katie Binetti

Interobserver Reliability of Ectocranial Suture Obliteration Assessment in Determining Age of Earth

2nd Place (tie)

Mai Dramiga, Samantha Herkner, Kelli Jones, and Tammy Wake

Faculty Mentor: Dr. Katie Binetti

Observations of the Effects of Water Salinity on Bone

2nd Place (tie)

Lilla Dorvee, Molly Ginn, Nicholas Mercurio, and Destiny Saxiones

Faculty Mentor: Dr. Katie Binetti

Does knowledge of mtDNA bias potential jurors?

BIOLOGY

CATEGORY 1

INTRODUCTORY INQUIRY-BASED LABS

1st Place

Lathan Lucas, Ashley Young, Braden Hansen, Sarah Antrich, Alaina Baird, Victoria Dinh, Emily Dunn, Bethany Fernandes, Emma Fraley, Alia Ghanem, Michael Gilbert, Terra Morris, Benjamin North, Mary Overcash, Katherine Pavleszek, Lily Pellegrini, Long Pham, Leo Rule, Emily Schultz, Jensen Smith, Brandon Thong, Haley Turner, Gabriella Walker, Zachary Whitaker, Rachel Wilsey, and Reid Yanney

Faculty Mentor: Dr. Tamarah Adair

Elesar: A founding member of the new Arthrobacter phage cluster FF

2nd Place

Amayah Brown, Margaret Klausmeyer and Sabrina Martinez

Faculty Mentor: Dr. Marty Harvill

The Effects of Attire on Laparoscopic Performance

2018 SCHOLARS WEEK OUTSTANDING POSTER PRESENTATIONS

BIOLOGY

CATEGORY 2

UPPER LEVEL CELL AND DEVELOPMENTAL BIOLOGY INQUIRY-BASED LABS

1st Place

**Alyssa Alaniz, Neha Hussain, Emily Feese, Annie Luksch, Victoria Mancillas,
and Michael Valencia**

Faculty Mentor: Dr. Myeongwoo Lee

The Influence of Imipramine on the Egg-Laying Behavior of
Caenorhabditis elegans

2nd Place

Vanessa Phan, Owen O'Neill, Caitlinn Kolibaba, Tim Noll, and Jeff Renner

Faculty Mentor: Dr. Myeongwoo Lee

The Effects of Alcohol on The Locomotion of *C. elegans*

CATEGORY 3

INDIVIDUAL RESEARCH PROJECT

1st Place

Hugh Mair

Faculty Mentor: Dr. Tamarah Adair

Tap Measure Protein Multiplex PCR Successfully Classifies Arthrobacteriophages

CATEGORY 4

RESEARCH TEAM PROJECT

1st Place

Clayton Smith and Beatriz Castillo Rodriguez

Faculty Mentor: Dr. Joseph Taube

CTR1 expression is not essential for maintaining epithelial or reverting
mesenchymal phenotypes in MCF7 and MDA-MB-231 breast cancer cell lines

2nd Place

Emily Lin, Aadil Sheikh

Faculty Mentors: Dr. Joe Taube and Dr. Leigh Greathouse

Cancer, Bacteria, and Inflammation: Outer Membrane Vesicles from
Enterotoxigenic *Bacteroides fragilis* and Non-enterotoxigenic *Bacteroides
fragilis* Contain RNA Species that Activate Pattern-Recognition Receptors on
Human Cells

2018 SCHOLARS WEEK OUTSTANDING POSTER PRESENTATIONS

CHEMISTRY

1st Place

Isaac Lill, Samuel O. Odutola, Erica N. Parker, and Brett D. Harper

Faculty Mentors: Dr. Mary Lynn Trawick, Dr. Touradj Solouki,
Dr. Kevin G. Pinney

Cruzain Inhibition by Thiosemicarbazone Compounds for Potential Therapeutic Use Against Chagas Disease

2nd Place

**Minwoo Kim, Javier Hernandez, Cody Yao, Aaron Murillo-Ruiz
and Tim Philip**

Faculty Mentor: Dr. Daniel Romo
Baylor Minipharma

ENVIRONMENTAL SCIENCE

**Liana DeNino, Grace Hutchinson, Julia Frandesen-DeLoach, Jonah Salazar,
and Clark Coneby**

Faculty Mentor: Dr. Trey Brown
Preliminary Results of Residential Curbside Residual Lead in West Dallas, TX

Hannah Dye and Jasmine Stovall

Faculty Mentor: Dr. Susan Bratton
Microplastic Pollution in an Urban Runoff-Fed Stream in Texas, USA.
A Comparison Between Habitat Types Above Treated Wastewater Effluents

Madison Stewart and Marina R. Mulenos

Faculty Mentor: Dr. Christie Sayes
Data Informatics and Proteomics: Multi-Variant Visualization of the Gold Nanoparticle Protein Corona

Andreanna Burman

Faculty Mentor: Dr. Christie M. Sayes
Physicochemical Features of the Gold Nanoparticle-Protein Corona: Using Analytical Methods to Detect and Identify Proteins

ENVIRONMENTAL STUDIES AND POLICY

Saskia Henery

Faculty Mentor: Dr. George Cobb
An Analysis into The Effects of Conservation Efforts of the Demerara Forest in South America

2018 SCHOLARS WEEK OUTSTANDING POSTER PRESENTATIONS

GEOSCIENCES

Rachel Holsteen Bruyere

Faculty Mentor: Dr. Kenny Befus

Were the Volatile Contents of Yellowstone Caldera's Lava Creek Tuff the Same?

Bradley Rains

Faculty Mentors: Wayne Hamilton, MS, Bruce Byars, MS

An Economic Spatial Optimization Analysis of Central Texas Lignite
Coal Mining

INTERDISCIPLINARY

Kilee Burke and Bisma Ikram

Faculty Mentor: Dr. Rizalia Klausmeyer

Gout Flare Association with Acute Myocardial Infarction

Matthew Parham

Faculty Mentor: Dr. Paul Fillmore

MrAnats: Magnetic Resonance-based Adaptive NeuroAnatomy
Teaching Software

Andres Umana and Larissa Garcia

Faculty Mentor: Dr. Sara Perry

It Takes Two to Tango: Gender Dyad Composition in Negotiation

Harrison Dai

Faculty Mentor: Dr. Joshua Patrick

Temperature, Single Men, and Crime?

PHYSICS

Garrett Williams and Susan Pedigo

Faculty Mentor: Dr. Zhenrong Zhang

The Effects of Cadmium on Calcium Binding and Dimerization of N-Cadherin.

Taylor Robinett and Courtney Turner

Faculty Mentor: Dr. William B. Cade III

Energy Transfer During Magnetic Storms

2018 SCHOLARS WEEK OUTSTANDING POSTER PRESENTATIONS

PSYCHOLOGY AND NEUROSCIENCE

1st Place

Habib Abl

Faculty Mentor: Dr. Sara Dolan, Dr. Richard Sanker, Dr. Evan Gordon and Dr. Steven Nelson

Effects of Traumatic Brain Injury on Cortical Myelin Content

2nd Place

Mary High, Taylor Luster, Daniel Zeter, Chenlu Gao, and Stacy Nguyen

Faculty Mentor: Dr. Michael Scullin

Does Mozart Make Memories? An Experimental Test of Targeted Memory Reactivation During Slow Wave Sleep

3rd Place

Christian Hernandez-Zegada, Samantha Hodges, Suzanne Nolan, Andy Holley, Matt Binder, Lindsay Tomac, Siena Condon, Christian Potter, and James Okoh

Faculty Mentor: Dr. Joaquin Lugo

The impact of early life seizures on the development of autistic-like behavior across two genetic mouse strains: 129SvEvTac and C57BL/6 mice

UNDERGRADUATE RESEARCH & SCHOLARLY ACHIEVEMENT

STEERING COMMITTEE MEMBERS

Dr. Tamara Adair

Eileen Bentsen

Dr. Susan Bratton

Dr. Laurie Burney

Dr. Nathan Elkins

Dr. Patrick Farmer

Dr. Jonathan Hu

Dr. Dennis Johnston

Dr. Paul Larson

Jianna Lin

Dr. Robert Miner

Dr. Brian Raines

Dr. Kelly Rossler

Dr. Rich Sanker

Courtney Smith

Jasmine Stovall

Dr. Dianna Vitanza



Dr. Luell Hyde
and
the Office of the Vice Provost for Research
wish to express appreciation to
Dr. Susan Bratton
for
her seven years of service as
Director of U.R.S.A
Thank you!





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UNIVERSITY

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