13th ANNUAL
UHD STUDENT RESEARCH CONFERENCE
Sponsored by the UHD Scholars Academy
Funded by the
National Science Foundation (0934913),
U.S. Department of Education (P120A130040),
U.S. Nuclear Regulatory Commission (NRC-27-10-1121, NRC-HQ-12-G-38-006),
The Brown Foundation, Inc., and UH-Downtown

A showcase of academic excellence demonstrated by UHD undergraduates majoring within the Colleges of Business, Humanities and Social Science, Public Service, and Sciences and Technology.

Friday, April 11, 2014

8:00 - 9:00 am  Registration and Continental Breakfast, Coffee House
9:00 am  Dr. Mary Jo Parker, Director, Scholars Academy, UHD
           Introduction of UHD President, Auditorium
9:00 am  Dr. William Flores, President, University of Houston-Downtown
           Welcoming Remarks, UHD Wilhelmina Cullen Robertson Auditorium
9:10 am  Dr. Lisa Morano, Chair, Department of Natural Sciences, UHD
           Introduction of Keynote Speaker, Auditorium
9:10 - 9:40 am  Jennifer Abrams, 2007 UHD Alumnus
                Graduate Research Assistant, Graduate School of Biomedical Sciences,
                University of Texas Health Science Center at Houston
                Keynote Speaker, Auditorium
9:40 - 10:40 am  Oral Presentations, Session I, Auditorium
10:50 - 11:50 pm  Oral Presentations, Session II, Auditorium
11:50 am  Dr. Mary Jo Parker, Director, Scholars Academy, UHD
           Introduction of External Community Speaker, Auditorium
11:50 - 12:10 pm  Tuwanda M. Smith, Esq., Manager, Minority Serving Institutions Program,
                   United States Nuclear Regulatory Commission
                   External Community Speaker, Auditorium
12:10 - 1:20 pm  Lunch Break
1:20 - 3:30 pm  Open Poster Sessions, Room A300

Conference Co-Chairs:
Dr. Weining Feng, Associate Professor of Engineering Technology, UHD
Dr. Aimee Roundtree, Associate Professor of English, UHD

Conference Planning Committee:
Dr. Maria Bhattacharjee, Associate Professor of Urban Education, UHD
Dr. David Branham, Associate Professor of Social Sciences, UHD
Dr. Irene Chen, Professor of Urban Education, UHD
Mr. Rene Garcia, Program Manager, UHD Scholars Academy
Dr. Kenneth Johnson, Associate Professor of Geology, UHD
Dr. Matthew Johnson, Assistant Professor of Criminal Justice, UHD
Dr. Lisa Morano, Chair of Natural Sciences Department, UHD
Dr. Mary Jo Parker, Director, UHD Scholars Academy
Dr. Lucille Pointer, Chair of Management, Marketing & Business Administration, UHD
Dr. Gene Preuss, Associate Professor of History, UHD
Dr. Ruth Robbins, Professor of Finance, Accounting and CIS, UHD
Dr. Edwin Tocarro, Associate Professor of Mathematics, UHD
Dr. Akif Uzman, Interim Dean, UHD College of Sciences and Technology
Dr. Jeong-Mi Yoon, Professor of Mathematics and Statistics, UHD

Oral and Poster Presentations:

58 - Alesha Rimmelin, “Molecular Phylogenetics of Rhinoclemmys: A Re-Assessment of the Taxonomic Status of Mexican Species”
Co-Author: John L. Carr, Department of Biology, University of Louisiana at Monroe
UHD Faculty Mentor: Dr. Amy Baird
Project Location: University of Houston-Downtown

20 - Francisco Colón, “Development of a New Method for the Chemical Abstraction and Identification of Diatom Tests from a Clay Soil Matrix”
UHD Faculty Mentor: Dr. Brad Hoge
Project Sponsors: National Science Foundation; Texas Workforce Commission
Project Location: University of Houston-Downtown

21 - Mariana Cortes, “Computational Investigation of Gd(III) Ligands used as Contrast Agents for Magnetic Resonance Imaging”
UHD Faculty Mentor: Dr. Maria Benavides
Project Sponsor: U.S. Nuclear Regulatory Commission
Project Location: University of Houston-Downtown

41 - Christa Landowski and Reyna Valdez, “Preliminary Screening of 144 Synthetic Compounds Identifies 10 Novel Compounds with Potential to Be Developed into Anti-Cancer Drugs”
Co-Authors: Michal Kaczmarek and Katarzyna Karpiniczka
UHD Faculty Mentor: Dr. Rachna Sadana
Project Sponsor: Brown Foundation, Inc.
Project Location: University of Houston-Downtown

The UHD Scholars Academy (SA) is an academically competitive program in the College of Sciences and Technology (CST) that promotes scholarship and student success for undergraduate students majoring in Science, Technology, Engineering and Mathematics (STEM).
23 - Rafael de la Flor, “Quantum Mechanical Studies of Gadolinium(III) Ligands used for MRI Contrast Agents”
UHD Faculty Mentor: Dr. Maria Benavides
Project Sponsors: Texas Workforce Commission and U.S. Nuclear Regulatory Commission
Project Location: University of Houston-Downtown

55 - Gregg Pelt, “African American Students Academic Performance in Predominately White Institutions”
UHD Faculty Mentor: Dr. Stacie Craft DeFreitas
Project Location: University of Houston-Downtown

2 - Shamsa Ali, “Investigation of T-cell receptors interacting molecule (TRIM) on natural killer cells in mice.”
Co-Authors: Suzette Khan and Nicolle Patterson
UHD Faculty Mentor: Dr. Emily Corse
Project Sponsor: Brown Foundation, Inc.
Project Location: MD Anderson Cancer Center

52 - Iris Silva and Maria Maldonado, “Microbiology and Urban Education Students Collaborate to Teach Third Graders about Composting”
Co-Authors: Sandy Gramajo and Fersen Leiva
UHD Faculty Mentor: Dr. Maria Bhattacharjee and Poonam Gulati
Project Sponsor: Brown Foundation, Inc.
Project Location: Crockett Elementary School and UHD

27 - Irene Girgis, “Turmeric Inhibits Streptococcus salivarius in Dental Biofilms”
Co-Authors: Merlin Herrera
UHD Faculty Mentor: Dr. Poonam Gulati
Project Sponsor: Brown Foundation, Inc.
Project Location: University of Houston-Downtown

5 - Shamsa Ali, “Investigation of T-cell receptors interacting molecule (TRIM) on natural killer cells in mice.”
Co-Authors: Graham Wilson, Faisal Khan, Janeffer Casarez, Sara Sulekha, Reihana Elsayed
UHD Faculty Mentor: Ms. Mitsue Nakamura
Project Sponsor: Brown Foundation, Inc.
Project Location: University of Houston-Downtown

7 - Kathryn Arntz, “Enduring Personality, Ethnic differences, and designing effective interventions for unhealthy eating behaviors”
UHD Faculty Mentor: Dr. Christine Bachman
Project Location: University of Houston-Downtown

19 - Jim Chisholm, “Thermal Analysis of Welded Copper Canister Nuclear Waste Storage System Components”
UHD Faculty Mentor: Dr. Janusz Grebowicz
Project Sponsor: U.S. Nuclear Regulatory Commission
Project Location: University of Houston-Downtown

21 - Mariana Cortes, “Computational Investigation of Gd(III) Ligands used as Contrast Agents for Magnetic Resonance Imaging”
UHD Faculty Mentor: Dr. Maria Benavides
Project Sponsor: U.S. Nuclear Regulatory Commission
Project Location: University of Houston-Downtown

Poster Presentation Session I (1:20PM-2:25PM):

1 - Anjum Abha, “Cloning and Expression of Staphylococcus aureus Colonization and Virulence Factors”
UHD Faculty Mentor: Dr. Gabriela Bowden
Project Location: University of Houston-Downtown

3 - Tawfiq Ahmed, Akhirah Avant, and Sara Osman, “Contagion: Race Against The Human Race”
Co-Authors: Graham Wilson, Faisal Khan, Janeffer Casarez, Sara Sulekha, Reihana Elsayed
UHD Faculty Mentor: Ms. Mitsue Nakamura
Project Sponsor: Brown Foundation, Inc.
Project Location: University of Houston-Downtown

8 - Tawfiq Ahmed, Akhirah Avant, and Sara Osman, “Contagion: Race Against The Human Race”
Co-Authors: Graham Wilson, Faisal Khan, Janeffer Casarez, Sara Sulekha, Reihana Elsayed
UHD Faculty Mentor: Ms. Mitsue Nakamura
Project Sponsor: Brown Foundation, Inc.
Project Location: University of Houston-Downtown

23 - Rafael de la Flor, “Quantum Mechanical Studies of Gadolinium(III) Ligands used for MRI Contrast Agents”
UHD Faculty Mentor: Dr. Maria Benavides
Project Location: University of Houston-Downtown

UHD Faculty Mentor: Dr. Cindy Stewart
Project Location: UHD and University of Tennessee Knoxville

29 - Martha Cecilia Guerra, “Developing a Novel Apoptotic Sensor”
Co-Authors: Casey Zhu
UHD Faculty Mentors: Drs. Daniel Wagner and Jonathan J. Silberg
Project Sponsors: National Science Foundation; Texas Workforce Commission
Project Location: Rice University

31 - Karina Henriquez, “New Assay for Acetate Based on the Oxidation of Azure Dyes by KBiO3 and KClO3”
UHD Faculty Mentor: Dr. Mian Jiang
Project Location: University of Houston-Downtown

33 - Masako Hino, “The Effect of Thermal History on Crystallization of Polypropylene (PP) and Polyethylene terephthalate (PET)”
Co-Authors: Jim Chisholm
UHD Faculty Mentor: Dr. Janusz Grebowicz
Project Sponsor: U.S. Nuclear Regulatory Commission
Project Location: University of Houston-Downtown

35 - Tiffany Jasso and Carmen Hernandez, “Does it Really Take a Village to Raise a Child?: Exploring the Concept of Non-Parental Discipline”
UHD Faculty Mentor: Dr. Susan Henney
Project Location: University of Houston-Downtown

Co-Authors: Eric Flores
UHD Faculty Mentors: Drs. Penny Morris-Smith and Donald Musselwhite
Project Sponsor: NASA
Project Location: UHD & UH-Central

39 - Danial Khan, “The Efficacy of three Distinct Components from Saffron with Anticancer Activity against Breast Cancer Cells In vitro”
UHD Faculty Mentors: Drs. Tyra Hessel and Hamida Qavi
Project Sponsor: Texas State Legislature - JAMP
Project Location: University of Houston-Downtown

41 - Christa Landowski and Reyna Valdez, “Preliminary Screening of 144 Synthetic Compounds Identifies 10 Novel Compounds with Potential to Be Developed into Anti-Cancer Drugs”
Co-Authors: Michal Kaczmarek and Katarzyna Karpinazka
UHD Faculty Mentor: Dr. Rachna Sadana
Project Sponsor: Brown Foundation, Inc.
Project Location: University of Houston-Downtown

43 - Minh Le and Andrew Yen, “Level Measurements and Control with an Ultrasonic Sensor”
UHD Faculty Mentor: Dr. Weiming Feng
Project Location: University of Houston-Downtown
Keynote Speaker:
Jennifer Abrams, Ph.D. Candidate
Graduate Research Assistant,
Graduate School of Biomedical Sciences,
University of Texas Health Science Center at Houston

**Biography:** Jennifer Abrams obtained a B.S. in biotechnology from the University of Houston-Downtown. While an undergraduate, she performed research analyzing coastal prairie soil fungi by denaturing gradient gel electrophoresis under the guidance of Dr. Philip Lyons. She is currently pursuing a Ph.D. in microbiology and molecular genetics at the University of Texas Medical School and Graduate School of Biomedical Sciences in the laboratory of Dr. Kevin A. Morano, where she studies the diversity of three families of cytosolic Hsp70 nucleotide exchange factors in *S. cerevisiae*.

**Presentation Title:** “Undergraduate Research: The First Step on the Path to a Successful Career in Science”

**Presentation Abstract:** My interest in science became apparent to me as a child, but I was only aware that it was an actual career option once I became an undergraduate at University of Houston-Downtown and was allowed to do a research project of my own under the guidance of Dr. Philip Lyons and The UHD Scholars Academy. This not only ignited my interest in research, but also gave me the opportunity to experience science from a different perspective. I did not know exactly what type of science career would be best for me, but I knew the two things that were most important to me: one was that I become an expert in my field of choice and that I love what I do. The novelty of what I was studying and the freedom to test my ideas led me to realize that research was one way to achieve my dreams. Undergraduate research gave me experience in scientific research, communication, and networking all the tools necessary to be accepted to and complete my Ph.D. training at The Graduate School for Biomedical Sciences at Houston. While in graduate school, my research project titled “Functional Specificity of Yeast Cytosolic Hsp70 Nucleotide Exchange Factors,” was completed with the mentorship from Dr. Kevin Morano, and I recently submitted my work for publication in The Journal of Biological Chemistry. This project is essential for understanding the role of chaperones in protein homeostasis as it relates to neurodegenerative diseases. In addition to my thesis project, I was able to publish a co-first author review and a novel technique that I developed in the lab. I am currently pursuing a postdoctoral position with Dr. Jason Gestwicki, who works on isolating small molecules that affect the function of molecular chaperones in order to develop drugs to treat neurodegenerative disease. I am still on the journey to achieving the career that is ideal for me, but undergraduate research is what set me on the right path and taught me how to overcome the difficult obstacles that has led me to where I am today.

External Community Speaker:
Tuwanda M. Smith, Esquire
Manager, Minority Serving Institutions Program,
United States Nuclear Regulatory Commission

**Presentation Title:** “The Minority Serving Institutions (MSIs) Program – A NRC Federal Education Investment Program”

**Presentation Abstract:** The Minority Serving Institutions (MSIs) Program was established in 2006 to help MSIs in their efforts to: (1) achieve academic excellence in STEM education and training; (2) develop human capital (faculty and students); (3) build capability, capacity and infrastructure; (4) effectively compete for grants, cooperative agreements, contracts and resources; (5) participate in Federal and public programs and funding opportunities; and (6) produce a diverse skilled STEM workforce. For the past four years, NRC has assisted the University of Houston-Downtown (UHD) by funding UHD’s project to increase underrepresented students in the nuclear industry.

This partnership with UHD has helped to create and sustain a direct pipeline for STEM students entering undergraduate and graduate level nuclear sciences, establish industry partnerships, increase offsite field trips, and fund summer scholarly research opportunities and seminar series.
45 - Amber Martin, Shequita Dickerson, and Francis Cortez, “Examining the own-gender bias in facial-processing: Are we better at detecting changes in the opposite sex or our own?”
UHD Faculty Mentors: Drs. Stephanie Babb and Ruth Johnson
Project Location: University of Houston-Downtown

47 - Lea Means, “Dynamics of Mixed Species Bacterial Biofilms”
Co-Authors: Nenna Kpando and Caroline Barbosa
UHD Faculty Mentor: Dr. Poonam Gulati
Project Sponsor: National Science Foundation
Project Location: University of Houston-Downtown

49 - Gabriel Morales, “Information Design”
UHD Faculty Mentor: Dr. Linda Bressler
Project Location: University of Houston-Downtown

51 - Gerardo Moreno, “Forensic Accountants in the Courtroom”
Co-Authors: Joel Medina, Anum Memon, Mario Mondragon, Kelly Moynihan, Phuong Nguyen, Trang Nguyen and Rosalba Oropeza
UHD Faculty Mentor: Dr. Stacie Craft DeFreitas
Project Location: University of Houston-Downtown

53 - Neley Munoz, Daniel Alaeinejad, and Bryan Lee, “Sysco Applying Linear Programming”
UHD Faculty Mentors: Drs. Lucille Pointer and Elias Keedy
Project Location: University of Houston-Downtown

55 - Gregg Pelt, “African American Students Academic Performance in Predominately White Institutions”
UHD Faculty Mentor: Dr. Stacie Craft DeFreitas
Project Location: University of Houston-Downtown

57 - Phylicia Real, Stephanie Guidi, and Hiba Khurshid, “Do “they” really all look alike? Analyzing the own-race bias across different ethnicities”
UHD Faculty Mentors: Drs. Stephanie Babb and Ruth Johnson
Project Location: University of Houston-Downtown

59 - Anisleidys Rivero, “Body Dissatisfaction and Religious Authority Figures”
UHD Faculty Mentor: Dr. Travis Crone
Project Location: University of Houston-Downtown

61 - Shea Snelling, “African American Students Academic Performance in Predominately White Institutions”
UHD Faculty Mentor: Dr. Travis Crone
Project Location: University of Houston-Downtown

63 - Roman Torres, “Macromolecular Response to Staphylococcus aureus”
UHD Faculty Mentor: Dr. Gabriela Bowden
Project Location: University of Houston-Downtown

65 - Destiny Trevino, Zakariya Mahmood, and Doris Amaro, “Exploring Genetic Engineering”
Co-Authors: Precious Awagu, Antonio Gloria, Lamont Cranfield, Isais Gonzalez
UHD Faculty Mentor: Ms. Mitsue Nakamura
Project Sponsor: Brown Foundation, Inc.
Project Location: University of Houston-Downtown

Co-Authors: A. Wypych, J.Ulaniski
UHD Faculty Mentor: Dr. Janusz Grebowicz
Project Location: Lodz University of Technology – Politechnika Lodzka, Lodz, Poland

69 - Alisa Turchaninova and Eloy Perez, “Applications of Partial Differential Equations to Chromatography”
UHD Faculty Mentor: Dr. Katarina Jegdic
Project Sponsor: U.S. Nuclear Regulatory Commission
Project Location: University of Houston-Downtown

71 - Angela Vang, Mandira Lamichane, and Resha Shrestha, “New Assay for Sugar Based on Transition Metal Hydroxide Fumes”
UHD Faculty Mentor: Dr. Mian Jiang
Project Location: University of Houston-Downtown

UHD Faculty Mentor: Dr. Reynaldo Romero
Project Location: University of Houston-Downtown

75 - Seeyna Vincent and Jacqueline Washington, “Molecular modeling of transition metal complexes of tetradentate Schiff base ligand”
UHD Faculty Mentor: Dr. Maria Benavides
Project Sponsor: U.S. Nuclear Regulatory Commission
Project Location: University of Houston-Downtown

77 - DaNae Woodard, “Activity of T. fusca and A. acidocaldarius OSBS enzymes”
Co-Authors: Mariana Lopez, Denis Odokonyero
UHD Faculty Mentor: Dr. Margaret Glasner
Project Location: Texas A&M University

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Service Learning
Poster Presentation Session I (1:20PM-2:25PM):

79 - Rebecca Barbosa and Joanna Castaneda, “The Beacon: Serving the Homeless of Houston”
UHD Faculty Mentor: Dr. Mary Jo Parker
Project Sponsor: Texas Workforce Commission
Project Location: The Beacon

81 - Isabel Corneo and Prisilia Cruz, “STEM to Inspire the Future”
UHD Faculty Mentor: Dr. Mary Jo Parker
Project Sponsor: Texas State Representative Sylvester Turner
Project Location: Polly Ann McRoberts Elementary School

83 - Rajni Dhadrul and Charles Punnathara, “Not Just Service, It’s a Ritual for Humanity”
Co-Authors: Milo Falconi, Namrata Kayastha, Sharlicia Meachine, Vivita Sedai, Sunday Edose, Kevin Castillo
UHD Faculty Mentor: Dr. Mary Jo Parker
Project Sponsor: Texas State Representative Sylvester Turner
Project Location: Polly Ann McRoberts Elementary School

Co-Author: Caroline Barbosa
UHD Faculty Mentor: Dr. Mary Jo Parker
Project Sponsor: Texas Workforce Commission
Project Location: Houston Children’s Museum of Natural Science

87 - Guadalupe Lee, Prinay Thomas, and Sara Valliani, “Promoting STEM at Clifton Middle School”
Co-Authors: Joshua Jimenez, Viridiana Monroy, Nadia Nourhussein, Ngoc Vo, Mona Youngblood
UHD Faculty Mentor: Dr. Mary Jo Parker
Project Sponsor: Texas State Representative Sylvester Turner
Project Location: Clifton Middle School and UHD

89 - Viridiana Monroy and Isela Castejon, “Service Learning Project: Testing Organic vs. Conventional Produce in First Grade”
Co-Authors: Joanna Castaneda and Alba Rubi Banegas
UHD Faculty Mentors: Drs. Maria Bhattacharjee and Poonam Gulati
Project Sponsor: Texas State Representative Sylvester Turner
Project Location: CrockettElemnetry School and UHD

91 - Semira Tahiery, Najah Khan, and Jessica Fuentes, “Teaching Science In Elementary Schools: A Microbiology and Urban Education Collaboration”
UHD Faculty Mentors: Drs. Maria Bhattacharjee and Poonam Gulati
Project Sponsor: Texas State Representative Sylvester Turner
Project Location: Crockett Elementary School and UHD

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One Main Street, 725-North; Houston TX 77002-1001
Phone: 713-222-5344; Fax: 713-222-5356; scholars@uhd.edu; www.uhd.edu/scholars
Poster Presentation Session II (2:25PM-3:30PM):

2 - Waqar Ahmad, “Theoretical Studies of Transition Metal Complexes of 4-amino-5-(pyridyl)-4H-1,2,4-triazole-3-thiol”
UHD Faculty Mentor: Dr. Maria Benavides
Project Sponsor: U.S. Nuclear Regulatory Commission
Project Location: University of Houston-Downtown

4 - Viktor Akhanov, “The Human Mucosal Response Against Staphylococcus aureus Virulence Factors”
UHD Faculty Mentor: Dr. Gabriela Bowden
Project Sponsor: Brown Foundation, Inc.
Project Location: University of Houston-Downtown

6 - Liz Amaro and Linda Onyirimba, “Role of Soil Texture on Fruit and Wine Color: An Analysis of Six Texas Hill Country Vineyards”
Co-Author: Aaron Corsi, and Dr. Jay Neal of UH
UHD Faculty Mentors: Drs. Lisa Morano and Ken Johnson
Project Sponsor: U.S. Department of Agriculture
Project Location: UHD and UH

UHD Faculty Mentor: Dr. Cindy Stewart
Project Location: UHD, and University of Tennessee knoxville

10 - Rebecca Barbossa, “Creating Soil Geochemistry Fingerprint of Texas Hill Country Syrah Vineyards”
Co-Author: Aaron Corsi, and Dr. Jay Neal of UH
UHD Faculty Mentor: Dr. Lisa Morano
Project Sponsor: U.S. Department of Agriculture
Project Location: UHD and UH

12 - Suraj Basnet, Richard Wrangpetch, Jose Barrera and Brigitte Goble, “Investigation of Phylogenetic Relationships of Shrew Populations Using Genetic Markers”
UHD Faculty Mentors: Amy Baird, Yuanyuan Kang, and Mehdi Esmaeiliyan
Project Location: University of Houston-Downtown

14 - Kristen Brown, “The Geochemistry of Weinsburg Type Granite of the Moldanubian Batholith in the Czech Republic”
Co-Author: Chris Zdenek
UHD Faculty Mentor: Dr. Kenneth Johnson
Project Sponsor: Texas Workforce Commission and U.S. Nuclear Regulatory Commission
Project Location: University of Houston-Downtown

16 - Oralio Campos, Daniel Yates, and Lupe Batalla, “Juror Characteristics in Relation to the Death Penalty”
UHD Faculty Mentor: Dr. Kristen Capuozzo
Project Location: University of Houston-Downtown

18 - Channalis Chea and Reyna Valdez, “Detection of the Plant Pathogen Xylella fastidiosa from an Experimental Vineyard to Find Grapevine Resistance to Pierce’s Disease”
UHD Faculty Mentor: Dr. Lisa Morano
Project Sponsor: U.S. Department of Agriculture
Project Location: University of Houston-Downtown

20 - Francisco Colón, “Development of a New Method for the Chemical Abstraction and Identification of Diatom Tests from a Clay Soil Matrix”
UHD Faculty Mentor: Dr. Brad Hoge
Project Sponsor: National Science Foundation, Texas Workforce Commission
Project Location: University of Houston-Downtown

22 - Mariana Cortes, “Development of Model Formulation Using Exothane 106”
Co-Author: Mau Truong and Nguyen Lau
UHD Faculty Mentor: Dr. Bryon Christmas
Project Sponsor: Texas Workforce Commission and U.S. Nuclear Regulatory Commission
Project Location: University of Houston-Downtown

24 - Erika Flores, “Plastic Degradation by Marine Microbes”
UHD Faculty Mentor: Dr. Poornam Gulati
Project Location: Galveston, TX and UHD

26 - J. Ivette Galvan and Carmen Hernandez, “Investigating the outgroup homogeneity effect across race and gender: Do other groups really all look alike?”
UHD Faculty Mentors: Drs. Ruth Johnson and Mary Portillo
52 - Leah Mulkey and Blanca Hinojosa, “Diatom Anomaly at Greens Bayou Wetlands Mitigation Bank”
UHD Faculty Mentor: Dr. Bradley Hoge
Project Sponsors: Brown Foundation, Inc., National Science Foundation, and Texas Workforce Commission
Project Location: University of Houston-Downtown

UHD Faculty Mentors: Drs. Mary Portillo and Ruth Johnson
Project Location: University of Houston-Downtown

56 - Leshon Rasheed and Chasidy Wofford, “The Impact of Perceived Racism on African American and Latino College Students”
UHD Faculty Mentor: Dr. Stacie Craft DeFreitas
Project Location: University of Houston-Downtown

58 - Alesha Rimmelin, “Molecular Phylogenetics of Rhinoclemmys: A Re-Assessment of the Taxonomic Status of Mexican Species”
Co-Author: John L. Carr, Department of Biology, University of Louisiana at Monroe
UHD Faculty Mentor: Dr. Amy Baird
Project Location: University of Houston-Downtown

60 - Alba Rubi Banegas, “The effects of nanocomposed graphene on crystallization of Poly(lactic-co-glycolic) Acid”
Co-Authors: Stephen Reagin and Masako Hino
UHD Faculty Mentor: Dr. Janusz Grebowicz
Project Location: University of Houston-Downtown

62 - Shima Taghikhani and Geraldine Lerner, “Inhibition of Streptococcus mutans in Oral Biofilms With Saffron Extract”
UHD Faculty Mentor: Dr. Poornam Galati
Project Sponsor: Brown Foundation, Inc.
Project Location: University of Houston-Downtown

64 - Christina Tran, “Phylogeography of the Hoary Bats (Lasiusurus): Molecular Evidence for Species Diversity and Multiple Invasions of the Hawaiian Islands”
UHD Faculty Mentor: Dr. Amy Baird
Project Location: University of Houston-Downtown

66 - Dat Truong, “Study of the Thermotropic and Light-Emitting Properties of Poly(pyridinium Salts Derived from Napthidine)”
UHD Faculty Mentor: Dr. Robin Jose
Project Sponsor: Welch Foundation (BJ-0027)
Project Location: University of Houston-Downtown

68 - Mau Truong and Vi La, “Synthesis & Characterization of Ceramic Nanoparticles with Different Morphology”
Co-Authors: A. Wypych, J.Ulański
UHD Faculty Mentor: Dr. Janusz Grebowicz
Project Location: Lodz University of Technology – Politechnika Lodzka, Lodz, Poland

70 - Evelyn Valdez and Tien Dong, “Comparison Of Leaf Hydraulic Conductance Between An Evergreen and Deciduous Chaparral Shrub”
UHD Faculty Mentors: Drs. Michael Tobin and Sergiy Kushkin
Project Sponsors: Brown Foundation, Inc.; National Science Foundation; and Texas Workforce Commission
Project Location: University of Houston-Downtown

72 - Vinay Vaz, “Ellipsoid Body Neurons: The Neurological Basis for Alcohol Sensitivity in Drosophila?”
Co-Author: Dr. Greg Roman, Research Mentor, Department of Biology and Biochemistry, UH
UHD Faculty Mentor: Dr. Yuanyuan Kang
Project Sponsors: National Institute of Alcohol Abuse and Alcoholism; Texas Workforce Commission; and U.S. Nuclear Regulatory Commission
Project Location: University of Houston-Downtown

74 - German Villalobos, Jennifer Nguyen, and Jaime Alvarez, “Sleeping Inducing Drugs”
Co-Author: Prisilia Cruz, Yasmin Trujillo, Dorcas Mbaeri, and Quintin Jackson
UHD Faculty Mentor: Ms. Mitsue Nakamura
Project Sponsor: Brown Foundation, Inc.
Project Location: University of Houston-Downtown

76 - Andrew Yen, “Temperature Control of an Air Heater”
UHD Faculty Mentor: Dr. Vassilios Tzouanas
Project Location: University of Houston-Downtown

Service Learning Poster Presentation Session II (2:25PM-3:30PM):

78 - Shamsa Ali and Judith Gallardo, “Service Learning Project at Hermann Park Conservancy”
Co-Author: Raymond Cherian
UHD Faculty Mentor: Dr. Mary Jo Parker
Project Sponsor: Texas Workforce Commission
Project Location: Hermann Park Conservancy

80 - Emilia Caylor, “Girls In STEM”
UHD Faculty Mentor: Dr. Mary Jo Parker
Project Sponsor: Texas Workforce Commission
Project Location: Saint Rose of Lima Catholic Church

82 - Shanna Daniel, “Service Learning at The Beacon Homeless Shelter”
UHD Faculty Mentor: Dr. Mary Jo Parker
Project Sponsor: Texas Workforce Commission
Project Location: The Beacon

84 - Amairani Hernandez, “Service Learning at Rusk Elementry”
Co-Author: Kathryn Wenzel
UHD Faculty Mentor: Dr. Mary Jo Parker
Project Sponsor: Texas Workforce Commission
Project Location: Rusk Elementry School

86 - Christa Landowski, “The Houston Food Bank”
UHD Faculty Mentor: Dr. Mary Jo Parker
Project Sponsor: Texas Workforce Commission
Project Location: Houston Food Bank

88 - Geraldine Lerner, “Service Project: Car Wash Fundraiser for the Living Hope Wheelchair Association”
Co-Author: Rickeno Bullard
UHD Faculty Mentor: Dr. Mary Jo Parker
Project Sponsor: Texas Workforce Commission
Project Location: University of Houston-Downtown

90 - Ely Rivera, “Serving at the Japhet Creek Linear Park”
Co-Author: DaNaë Woodard
UHD Faculty Mentor: Dr. Mary Jo Parker
Project Sponsor: Texas Workforce Commission
Project Location: Japhet Creek Linear Park

92 - Iris Silva and Maria Maldonado, “Microbiology and Urban Education Students Collaborate to Teach Third Graders about Composting”
Co-Authors: Sandy Gramajo and Fersen Leiva
UHD Faculty Mentors: Drs. Maria Bhattacharjee and Poornam Galati
Project Sponsor: Texas Workforce Commission
Project Location: Japhet Creek Linear Park
Acknowledgements

It is a great pleasure to recognize the many individuals, organizations, and institutions supporting our UHD students in their research endeavors as well as service learning activities. These include significant funding of research and service learning over the past year from the following agencies: National Science Foundation Noyce Program (0934913); Texas State Legislature JAMP Program; Texas State Representative Sylvester Turner Office; Texas Workforce Commission (2813WPB000); U.S. Department of Education MSEIP (P120A130040); U.S. Nuclear Regulatory Commission (NRC-27-10-1121, NRC-HQ-12-G-38-0006); The Brown Foundation, Inc.; Welch Foundation (BJ-0027); Shell Oil Co.; and University of Houston-Downtown.

Many students conducted their research during academic and summer research programs on and/or off-campus. Faculty and staff members of these and other academic institutions, as well as personnel at industrial facilities, have generously supported/mentored our UHD students.

In addition, we would like to thank the UHD faculty and staff who have worked tirelessly to support undergraduate research and service learning experiences as well as the UHD staff, faculty and administrators who have helped make this conference a success.

Thank you for participating in the 13th Annual UHD Student Research Conference!

Please share your impressions of the event by completing a conference evaluation.

Thanks to the generous supporters of this student conference:

The Brown Foundation, Inc.
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U.S. Department of Education MSEIP (Award No. 120A130040)
U.S. Nuclear Regulatory Commission (Award Nos. NRC-27-10-1211, NRC-HQ-12-G-38-0006)
UHD College of Business
UHD College of Humanities and Social Sciences
UHD College of Public Service
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UHD President's Office
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