Dear Friends of Undergraduate Research and Service Learning:

Welcome to the seventh annual Celebratory Symposium for students in our Summer Scholars program. With more than four hundred presenters, this is our largest event ever, and we are very excited to share their work with you. And we are delighted to be able to do so in the heart of the main campus in the Patrick T. Harker ISE Lab – our special thanks go to Dr. John Jungck, Director of the ISE Lab, for kindly hosting us in this wonderful facility.

As the Symposium program demonstrates, these students have worked on an extraordinary range of projects in disciplines all across the university as well as in the community. Over the past ten weeks, they have collaborated with their faculty mentors and, in many cases, with other undergraduates and with graduate students, learning how original research takes place and creating new knowledge themselves. Continuing UD’s nature as an engaged campus, many of them have worked with a wide range of external partners, translating research into action that both benefits community agencies and provides the students themselves with deepened understandings of the ways in which they can contribute and learn from their service. National studies of undergraduate research and experiential learning have shown time and again that these experiences can be the most powerful part of a student’s education, shaping his or her life and career for decades to come.

Both today’s event and the summer program itself would not be possible without the extraordinary support of people and offices across our campus. I particularly want to call out for thanks to the staff of the Office of Undergraduate Research and Experiential Learning as well as the members of the faculty and staff throughout UD who volunteer their time and expertise to mentor students in the opportunities and responsibilities that go with conducting original research and service projects.

On behalf of all these members of the UD community, thank you for joining us at today’s program. We hope you will enjoy seeing and hearing the fruits of the students’ work and take away an even deeper appreciation for the intellectual accomplishments, creative achievements, and service contributions they make to the University of Delaware and its wider community.

Sincerely.

Iain Crawford
Faculty Director, Undergraduate Research and Experiential Learning
August 2016

Dear Colleagues and Friends:

Welcome to the University of Delaware’s seventh Annual Undergraduate Research and Service Celebratory Symposium that brings this year’s Summer Scholars program to a conclusion. This event marks the culmination of 10 weeks of full-time research by more than 400 student researchers who have worked with faculty mentors and community partners. During the program, these students have been engaged in projects representing disciplines across the university, discovering the challenges and excitement of creating new knowledge in collaboration with faculty and other researchers.

Studies have shown that these types of experiences are among the most important forms of learning. We know that engaging in mentored research can be a life-changing experience. Some of the students will build from this program as they go on to graduate school; others will find the experience they have gained invaluable as they move into professional careers. All of them will look back on these summer months as some of the most intensive and successful parts of their education.

On behalf of the University, I thank everyone who has made this program possible, including the staff of the Office of Undergraduate Research and Experiential Learning, faculty, mentors and community partners. Being part of a top-flight research university such as Delaware means that every student must possess courage, enthusiasm, and the willingness to push the boundaries of understanding and knowledge. I want to challenge every student to dare to be great. This is what makes Delaware shine.

Go Hens,

Domenico Grasso
Undergraduate Research and Service Celebratory Symposium
Harker ISE Lab
Thursday, August 11, 2016 • 9:00 a.m. - 5:00 p.m.

8:30 – 8:55 Poster Session I Set-up

9:00 – 4:00 Art Exhibit

9:00 – 10:30 Poster Session I

9:00 – 9:45 (ODD-numbered posters present)
9:45 – 10:30 (EVEN numbered posters present)

9:00 – 10:00 Oral Session I

1. Educational Enrichment
2. Criminal Justice Reform
3. Sustainable Apparel

10:10 – 11:10 Oral Session 2

1. Camp
2. Agriculture & Food
3. Fashion & Dye
4. Politics & Policy

10:30 – 10:45 Switch Posters for Session II

10:45 – 12:15 Poster Session II

10:45 – 11:30 (ODD-numbered posters present)
11:30 – 12:15 (EVEN numbered posters present)

11:20 – 12:20 Oral Session 3

1. Women's Studies & Social Justice
2. Material Culture
3. English Education

12:00 – 1:30 LUNCH

12:15 – 1:15 Switch posters for Session III

1:15 – 2:45 Poster Session III

1:15 – 2:00 (ODD-numbered posters present)
2:00 – 2:45 (EVEN numbered posters present)

1:30 – 2:30 Oral Session 4

1. Well-Being
2. Anthropology
3. Art
4. Economics & Statistics

2:40 – 3:55 Oral Session 5

1. Healthy Communities
2. Psychology & Diversity
3. English & Music

2:45 – 3:00 Switch Posters for Session IV

3:00 – 4:30 Poster Session IV

3:00 – 3:45 (ODD-numbered posters present)
3:45 – 4:30 (EVEN numbered posters present)

4:00 – 5:00 UD Creamery Ice Cream, courtesy of the
College of Agriculture and Natural Resources
Harker ISE Lab Walkway
Explanation of Program Entries

Student Name: John Doe, Biomedical Engineering (LS) (UD)
Major: Biomedical Engineering
Project Title: Identification of Early Through Late-Stage Changes in Murine Articular Chondrocyte Biology Following Joint Destabilizing Surgery
Faculty Mentor Name: Joe Smith, Biomedical Engineering
Faculty Mentor Department: Home University (if not UD)
Funding Source

Key to Abbreviations

ACCEL Accelerating Clinical Science Partnerships and Translational Research
ADaPT Advancing Diversity in Physical Therapy
AHSS Arts, Humanities, & Social Sciences
ArtsBridge ArtsBridge America
BMEG Department of Biomedical Engineering
CANR College of Agriculture & Natural Resources Summer Institute
Carmean Blair & Cheryl Carmean Summer Scholar Award
CBER Center for Biomedical Engineering Research
CCEI Catalysis Center for Energy Innovation
CPC Center for Political Communications
CPW Charles Peter White Scholars
CPWBIO Charles Peter White Biology Scholars
CRESP Center for Research in Education & Social Policy
CSD Center for the Study of Diversity
DDOE MSP Delaware Department of Education Mathematics Science Partnership
DNERR Delaware National Estuary Research Reserve
DNREC Delaware Department of Natural Resources & Environmental Control
DRI Delaware Rehabilitation Institute
DSU Delaware State University
DTCC Delaware Technical Community College
ECE Department of Electrical & Computer Engineering
EPSCoR Experimental Program to Stimulate Competitive Research
Heitzer David M. Heitzer Award
Hofmann Scholar Ethel & Donald Hofmann Scholars
INBRE IDEA Network of Biomedical Research Excellence
IWSTEM Inspiring Women in Science, Technology, Engineering & Mathematics
McNair McNair Scholars Program
MEEG Department of Mechanical Engineering
NECA Northeastern Chemical Association
NIH National Institute of Health
NIH-COBRE National Institute of Health Center of Biomedical Research Excellence
NSF National Science Foundation
NSF REU National Science Foundation Research Experiences for Undergraduates
NSF CBET Bioengineering, Environmental, and Transport Systems
NSURP Nemours Summer Undergraduate Research Program
OHEI-HESSP Office of Health Equities & Inclusion- Health Equities Summer Scholar Program
Pattison Hellen Pattison Scholar Award
Plastino David A. Plastino Scholar Award
REACT Research Experiences to Advance Chemists in Training
SE Science & Engineering Scholars
SF Summer Fellowship
SL Service Learning Scholars
Stetson Milton H. Stetson Memorial Fellowship
POSTER SESSION I

(Agriculture & Natural Resources, Animal & Food Sciences, Entomology & Wildlife Ecology, Plant & Soil Sciences, Biological Sciences, Chemistry & Biochemistry, Geography, Marine Science & Policy, Environmental Science)

AGRICULTURE & NATURAL RESOURCES

1) Frances Blake, Pre-Veterinary Science (EPSCoR) (DSU)  
Brigid McCrea, Agriculture & Natural Resources (DSU)  
Analysis of Growth Rates and Feed Efficiency for Broilers and Buckeyes

2) Jordan Brockwell, Biological Chemistry (EPSCoR) (Wesley College)  
Brigid McCrea, Agriculture & Natural Resources (DSU)  
The Effect of Different Waterer Designs On the Drinking Behavior of Buckeye Chickens

3) Dinh Ngo, Biological Chemistry (EPSCoR) (Wesley College)  
Brigid McCrea, Agriculture & Natural Resources (DSU)  
Comparison between Broiler and Buckeye Chickens in Organ Growth and Parts Distribution

4) Omolade Oludare, (EPSCoR) (DSU)  
Kalpalatha Melmaiee, Agriculture & Natural Resources (DSU)  
TBA

5) Tabitha Edwards, Environmental Science (EPSCoR) (DSU)  
Gulnihal Ozbay, Agriculture & Natural Resources (DSU)  
TBA

ANIMAL & FOOD SCIENCES

6) Andrew Mason, Pre-Veterinary Medicine & Animal Biosciences (SE)  
Ryan Arsenault, Animal & Food Sciences  
Comparison of Immunometabolic Response in Macrophages Infected with Salmonella Enteritidis or Salmonella Heidelberg

7) Joey Rea, Pre-Veterinary Medicine & Animal Biosciences (SE)  
Ryan Arsenault, Animal & Food Sciences  
Kinome Profiling of Gene Knockout Mutants of Salmonella Typhimurium

8) Justin Berg, Pre-Veterinary Medicine & Animal Biosciences (SE)  
Amy Biddle, Animal & Food Sciences  
The Equine Microbiome Project

9) Brian Chambers, Pre-Veterinary Medicine & Animal Biosciences (SE)  
Amy Biddle, Animal & Food Sciences  
Resistance of Strongylus equinus to Dewormers and its Relation to Horse Age, Gender and Breed

10) James Madlock, Biology (EPSCoR) (Cheyney University)  
Amy Biddle, Animal & Food Sciences  
Measuring Metabolic Changes Over Time in Equine Microbiome Community

11) Gregory Patterson, Biology (EPSCoR) (Cheyney University)  
Amy Biddle, Animal & Food Sciences  
Primer Design for Identification of Small Strongyle Species

12) Natalie Zelenky, Pre-Veterinary Medicine & Animal Biosciences (Carmean)  
Robert Dyer, Animal & Food Sciences  
E. coli Endotoxin Activates Proinflammatory Cytokine Secretion in Immune Cells of Bovine Spleen and Mesenteric Adipose Tissue

13) Kassandra Moyer, Animal & Food Sciences (Carmean)  
Tanya Gressley, Animal & Food Sciences  
Characterization of Urea Release Rates from Slow Release Urea Products

14) Kayla Neiderfer, Pre-Veterinary Medicine & Animal Biosciences (Carmean)  
Tanya Gressley, Animal & Food Sciences  
Affects of Buffers in the Bovine Gastrointestinal Tract

15) Alexis Trench, Pre-Veterinary Medicine & Animal Biosciences (CARMN)  
Tanya Gressley, Animal & Food Sciences  
Effect of Carbon Dioxide and Pore Size on in vitro Measurements of Bovine Neutrophil Chemotaxis

16) Phania Alcena, Food Science (EPSCoR) (Florida A&M University)  
Kali Kniel, Animal & Food Sciences  
Detection and Quantitative Analysis of Salmonella from Pre-harvest Environment

17) Lakshmi Sastry, Pre-Veterinary Medicine & Animal Biosciences (SE)  
Mark Parcells, Animal & Food Sciences  
Mapping Interactions of EZH2 in Marek’s Disease Oncogenesis

18) Louis Colaruotolo, Food Science (SE)  
Changqing Wu, Animal & Food Sciences  
Influences of Pulsed Light on Anthocyanins and Other Compounds in Red Raspberries
ENTOMOLOGY & WILDLIFE ECOLOGY

19) Daniel Day, Environmental Science (CANR) (Dickinson College)
   Jeff Buler, Entomology & Wildlife Ecology
   Mapping Winter Waterfowl Using Radar in Delaware

20) William Keilsohn, Entomology (SE)
   Doug Tallamy, Entomology & Wildlife Ecology
   The Effects of Roadside Habitat on Traffic Insect Mortality

PLANT & SOIL SCIENCES

21) Jarrett Talley, Agronomy (EPSCoR) (Florida A&M University)
   Harsh Bais, Plant and Social Sciences
   Behavioral Assays of the Parasitic Plant Cuscuta

22) Ryan Johnson, Medical Diagnostics (EPSCoR/Hofmann Scholar)
   Pamela Green, Plant and Social Sciences
   Investigating the Impact of Environmental Stress on Gene Expression in the Horseshoe Crab

23) John Dougherty, Environmental Sciences (EPSCoR) (Wesley College)
   Shreeram Inamdar, Plant and Social Sciences
   How Does Heterogeneous Vegetation and Topography Affect Physical and Chemical Soil Properties in an Upland Temperate Forest

24) Jack Protokowicz, Biochemistry (EPSCoR)
    Shreeram Inamdar, Plant & Soil Sciences
    Capturing Carbon: Investigating the Impact of Various Carbon Sources on a Small, Forested Watershed

25) Tristun Williams, Agronomy (EPSCoR) (Florida A&M University)
    Deb Jaisi, Plant and Social Sciences
    Phosphorus Cycling in the Chesapeake Bay and Deer Creek

26) Alesia Hunter, Environmental Biology (McNair) (Beloit College)
    Angela Seyfferth, Plant & Soil Sciences
    Chemical Properties of Mangrove Leaves from Polluted and Healthy Habitats

27) Erica Loudermilk, Environmental Engineering (EPSCoR)
    Angela Seyfferth, Plant and Social Sciences
    Phosphorus and Nitrogen Spatiality in a Delaware Estuary

28) Kaitlyn Markey, Plant & Soil Science (CANR) (North Carolina State University)
    Amy Shober, Plant & Soil Sciences
    Using Silicon Fertilizers to Improve Soil Phosphorus Availability in High Phosphorus Soils

29) Gina Zhu, Environmental Engineering (EPSCoR) (Yale University)
    Donald Sparks, Plant & Social Sciences
    Impacts of Sorption on Soil Organic Carbon Reactivity Associated with Hydrous Manganese Oxide

30) Tessa Jarvis, Biological Sciences (EPSCoR/NUCLEUS)
    Eric Wommack, Plant and Social Sciences
    Production of Latent Viruses from a Nitrogen-Fixing Bacterial Symbiont of Soybean

BIOLOGICAL SCIENCES

31) Kanisha Blake, Biology (INBRE) (Wesley College)
    Hacene Boukari, Physics (DSU)
    Ficoll Induces Aggregation of Bovine Serum Albumin and Phycoerythrin Proteins

32) Maria Limmina, Biological Sciences (Governor Biotech Award)
    Ethna Fidelma Boyd, Biological Sciences
    Investigating the Role of Bacterial Cell Wall Modifications in Fitness and Survival

33) Priyha Mahesh, Biological Sciences (CPWBIO/Hofmann Scholar)
    Melinda Duncan, Biological Sciences
    Developmental Expression of β-catenin in Reporter Mice

34) Branden Bateman, Biomedical Engineering (SE)
    Randall Duncan, Biological Sciences
    Effects of IGF-1 on Chondrocyte Morphology in Three-dimensions

35) Elijah Ikhumhen, Biomedical Sciences (McNair) (Marquette University)
    Randall Duncan, Biological Sciences
    The Role of TRPV Channels in Preosteoblast Response to Mechanical Loading

36) Shannon Marshall, Biological Sciences (McNair)
    Randall Duncan, Biological Sciences
    The Effect of Oscillatory Fluid Shear on Prostate Cancer Attachment to Bone Marrow Endothelial Cells

37) Michael Wilson, Biological Sciences (CPW)
    Randall Duncan, Biological Sciences
    NGF Regulation of Bone-Derived Prostate Cancer Cell Proliferation and Response to ATP

38) Kyle Plusch, Biological Sciences (CPWBIO)
    Deni Galileo, Biological Sciences
    Determining the Role of L1CAM in Malignant Glioblastoma Stem Cells

39) Alexander Stubbolo, Biological Sciences (CPWBIO)
    Deni Galileo, Biological Sciences
    Does L1CAM Provide Chemotactic Signals That Instruct Migrating Glioblastoma Cells?

40) Austin Luna, Biology (INBRE) (Wesley College)
    Fady Gerges, (Green Clinics Laboratory)
    Incidence and Prevalence of Melanoma (In-situ and Invasive) Along the Demographics Spectrum in Kent and Sussex Counties as Correlated with the BRAF Mutation Status

41) Sydney Guaitieri, Neuroscience (DDOE MSP)
    John Jungck, Biological Sciences & Mathematical Sciences
    Cancerous Tumor Growth Models
42) Sundus Ahmed, Biology (INBRE) (DSU)
Hwan Kim, Biology (DSU)
A Novel Neuroprotective AurimMed Compound as a Potential Therapeutic for Parkinson’s Disease.

43) Joseph Katz, Nutritional Sciences (INBRE)
Hwan Kim, Biology (DSU)
Assessing Synergistic Damage of Commercially Available Pesticides in Parkinson’s Disease Fly Model

44) Nathaniel Borders, Biological Sciences (Stetson)
Salil Lachke, Biological Sciences
Functional Characterization of Caprin2 in Mouse Eye Development and its Associated Developmental Defect Peters Anomaly

45) Opeyemi Akinrininsola, Biology (EPSCoR) (DSU)
Hakeem Lawal, Biology (DSU)
Developing a Drosophila Model for Parkinson’s Disease from Commercially-used Pesticides

46) Mara Baker, Biological Sciences (Delaware Governor’s Bioscience Fellowship) (DTCC)
John McDowell, Biology & Chemistry (DTCC)
Analysis of Transcriptional Regulation of the Lyme Borrelia Fibronectin-binding Protein BBK32: Promoter Mapping of a Putative Member of the RpoS-regulated Transcriptome

47) Stephanie Anyika, Biology (EPSCoR) (DSU)
Karl Miletti, Biology (DSU)
TBA

48) Teshress Chandradat, Biotechnology (EPSCoR) (DTCC)
Karl Miletti, Biology (DSU)
TBA

49) Jan Parson, Pre-Professional Chemistry (INBRE) (DSU)
Karl Miletti, Biology (DSU)
CD44-associated Response to Hydrogen Peroxide-mediated Oxidative Stress in MCF-7 and MCF-7/CD44s Breast Cancer Cell Lines

50) Sean Lein, Biochemistry (CPW BIO)
Ramona Neunuebel, Biological Sciences
Identifying Phosphoinositide Binding Regions in Legionella pneumophila Effector Proteins

51) Nicollette Uhde, Biological Sciences (INBRE) (DTCC)
Ramona Neunuebel, Biological Sciences
Constructing a Legionella pneumophila Effector Library to Identify Novel Cytoskeleton Interacting Proteins

52) Kaitlyn Duong, Biological Sciences (CPW BIO)
Anja Nohe, Biological Sciences
Effects of Turmeric Extract on PC12 Cell Differentiation

53) Lauren Harper, Biological Sciences (CPW BIO)
Anja Nohe, Biological Sciences
Effects of CK2 Blocking Peptides on C2C12 Cell Differentiation

44) Nathaniel Borders, Biological Sciences (Stetson)
Salil Lachke, Biological Sciences
Functional Characterization of Caprin2 in Mouse Eye Development and its Associated Developmental Defect Peters Anomaly

CHEMISTRY & BIOCHEMISTRY

56) Cannon Giglio, Chemistry (SE)
Steven Brown, Chemistry & Biochemistry
Selection of Important Variables for Chemical and Spectroscopic Data

57) Griffen Desroches, Chemistry (Plastino)
Svilen Bobev, Chemistry & Biochemistry
New Interstitial Intermetallics in the RE-Cd-A System

58) Ariel Bilbrough, Biological Chemistry (INBRE) (Wesley College)
Malcolm D’Souza, Chemistry (Wesley College)
Persistence of Sulfide, Sulfonyl, and Sulfamoyl-Containing Compounds in Aquatic Environments

59) Edward Brandenburg, Biochemistry (EPSCoR) (Wesley College)
Malcolm D’Souza, Chemistry (Wesley College)
Evaluating the Contribution of Nitrogen’s Lone Pair in Differing Substances

60) Andreanna Jeffries, Biological Chemistry (EPSCoR) (Wesley College)
Malcolm D’Souza, Chemistry (Wesley College)
Increasing the STEM Presence on the Wesley Website

61) Austin Lonski, Biological Chemistry (INBRE) (Wesley College)
Malcolm D’Souza, Chemistry (Wesley College)
Kinetic Analyses of 3-Trifluoromethyl Phenyl Chloroformate Using Conductance and Titrations

62) Michael Skivers, Environmental Studies (EPSCoR) (Wesley College)
Malcolm D’Souza, Chemistry (Wesley College)
Turning Despicable into Livable: A Statewide Analysis to Identify High Risk Lawns for Water Quality

63) Jeremy Wirick, Biological Chemistry (INBRE) (Wesley College)
Malcolm D’Souza, Chemistry (Wesley College)
Correlation of the Rates of Solvolysis of 4-Chlorobutyl Chloroformate

64) Matthew Hurlock, Biochemistry (Plastino)
Catherine Grimes, Chemistry & Biochemistry
Investigation of ATPase Activity in Nod2 and Nod2 Walker Mutants
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<th>No.</th>
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<tr>
<td>65)</td>
<td>Zachary Jones, Chemistry (Plastino)</td>
<td>Catherine Grimes, Chemistry &amp; Biochemistry</td>
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<td></td>
<td>Chemoenzymatic Synthesis of Bioorthogonal UDP N-acetyl muramic acid</td>
<td>Derivatives to Label the Peptidoglycans of S. aureus and B. subtilis</td>
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<td>66)</td>
<td>Hannah Wastyk, Biochemistry (Plastino)</td>
<td>Catherine Grimes, Chemistry &amp; Biochemistry</td>
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<td></td>
<td>Biochemical Characterization of Innate Immune Receptor, Nod2 and its</td>
<td>Chaperone, Hsp70</td>
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<td>67)</td>
<td>Shelby Roseman, Chemistry (SE)</td>
<td>John Koh, Chemistry &amp; Biochemistry</td>
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<td>AF4-AF9 Protein-Protein Interaction Inhibitor: Synthesis and</td>
<td>Biological Evaluation</td>
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<td>68)</td>
<td>Junius Thomas, Biochemistry (NUCLEUS)</td>
<td>John Koh, Chemistry &amp; Biochemistry</td>
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<td>Design and Synthesis of Possible NSD1 Inhibitors for Pediatric</td>
<td>Leukemia</td>
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<td>69)</td>
<td>Lucas Onisk, Chemistry (Plastino)</td>
<td>Tatyana Polenova, Chemistry &amp; Biochemistry</td>
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<td>Characterization of the Active Site of Vanadium Haloperoxidases and</td>
<td>F397H Mutant using $^{51}$V Magic Angle Spinning NMR Spectroscopy</td>
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<td>Dominic Santoleri, Biochemistry (SE)</td>
<td>Sharon Rozovsky, Chemistry &amp; Biochemistry</td>
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<td>Purification and Characterization of DNA Binding Protein AphA</td>
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<td>Evan Horowitz, Chemistry (Heitzer)</td>
<td>Klaus Theopold, Chemistry &amp; Biochemistry</td>
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<td>Synthesis and Characterization of First Row Metal-Tp Complexes</td>
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<td>72)</td>
<td>Igbal Attelaemanan, Biochemistry (REACT)</td>
<td>Mary Watson, Chemistry &amp; Biochemistry</td>
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<td></td>
<td>Synthesis of Substituted Nitrobenzenes as NSD1 Inhibitors, an</td>
<td>Epigenetic Regulator in Leukemias</td>
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<td>73)</td>
<td>Alex Manders, Chemistry (Plastino)</td>
<td>Mary Watson, Chemistry &amp; Biochemistry</td>
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<td>Enantiospecific Allylic Arylations to form Quaternary Stereocenters</td>
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<td>74)</td>
<td>Jacob Piane, Chemistry (Plastino)</td>
<td>Mary Watson, Chemistry &amp; Biochemistry</td>
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<td>Late-Stage Functionalization via Suzuki Cross Couplings of</td>
<td>Un-activated Amines</td>
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<td>75)</td>
<td>Arvind Annamalai, Chemistry (Plastino)</td>
<td>Neal Zondlo, Chemistry &amp; Biochemistry</td>
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<td>Structural Contexts of Phosphorylation and OGlcnAcylation</td>
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<td>76)</td>
<td>Nicole Wenzell, Biochemistry (SE)</td>
<td>Neal Zondlo, Chemistry &amp; Biochemistry</td>
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<td>Understanding a Fundamental Force in Protein Folding: Tuning the N</td>
<td>$\rightarrow$ Pi* Interaction via Designed Peptides</td>
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**GEOLOGICAL SCIENCES**

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<th>No.</th>
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<tbody>
<tr>
<td>77)</td>
<td>Haley Stanko, Geography (EPSCoR)</td>
<td>Lindsay Naylor, Geography</td>
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<td>TBA</td>
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**MARINE SCIENCE & POLICY**

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<th>No.</th>
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<tr>
<td>78)</td>
<td>Melanie Brennan, Marine Science (SE)</td>
<td>Daniielle Dixson, Marine Biosciences</td>
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<td></td>
<td>Predator Detection Though Sensory Stimuli in the Coral Peppermint</td>
<td>Shrimp (Lysmata wurdemanni)</td>
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<td>79)</td>
<td>Megan Cain, Environmental Science (SE)</td>
<td>Daniielle Dixson, Marine Biosciences</td>
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<td>Sunscreen Negatively Effects the Behavior and Development of the</td>
<td>Atlantic Horseshoe crab, Limulus polyphemus</td>
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<td>80)</td>
<td>Lucas Pensinger, Marine Science (SE)</td>
<td>Daniielle Dixson, Marine Biosciences</td>
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<td></td>
<td>Understanding the Effects of Climate Change on Horseshoe Crab</td>
<td>Development</td>
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<td>81)</td>
<td>Alexandra Matacchieri, Marine Science (SE)</td>
<td>Pat Gaffrey, Marine Biosciences</td>
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<td></td>
<td>Exploring the Different Trematodes Found in the Eastern Mudsnail,</td>
<td>Ilyanassa oboleta, through DNA Profiling</td>
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<td>82)</td>
<td>Nicole Coffey, Marine Science/Chemistry (SE)</td>
<td>George Luther, Oceanography</td>
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<td>Low-level Soluble Manganese Speciation in Surface Seawater</td>
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<td>83)</td>
<td>Robert Jaquette, Physics (Hofmann Scholar)</td>
<td>Fabrice Veron, Physical Ocean Science &amp; Engineering</td>
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<td>Exploring the Different Trematodes Found in the Eastern Mudsnail,</td>
<td>Ilyanassa oboleta, through DNA Profiling</td>
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<td>84)</td>
<td>Logan Minner, Medical Technology &amp; Lily Neff, Biological Chemistry</td>
<td>Kevin Shuman, Biology, Chemistry, Physics &amp; the Environment (Wesley</td>
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<td>Vertical Distribution of Photosynthetic Pigments in Silver Lake</td>
<td>College)</td>
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**ENVIRONMENTAL SCIENCE**

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<th>No.</th>
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<tr>
<td>85)</td>
<td>Lily Neff, Biological Chemistry (EPSCoR) (Wesley College)</td>
<td>Kevin Shuman, Biology, Chemistry, Physics &amp; the Environment (Wesley</td>
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<td></td>
<td>Prudent Practices in the Storage, Handling and Disposal of Laboratory</td>
<td>College)</td>
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<td>86)</td>
<td>Mary Williams, Biological Sciences (EPSCoR) (DTCC)</td>
<td>Kari St. Laurent, Environmental Science (DNERR)</td>
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<td>Developing a Zooplankton Monitoring Program at the DNERR</td>
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</table>
87) Savanah Love, Environmental Sciences (EPSCoR) (Wesley College)
Stephanie Stotts, Environmental Studies (Wesley College)
*Environmental and Water Quality Projects on Silver Lake, Dover, DE*

88) Jose Santana, Environmental Sciences (EPSCoR) (Wesley College)
Stephanie Stotts, Environmental Studies (Wesley College)
*Development of Rivers and Streams: A Historical Analysis*

89) Brooke Thompson, Environmental Sciences (EPSCoR) (Wesley College)
Stephanie Stotts, Environmental Studies (Wesley College)
*A Cost Benefit Analysis of Wesley College’s Recycling Program in its First Semester*

**POSTER SESSION II**

*(Christiana Care, Nemours Biomedical Research, Medical Laboratory Sciences, Psychological & Brain Sciences, Kinesiology & Applied Physiology, Physical Therapy, Nursing)*

**CHRISTIANA CARE HOSPITAL**

1) Destiny Hollis, Biology (INBRE) (Wesley College)
LeRoi Hicks, Internal Medicine (Christiana Care Hospital)
*Opioid Overdose Patients: Identifying Patients at Risk for Rehospitalization Due to Subsequent Opioid and Benzodiazepine Treatment*

2) Kristen Pisarcik, Biotechnology (INBRE) (DTCC)
Eric Kmiec, Gene Editing Institute (Christiana Care Hospital)
*Gene Editing in Saccharomyces cerevisiae using CRISPR/Cas9*

**NEMOURS BIOMEDICAL RESEARCH**

3) Alyssa Lattomus, Chemistry (NIH) (Washington College)
Robert Akins, Nemours Biomedical Research (Nemours)
*Surgical Skeletonization of Common Carotid Artery in an Animal Model Alters Vessel Compliance and Protease Activity*

4) Margaret Mahoney, Neuroscience (NSURP) (Dartmouth College)
Melissa Alderfer, Nemours Biomedical Research (Nemours)
*Assessing Socioeconomic Status and Overall Psychosocial Risk in Families of Children with Cancer*

5) Kyle Hinle, Biological Sciences (NUCLEUS)
Matthew Butchbach, Nemours Biomedical Research (Nemours)
*Regulation of SMN2 Expression by Novel Small Molecules*

6) Stephanie Masters, Biology (NSURP) (James Madison University)
Matthew Butchbach, Nemours Biomedical Research (Nemours)
*Ephrin Receptor A4 (EPHA4) Expression in Spinal Muscular Atrophy Cells*

7) Meghan Brumbley, Neuroscience (NSURP) (Temple University)
Esther Chung, Nemours Biomedical Research (Jefferson)
*Receipt of Prenatal Care and Well Child Care among Drug Dependent Women and Their Young Children*

8) Robert Abishek, Neuroscience (INBRE) (Swarthmore College)
Jane Crowley & Gray Vargas, Nemours Biomedical Research (Nemours)
*Factors Affecting Recovery in Pediatric Concussion*

9) Andrew Doran, Histology (INBRE) (DTCC)
Paul Fawcett & Carrie Paquette-Straub, Nemours Biomedical Research (Nemours)
*Assessment of Clinical Value of Cytokines*

10) Melchizedek Myers, Chemistry (INBRE) (Temple University)
Rochelle Haas, Nemours Biomedical Research (Nemours)
*Oculomotor Dysfunction in Concussion: A Predictor of Protracted Recovery?*

11) Colton Takata, Biomedical Engineering (NSURP) (Johns Hopkins University)
John Henley, Nemours Biomedical Research (Nemours)
*Comparison of Intrinsic Kinematic Foot Models*

12) Camille Elliott, Biology (OHEI-HESSP) (Rowan University)
Laurens Holmes, Nemours Biomedical Research (Nemours)
*Race/Ethnicity Disentanglement in the Relationship between Substance Misuse and Mild Traumatic Brain Injuries (mTBI) in Children*

13) Anthony Filippini, Nursing (OHEI-HESSP) (West Chester University)
Laurens Holmes, Nemours Biomedical Research (Nemours)
*Race-Specific and Age-Adjusted Childhood Immunization Prevalence: Prospects for Diverse Culture Subpopulation Optimization*

14) Melissa Gray, Biology (OHEI-HESSP) (James Madison University)
Laurens Holmes, Nemours Biomedical Research (Nemours)
*Childhood Acute Myeloid Leukemia Characterization and Temporal Trends in the United States (1973-2013): Are There Variances in Sex, Age at Tumor Diagnosis, and Race in Four Decades?*

15) Andre Jones, Biology (INBRE) (Wesley College)
Laurens Holmes, Nemours Biomedical Research (Nemours)
*Implication of Race in the Relationship between Dental Disorders and Social Determinants among Children: Evidences from NSCH, 2012*
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<td>17</td>
<td>Eunice Shin</td>
<td>Biology (NSURP) Villanova University</td>
<td>Delineating Genotype-Phenotype Correlations in Diastrophic Dysplasia</td>
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<td>18</td>
<td>Halley Donlin</td>
<td>Psychology (NSURP) Elizabethtown College</td>
<td>Optical Coherence Tomography (OCT) Study of Fixation Pattern, Macular Structure, and Ocular Dominance in Normal and Amblyopic Eyes</td>
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<td>19</td>
<td>Alyssa Givens</td>
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<td>Long-term Effects of Bisphosphonates on Bone Health in Children with Cerebral Palsy</td>
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<td>20</td>
<td>Lucy Sullivan</td>
<td>Molecular Cell Biology (NSURP) University of California, Berkely Nemours Biomedical Research (Nemours)</td>
<td>Development of Tools for High-throughput Drug Discovery in Drug-resistant Medulloblastoma</td>
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<td>21</td>
<td>Robert Dina</td>
<td>Biological Chemistry (INBRE) Wesley College</td>
<td>The Long-term Outcome of Pelvic Asymmetry during Gait in Children with Cerebral Palsy Following Unilateral Femoral Derotation Osteotomy</td>
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<td>Samantha Weiss</td>
<td>Biochemistry (NSURP) Rowan University</td>
<td>Development of High-throughput Screen for Compounds that Disrupt Binding of Leukemia Cells to Bone Marrow</td>
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<td>23</td>
<td>Celina Santiago</td>
<td>Chemistry (NSURP) Villanova University</td>
<td>Foot Deformities and Gait Deviations in Children with Arthrogryposis</td>
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<td>24</td>
<td>Catherine Dolan</td>
<td>Biological Sciences Education (INBRE)</td>
<td>The Impact of Surgical and Physical Therapy Dose on Recovery in Children and Youth with CP</td>
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<td>25</td>
<td>Nicholas Imperato</td>
<td>Neuroscience (INBRE) Nemours Biomedical Research (Nemours)</td>
<td>Development of Tools for High-throughput Drug Discovery in Drug-resistant Medulloblastoma</td>
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<td>26</td>
<td>Myranda Steingraeber</td>
<td>Neuroscience (NSURP) University of Rochester</td>
<td>Investigating the Link between Neuroligin 4Y and Autism Spectrum Disorder in 47, XYY Syndrome</td>
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<td>Abigail Bisesi</td>
<td>Biology (ACCEL CTR) Oberlin College</td>
<td>Preclinical Testing of Targeted Therapies in Combination with Eribulin in Osteosarcoma</td>
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<td>Hannah Chidekel</td>
<td>Health: Science, Society, &amp; Policy (Brandeis University) Nemours Biomedical Research (Nemours)</td>
<td>Vaccine Adherence and Hesitancy Among Parents and Children with Cystic Fibrosis</td>
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<td>Aniah Coley</td>
<td>Public Health (ACCEL CTR) DSU</td>
<td>Long Acting Reversible Contraception (LARC) Participatory Action Research (PAR)</td>
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<td>Caitlin Blades</td>
<td>Foreign Language &amp; Literature (McNair)</td>
<td>Nanofiber Scaffold for the Differentiation of Stem Cells into Specific Cell Lines</td>
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<td>Diamond Higgin</td>
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<td>Christina Woodson</td>
<td>Psychology (McNair) Marquette University</td>
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<td>33</td>
<td>Rachel Metzgar</td>
<td>Neuroscience (SE)</td>
<td>How Does Emotion Interfere with Attention?</td>
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<td>Lizzy Marano</td>
<td>Psychology (SE)</td>
<td>Gender Differences in Children's Verbal Content</td>
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<td>Arthur Currier</td>
<td>Neuroscience (McNair)</td>
<td>Lifespan Boundary Extension</td>
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| 36) | Marisa Chamness, Neuroscience (SE)  
Dayan Knox, Psychological & Brain Sciences | GR Functionality in the Hippocampus        |
| 37) | Emily Moulton, Neuroscience (SE)  
Dayan Knox, Psychological & Brain Sciences | GR Function in the mPFC and Amygdala in the Single Prolonged Stress Model |
| 38) | Stephanie Rodgers, Neuroscience (INBRE)  
Jared Medina, Psychological & Brain Sciences | Examining the Relationship between Brain Damage and Proprioception |
| 39) | Xiaxin Zhong, Psychology (SE)  
Beth Morling, Psychological & Brain Sciences | Cultural Differences in Feedback Exchanges |
| 40) | Morgan Spurrier, Cognitive Science (SE)  
Joshua Neunuebel, Psychological & Brain Sciences | Sex Differences in the Acoustic Structure of Mouse Ultrasonic Vocalizations |
| 41) | Victor Ike, Psychology (McNair) (Marquette University)  
Anna Papafragou, Psychological & Brain Sciences | Event Perception and Description |
| 42) | Raevyn Johnson, Psychology (McNair) (Bloomfield College)  
Anna Papafragou, Psychological & Brain Sciences | The Development of Children's Communication Abilities |
| 43) | Malak Kawan, Neuroscience (SE)  
Jeffrey Rosen, Psychological & Brain Sciences | Differential Expression of Immediate Early Genes of Juvenile Rats after Contextual Fear Conditioning |
| 44) | Johanna Chajes, Neuroscience (SE)  
Tania Roth, Psychological & Brain Sciences | Using HDAC Inhibitors to Prevent Maltreatment-Induced Brain DNA Methylation |
| 45) | Simran Kaur, Neuroscience (SE)  
Tania Roth, Psychological & Brain Sciences | The Effect of Zebularine on Rodents Exposed to Various Maternal Caregiving Techniques |
| 46) | Sarah Beamish, Neuroscience (NUCLEUS)  
Jaclyn Schwarz, Psychological & Brain Sciences | The Impact of Sex and Neonatal Infection on Delays in Novel Object Recognition and Location and Changes in Proinflammatory Gene Expression in Juvenile Rats |
| 47) | Julie Gomez, Neuroscience (McNair)  
Jaclyn Schwarz, Psychological & Brain Sciences | Examination of Maternal Immune Activation on Inflammatory Response of Placenta and Fetal Immune System |
| 48) | Pragyan Khanal, Neuroscience (McNair)  
Jaclyn Schwarz, Psychological & Brain Sciences | Examination of Maternal Immune Activation on Inflammatory Response of Maternal and Fetal Brain |
| 49) | Jennifer Lawrence, Neuroscience (SE)  
Jaclyn Schwarz, Psychological & Brain Sciences | An Investigation of Sex Difference in Microglia Morphology and Function |
| 50) | Hallye Rosenbloom, Biological Sciences (SE)  
Jaclyn Schwarz, Psychological & Brain Sciences | Impact of Sex Differences and Neuroimmune Activation on Novel Object Recognition and Location at the Onset of Spatial Learning in Rats |
| 51) | Lauren Miller, Neuroscience (SE)  
Mark Stanton, Psychological & Brain Sciences | MK-801 Impairs the Retention of the Context-Shock Association in Standard Contextual Fear Conditioning in Adolescent Rats |
| 52) | Corey Beinhart, Cognitive Science (SE)  
Timothy Vickery, Psychological & Brain Sciences | A Computational, Statistical, and Neurological Examination of Contextual Cueing in Visual Scenes |
| 53) | Adrienne Kim, Biological Sciences (INBRE)  
Timothy Vickery, Psychological & Brain Sciences | Neural Representations of Wins and Losses across Different Opponent Contexts |

**KINESIOLOGY & APPLIED PHYSIOLOGY**

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<th>No.</th>
<th>Author(s)</th>
<th>Department(s)</th>
<th>Title</th>
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| 54) | Cory Cacciola, Mechanical Engineering (INBRE)  
Elisa Arch, Kinesiology & Applied Physiology | Training Individuals Post-Stroke to use Passive-Dynamic Ankle-Foot Orthoses using Live Bio-Feedback |
| 55) | Daniel Courtney, Exercise Science (INBRE)  
Elisa Arch, Kinesiology & Applied Physiology | Assessing the Validity of the G-Walk BTS® on Individuals with Unilateral Transtibial Amputations |
| 56) | Amy Bednarek, Athletic Training (SE)  
Thomas Buckley, Kinesiology & Applied Physiology | A Descriptive Analysis of Concussion History and Abnormalities Identified by Vestibular/Ocular Motor Screening Tools |
| 57) | Michael Christensen, Exercise Science & Dietetics (INBRE)  
Anahid Ebrahimi, Kinesiology & Applied Physiology | Comparing the Metabolic Cost for Healthy Individuals Walking With and Without Restricted Ankle Function |
| 58) | Teresa Ferrara, Biological Sciences (INBRE)  
Anahid Ebrahimi, Kinesiology & Applied Physiology | Altered Gait Parameters of Healthy Individuals Walking with Varying Levels of Restricted Ankle Function |
| 59) | Amy Trask, Exercise Science (SE) & Emily Wunsch, Exercise Science (NUCLEUS)  
Nancy Getchell, Kinesiology & Applied Physiology | Contextual Interference Effect in Random vs Blocked Learning |
60) Eduardo Arocha, Exercise Science (NUCLEUS)
Thomas Kaminski, Kinesiology & Applied Physiology
NCAA/DoD Grand Alliance: Concussion Assessment, Research and Education (CARE) Consortium – An Examination of Chronic Ankle Instability among Collegiate Athletes

61) Peter Spurrell, Biological Sciences (SE)
Thomas Kaminski, Kinesiology & Applied Physiology
A Comparison of Chronic Ankle Instability Tool and Balance Error Scoring System Outcomes

62) Daniela Davison, Biomedical Engineering (CBER NSF REU) (NJ Institute of Technology)
Chris Modlesky, Kinesiology & Applied Physiology
Improving the Reliability of a Technique to Calculate Rate of Force Development Scaling Factor (RFD-SF) in Children

63) Juan Ruiz, Biochemistry (INBRE)
Rhonda Prisby, Kinesiology & Applied Physiology
Intermittent Parathyroid Hormone Administration in Young and Old Male Fischer-344 Rats

PHYSICAL THERAPY

64) Michael Hoffman & Susanna Trost, Biological Sciences (SE)
Anjana Bhat, Physical Therapy
Differences in fNIRS Based Cortical Activation during Motor Tasks Across Children and Adults

65) Ikira Peace, Communication (INBRE) & Jessica Gibbons, Exercise Science (CPW)
Anjana Bhat, Physical Therapy

66) Daria Collins, Cognitive Science (McNair)
Cole Galloway, Physical Therapy
The Effects of Ramp Ascend Focused Body-Weight Supported Activity on the Development of Infants With and Without Down Syndrome

67) Nisha George, Biological Sciences (INBRE)
Cole Galloway, Physical Therapy
Effects of BWSS on Lower Extremity Limb Movement in Infants with Down Syndrome

68) Katie Holland, Biological Sciences (NUCLEUS)
Michele Lobo, Physical Therapy
Examining the Impact of an Exoskeletal Garment, the PlaySkin Lift, on Reaching Behaviors in Toddlers with Arthrogryposis Multiplex Congenita

69) Katelyn Klimowich, Biological Sciences (INBRE)
Michele Lobo, Physical Therapy
Effects of the Wilmington Robotic Exoskeleton (WREX) and the PlaySkin Lift on Reaching Behaviors in Toddler’s with Arthrogryposis Multiplex Congenita (AMC)

70) Casey Polasko, Exercise Science (INBRE)
Michele Lobo, Physical Therapy
Use of the PlaySkin LiftTM to Assist At-Risk Infants with Reaching and Manipulation

71) Nicholas Rattenni, Biomedical Engineering (CPW)
Michele Lobo, Physical Therapy
Microcontroller Analysis of Percent Time Infants Spend in the Prone, Supine, Sitting, and Reclined Position

72) Kendal Simmons, Exercise Science (McNair)
Michele Lobo, Physical Therapy
Testing the Effectiveness of Hard Pediatric Wilmington Robotic Exoskeleton (P-WREX) vs. Soft Garment-based PlaySkin Lift on Exoskeleton in Improving Upper-Extremity Mobility, Reaching and Object Exploration in a Child with Arthrogryposis

73) Emily Smith, Biological Sciences (NUCLEUS)
Michele Lobo, Physical Therapy
Upper Extremity Exoskeletons and Their Effects on the Mobility of Toddlers with Arthrogryposis

74) Ania Lipat, Applied Physiology & Kinesiology (CBER NSF REU) (University of Florida)
Darcy Reisman, Physical Therapy
Neurophysiologic and Behavioral Mechanisms of Post-Stroke Locomotion Learning

75) Logan Girton, Exercise Science (INBRE) (Slippery Rock University)
Karin Silbernagel, Physical Therapy
Short-Term Effects of Low Level Laser Therapy on the Achilles Tendon

76) Nia Powell, Athletic Training (ADaPT)
Karin Silbernagel, Physical Therapy
Use of Extended Field of View Ultrasound Imaging to Evaluate Patella Tendon Structure: A Feasibility and Reliability Study

77) Tyler Tice, Athletic Training (CPW)
Karin Silbernagel, Physical Therapy
Changes in Gait Patterns and Triceps Surae Activity in Immobilization Boots

78) Georgia Gagianas, Exercise Science (DRI)
Lynn Snyder-Mackler, Physical Therapy
The Effect of Fear and Lack of Confidence on Knee Biomechanics in Athletes after Anterior Cruciate Ligament Reconstruction

NURSING

79) Kelly Chen, Nursing (SE)
Ingrid Pretzer-Aboff, School of Nursing
Correlation between Physical Activity and Cognition in Parkinson’s Disease

80) Amoni Knight, Movement Science (INBRE) (DSU)
Ingrid Pretzer-Aboff, School of Nursing
The Relationship between Upper Body Function to Quality of Life in People with Parkinson’s Disease
POSTER SESSION III

BEHAVIORAL HEALTH & NUTRITION

1) Karlee Stritzinger & Heather Latchford, Exercise Science (INBRE) (DTCC)
   Mark Lafferty, Allied Health & Carol Malkin, Exercise Science (DTCC)
   *Thermic Effect of Digestion using Various Fasting Protocols*

2) Krystal Lee, Dietetics (SE)
   Sheau Ching Chai, Behavioral Health & Nutrition
   *Antioxidant Effects on Bone Mineral Density and Body Composition in Adults Aged 65-80*

3) Jing Luo, Dietetics (Pattison)
   Sheau Ching Chai, Behavioral Health & Nutrition
   *The Effects of Dietary Fats on Cognitive Function and Emotional Status in Adults Aged 65-80*

4) Rosymar Magana, Health Behavioral Science (McNair)
   Elizabeth Orsega-Smith, Behavioral Health & Nutrition
   *The Factors Influencing Cognitive Ability in Older Adults*

5) Peter Chappell, Health Behavior Science (SL Fellow)
   Mia Papas, Behavioral Health & Nutrition
   *Implementation of a Food Pantry at the University of Delaware*

6) Varsha Kripalu, Biological Sciences (SE)
   Mia Papas, Behavioral Health & Nutrition
   *Race, Education, and Health Impact Smoking Cessation Behaviors among Mobile Food Pantry Users*

7) Tyler Myers, Health Behavior Science (Pattison)
   Mia Papas, Behavioral Health & Nutrition
   *E-Cigarette Policies and Practices within the State of Delaware*

8) Vanessa Santiago, Health Behavior Science (McNair)
   Mia Papas, Behavioral Health & Nutrition
   *Examining the Impact of Adverse Childhood Experiences (ACEs) on the Efficacy of the Strengthening Families Parenting (SFP) Program*

9) Alyssa Tate Biological Sciences (SL Fellow)
   Mia Papas, Behavioral Health & Nutrition
   *Effectiveness of a Smoking Cessation Intervention Program on Food Bank Users*

10) Julia Katcher, Health Sciences (Extension Scholars)
    Sue Snider & Kathleen Splane, New Castle County Cooperative Extension-Nutrition
    *Approaches for Promoting Fruit and Vegetable Consumption in Children Participating in "Up for the Challenge"*

11) Emily Merklen, Dietetics (Extension Scholars)
    Sue Snider & Kathleen Splane, New Castle County Cooperative Extension-Nutrition
    *Are You Up for the Challenge?: A Program to Improve Healthy Food and Physical Activity Choices Among Youth*

MANAGEMENT INFORMATION SYSTEMS

12) Anyelo Almonte, Management Information Systems (McNair) (Bloomfield College)
    Gang Wang & Nerissa Brown, Accounting & MIS
    *TBA*

EDUCATION & HUMAN DEVELOPMENT

13) Alexis Paller, Psychology (INBRE)
    Roberta Golinkoff, School of Education
    *Effects of Parent Reading and Audio Narration on Children’s Comprehension of Books on Tablets*

14) Spencer Hoernes, Food Science (SL Fellow)
    Community Partner: Lutheran Community Services
    Allison Karpyn, Center for Research in Education & Social Policy
    *Green Inclusion’s Gardening Guide*

15) Nadisha Downs, Human Services (McNair)
    Rob Palkovitz, Human Development & Family Studies
    *Non-residential Father Involvement of Young African American Men Ages 18-25 in Urban Contexts*
LINGUISTICS & COGNITIVE SCIENCE

16) Naiim Mason, Linguistics (Hofmann Scholar)
Irene Vogel, Linguistics & Cognitive Science
*Systematic and Computational Quantification of Language Differences*

ENERGY & ENVIRONMENTAL POLICY

17) Abigail Vanover, Energy & Environmental Policy (SE)
John Byrne, Center for Energy & Environmental Policy
*The Case for Alternatives: Movement beyond the Car in the U.S.*

FASHION & APPAREL STUDIES

18) Danielle Dubay-Betters, Apparel Design (AHSS)
Kelly Cobb, Fashion & Apparel Studies
*Rethinking Solutions for Reducing Textile Waste in Landfills*

ARTSBRIDGE

19) Rachel Austin, Quantitative Biology (ArtsBridge)
Lynnette Overby, Theatre
*Building Demand for the Arts: A Qualitative Analysis of Arts Access in Wilmington, DE*

PHILOSOPHY

20) Wylie Darden, Philosophy (EPSCoR) (Howard University)
Stephen Taylor, History, Political Science & Philosophy (DSU)
*TBA*

MATHEMATICAL SCIENCES

21) Chris Cornwell, Mathematical Sciences (NSF REU)
Richard Braun, Mathematical Sciences
*Similarity Solutions and Tear Film Thinning*

22) Spencer Walker, Applied Mathematics (NSF REU)
Richard Braun, Mathematical Sciences
*Models for Tear Film Evaporation and the Corneal Epithelium*

23) Stephanie Clampitt, Mathematical Sciences (SE)
Sebastian Cioaba, Mathematical Sciences
*Applications of Mathematics to Economics*

24) Cory Cutsail, Mathematical Sciences (McNair)
Sebastian Cioaba, Mathematical Sciences
*Applications of Mathematical Programming Methods in Economics*

25) Nicole DiPasquale, Statistics (SE)
Sebastian Cioaba, Mathematical Sciences
*Investigations in Network Medicine*

26) Pasquale Zingo, Applied Mathematics (SF)
Sebastian Cioaba, Mathematical Sciences
*Data Analysis with Spectral Graph Theory*

27) Amanda Seiwell & Erin Tellup, Secondary Mathematics Education (SE & AHSS)
Michelle Cirillo, Mathematical Sciences
*Scaffolding the Introduction to Mathematical Proof*

28) Christopher Beam, Applied Mathematics (SE)
Tobin Driscoll, Mathematical Sciences
*Automatic Differentiation for ODE Sensitivity Analysis in MATLAB*

29) Jennifer Fanelle, Applied Mathematics (SF)
Tobin Driscoll, Mathematical Sciences
*Dimension Reduction for Neonatal Arterial Pressure Waveforms*

30) Matthew Meyers, Applied Mathematics (SF/Mathematical Sciences)
Tobin Driscoll, Mathematical Sciences
*Dimension Reduction and Clustering of Blood Pressure Waveforms*

31) Joshua Sporre, Mathematical Sciences (SE)
Tobin Driscoll, Mathematical Sciences
*Dimension Reduction for Stochastic ODEs using Active Subspaces*

32) Wenbin Li, Mathematical Sciences (NSF)
David A. Edwards, Mathematical Sciences
*Mathematical Extensions for Optical Biosensors*

33) Nathaniel Kim, Mathematical Sciences (SE)
Mahya Ghandehari, Mathematical Sciences
*Wavelet Theory*

34) Qile Wang, Mathematical Sciences (SE)
Dominique Guillot, Mathematical Sciences
*Paleoclimate Reconstructions via Modern Data Science*

35) Tina Torkaman, (Sharif Institute of Technology)
Dominique Guillot & Mayha Ghandehari, Mathematical Sciences
*Critical Exponents of Graphs*

36) Russell Harris, University Studies (EPSCoR)
John Jungck, Biological Sciences & Mathematical Sciences
*Evolutionary Game Theory for Optimizing Cancer Multi-drug Chemotherapy*

37) Guanyu Hou, Mathematical Sciences (SE)
Francisco Javier Sayas, Mathematical Sciences
*Numerical Simulation of Waves in Viscoelastic Media*

38) Sammy Eyong, Mathematics (INBRE) (DSU)
Sokratis Makrogiannis, Mathematics (DSU)
*Lower Leg Tissue Quantification and Validation Methods*

39) Kaitlyn Thomsen, Quantitative Biology (SE)
Gilberto Schleiniger, Mathematical Sciences
*Mathematical Model of Oxygen Delivery for HLHS Anatomy*
PHYSICS & ASTRONOMY

41) Jaspal Nijjar, Physics (SE)
   John Clem, Physics & Astronomy
   *Radio JOVE Project*

42) Nasiru Abdullah, Information Technology (INBRE) (DSU)
   Mohammad Khan, Physics & Pre-Engineering (DSU)
   *Development of Sensors for Breath Analysis Detecting Lung Cancer*

43) Seth Fair, Engineering Physics (INBRE) (DSU)
   Mohammad Khan, Physics & Pre-Engineering (DSU)
   *Novel Calibration Techniques for Biochemical Sensing Applications*

44) Eric Rouviere, Physics (SE)
   Edward Lyman, Physics & Astronomy
   *Predicting Cholesterol Interaction Sites of the A2A Adenosine Receptor*

45) Alexis Webb, Physics (SE)
   Edward Lyman, Physics & Astronomy
   *Computational Calorimetry*

MATERIALS SCIENCE

46) Jamie Beshore, Materials Science & Engineering (NSF-REU) (Cornell University)
   Matthew Doty, Materials Science & Engineering
   *Time-Integrated and Time-Resolved Photoluminescence Measurements of III-V Heterostructures*

47) Marc Christian, Mechanical Engineering (SE)
   Xinqiao Jia, Materials Science & Engineering
   *Vocal Fold Bioreactor Fabrication and Characterization*

48) Christian Harris, Biology (SE) (Lincoln University)
   Stephanie Law, Materials Science & Engineering
   *Numerical Simulations of Optical Phenomenon*

49) Dan Ferraro, Chemical Engineering (SE)
   William Shaframan, Materials Science & Engineering
   *Surface Sulfurization Effects on Thin Film Cu(InGa)Se2 Solar Cells*

50) Isaac King, Chemical Engineering (SE)
    Joshua Zide, Materials Science & Engineering
    *TBA*

51) Lisa Mwanza, Biochemistry (NSF-REU) (Lincoln University)
    Joshua Zide, Materials Science & Engineering
    *Thermoelectrics in Time Varying Environments*
POSTER SESSION IV
(Engineering: Biomedical, Mechanical, Chemical & Biomolecular, Civil & Environmental)

BIOMEDICAL ENGINEERING

1) Dina Collins, Neuroscience (McNair) Danielle Benoit, Biomedical Engineering (University of Rochester) Nanoparticle-mediated Delivery of miRNA-140 to Drive Chondrogenesis in Human Mesenchymal Stem Cells

2) Margaret Billingsley, Biomedical Engineering (SE) Emily Day, Biomedical Engineering Enhanced Detection of Circulating Tumor Cells Using EGFR-Targeted Nanoshells

3) Nicole Kreuzberger, Biomedical Engineering (SE) Emily Day, Biomedical Engineering Synthesis of Polyethylenimine (PEI) Coated Spherical Nucleic Acids for Enhanced siRNA Delivery

4) Christian Montero, Biomedical Engineering (CBER NSF REU) (Boston University) Dawn Elliott, Biomedical Engineering Determining a Fibril-Level Mechanism of Age Related Tendon Rupture

5) Erica Comber, Biomedical Engineering (INBRE) Jason Gleghorn, Biomedical Engineering Hypoxia Signaling in Mouse Lung Development

6) Elizabeth Marcin, Biomedical Engineering (SE) Jason Gleghorn, Biomedical Engineering Expression of Myosin Isoforms in Fetal Lungs

7) Peter Sariano, Biomedical Engineering (INBRE) Jason Gleghorn, Biomedical Engineering Toward a 3D Cell Culture Model of an Airway with Contractile Smooth Muscle

8) Zachary Sexton, Biomedical Engineering (UDRF REU) Jason Gleghorn, Biomedical Engineering Developing Microfluidic Models for Fluid Stresses in Complex Epithelial Networks

9) Alexander Kulyk, Biomedical Engineering (SE) Curtis Johnson, Biomedical Engineering Quantification of Brain Tumor Stiffness and Heterogeneity from MRE Images

10) Grace McIlvain, Biomedical Engineering (SE) Curtis Johnson, Biomedical Engineering Mechanical Properties of the Child’s Brain

11) Christian Thompson, Biomedical Engineering (SE) Curtis Johnson, Biomedical Engineering Stiffness of White Matter Lesions in Multiple Sclerosis

12) Patrick Canning, Biomedical Engineering (SE) Megan Killian, Biomedical Engineering Sustained Growth of Embryonic Mouse Limbs in Vitro

13) Lindsay Erndwein, Materials Science and Engineering (CBER NSF REU) (Pennsylvania State University) Megan Killian, Biomedical Engineering Second Harmonic Generation Microscopy Generates Collagen Fiber Alignment of the Achilles Tendon-Bone Interface

14) Emily Hudson, Pre-Veterinary Medicine & Animal Biosciences (INBRE) Megan Killian, Biomedical Engineering Targeted Affects of FGF9 Deletion in Scleraxis Lineage Cells

15) Julia Paganucci, Mechanical Engineering (CBER NSF REU & BMEG) Megan Killian, Biomedical Engineering Assessing Mouse Hip Joint Laxity Ex Vivo

16) David Sun, Biomedical Engineering (UD Dare to Be FIRST REU) (Washington University) Christopher Price, Biomedical Engineering Mechanobiology of Tribological Rehydration in Cartilage

17) Natalie Muneses, Biomedical Engineering (SE) Chandran Sabanayagam, Biomedical Engineering Developing a Micro-fraction Collector using Fluorescence Microscopy

18) Gemma Ciabattoni, Mechanical Engineering (DRI) Fabrizio Sergi, Biomedical Engineering Developing a Backdrivable Wrist Robot: Investigating a Co-located and Non Co-located Design and Implementation

19) Elspeth Grasso, Biomedical Engineering (SE) Fabrizio Sergi, Biomedical Engineering Testing MR Compatibility of the MR-SofWrist

20) Margaret Pires-Fernandes, Biomedical Engineering (CBER NSF REU) (University of Florida) Fabrizio Sergi, Biomedical Engineering Effects of Gait Speed and Stride Length on Joint Torque Distribution in Normal Gait

21) Takunda Masike, Engineering (CBER NSF REU) (Clark College) John Slater, Biomedical Engineering A Finite Element Model to Predict Strain Fields in Hydrogels Resulting from Cell-Generated Forces Using an Embedded Fiducial Marker Array

22) Laura Sturgill, Biomedical Engineering (SE) John Slater, Biomedical Engineering Antibody Treatment of Endothelial Cells to Inhibit Circulating Tumor Cell Docking
23) Matthew Scott, Mathematical Sciences (NIH)
Ryan Zurakowski, Biomedical Engineering
*Rate Comparisons of 2-LTR Circle Formation in Active and Quiescent HIV-infected Cell*

**MECHANICAL ENGINEERING**

24) Kanak Chattopadhyay, Mechanical Engineering (SE)
Suresh Advani, Mechanical Engineering
*Characterizing Capillary Flow via Micro-CT*

25) Tess Carella, Mechanical Engineering (SE)
Suresh Advani, Mechanical Engineering
*Fabric and Textile 3D Permeability Characterization Workstation*

26) Jacob Fish, Biomedical Engineering (DRI)
Tom Buchanan, Mechanical Engineering
*Generation of Subject-specific Knee Finite Element Models using Magnetic Resonance Imaging*

27) Oluwajomiloju Olaode, Biomedical Engineering (CBER NSF REU) (Worcester Polytechnic Institute)
Thomas Buchanan, Mechanical Engineering
*Establishing a Mathematical Model to Estimate Knee Joint Loading during Gait*

28) Sarah Leung, Biomedical Engineering (SE)
David Burris, Mechanical Engineering
*Self-Lubricating Scaffold Reinforced Polyvinyl Alcohol Hydrogels*

29) Michael Whiting, Mechanical Engineering (CBER & MEEG)
David Burris, Mechanical Engineering
*Tribologically Induced Articulate Cartilage Recovery*

30) Nicole Moylett, Mechanical Engineering (SE)
Joseph Feser, Mechanical Engineering
*Thermoreflectance Expansion and Laser Properties*

31) Eryn Gerber, Biomedical Engineering (DRI)
Jill Higginson, Mechanical & Biomedical Engineering
*A Novel Design for a Garment-based Body-weight Support Harness*

32) Daniel Grindle, Mechanical Engineering (DRI)
Jill Higginson, Mechanical & Biomedical Engineering
*Passive Support System’s Effect on Walking Kinematics and Kinetics*

33) Kelley Kempski, Biomedical Engineering (CBER NSF REU & MEEG)
Jill Higginson, Mechanical & Biomedical Engineering
*Interlimb Comparison of Joint Angle Variability Post-Stroke*

34) Andrew Whitford, Mechanical Engineering (CBER NSF REU & MEEG)
Jill Higginson, Mechanical & Biomedical Engineering
*Redistribution of Backpack Load*

35) Tash Zunaid, Biomedical Engineering (CBER NSF REU & MEEG)
Jill Higginson, Mechanical & Biomedical Engineering
*Effects of the Passive Support System on Lower Back Forces*

36) Jesse Bloeker, Mechanical Engineering (SE)
Guoquan Huang, Mechanical Engineering
*Development of Navigation and Mapping Algorithms using Simultaneous Localization and Mapping (SLAM)*

37) Patrick Geneva, Mechanical Engineering (SE)
Guoquan Huang, Mechanical Engineering
*Visual-Inertial Navigation on Mobile Devices with Rolling Shutter Cameras*

38) Marisa Bisram, Mechanical Engineering (CBER NSF REU & MEEG)
X. Lucas Lu, Mechanical Engineering
*The Role of ZA in Calcium Signaling during Long and Short Term Culture*

39) Jessica Kerns, Biology (CBER NSF REU) (Saint Joseph’s University)
X. Lucas Lu, Mechanical Engineering
*Antioxidant from Green Tea can Protect Cartilage from Degeneration*

40) Kelsey Jordan, Bioengineering (CBER NSF REU) (University of Pennsylvania)
Kurt Manal, Mechanical Engineering
*Brake Simulator Testing of Reaction Time and Force Application Using DriveSim*

41) Dillon Elliott, Mechanical Engineering (CBER NSF REU) (University of Colorado)
Debora Massouda, Mechanical Engineering
*3D Printing and Characterization of Cellular Material*

42) Christopher Kitson, Mechanical Engineering (SE)
Ajay Prasad, Mechanical Engineering
*Self-healing Membranes via Microcapsules for Fuel Cell Applications*

43) Elizabeth Racca, Mechanical Engineering (CBER & MEEG)
Dustyn Roberts, Mechanical Engineering
*Drones, Mazes, and Algorithmic Learning*

44) Jason Stevens, Mechanical Engineering (CBER & MEEG)
Dustyn Roberts, Mechanical Engineering
*This Machine Kills Fascists: A Robotic Guitar*

45) E.J. Carron, Mechanical Engineering (SE)
Valery Roy, Mechanical Engineering
*Experimental Demonstration of Energy Harvesting by Aeroelastic Galloping*

46) John Pfreundschuh, Mechanical Engineering (SE)
Valery Roy, Mechanical Engineering
*Engineering Analysis of a Torsional Galloping Wind Energy Harvester*
47) Michael DiMercurio, Mechanical Engineering (SE)  
    Herbert Tanner, Mechanical Engineering  
    *Autonomous Quadrotor Control and Stationary Radiation Detection*

48) Aris Mardirossian, Mechanical Engineering (SE)  
    Erik Thostenson, Mechanical Engineering  
    *Process of Carbon Nanotube Film Growth by Electrophoretic Deposition*

49) Nicholas Geneva, Mechanical Engineering (SE)  
    Lian-Ping Wang, Mechanical Engineering  
    *3D Rayleigh-Benard Convection in a Cylindrical Cell*

50) Danielle Gerstman, Mechanical Engineering (SE)  
    Liyun Wang, Mechanical Engineering  
    *SimU’Thor Enhancement for Simulation Study Preparation*

51) Kevin Hrubik, Mechanical Engineering (CBER NSF REU & MEEG)  
    Liyun Wang, Mechanical Engineering  
    *Unconfined Compression Testing of Intervertebral Discs*

**CHEMICAL & BIOMOLECULAR ENGINEERING**

52) Robert Cipolla, Chemical & Biomolecular Engineering (NSF CBET)  
    Maciek Antoniewicz, Chemical & Biomolecular Engineering  
    *Elucidating the Metabolism of the Extremely Thermophilic Archaeon Sulfolobus with 13C Tracers and Flux Analysis*

53) Ryan McNulty, Chemical & Biomolecular Engineering (NSF CBET)  
    Maciek Antoniewicz, Chemical & Biomolecular Engineering  
    *Synergistic Interactions between Auxotrophic E. coli Knockout Strains*

54) Wenxin Wang, Chemical Engineering (Plastino)  
    Douglas Buttrey, Chemical & Biomolecular Engineering  
    *Synthesis and Characterization of Advanced Materials for Catalysis*

55) Christine Mourafetis, Chemical Engineering (NSF-REU) (New York University)  
    Wilfred Chen & April Kloxin, Chemical & Biomolecular Engineering  
    *Constructing Spatially Organized Hydrogels for Controlled Protein Release*

56) Justin Terr, Chemical Engineering (SE)  
    Wilfred Chen, Chemical & Biomolecular Engineering  
    *Elastin-Like Peptides (ELPs) for the Simple Purification of Snake Antivenom Peptides*

57) Austin Roadarmel, Biological Sciences (NIH-COBRE,)  
    David Colby, Chemical & Biomolecular Engineering  
    *Implications of Pathological Tau Protein Conformation in Neurodegenerative Disease*

58) Jacob Shapiro, Chemical Engineering (SE)  
    David Colby, Chemical & Biomolecular Engineering  
    *Creation of cDNA Libraries to Find Protein-Protein Interaction Partners*

59) Sean Daniels, Chemical Engineering (CCEI)  
    Vlachos Dion, Chemical & Biomolecular Engineering  
    *One Pot Reductive Etherification of 5-hydroxymethyl Furfural to Fuels using Homogeneous Metal Salts*

60) Tobias Mazal, Chemical Engineering (CCEI)  
    Vlachos Dion, Chemical & Biomolecular Engineering  
    *Hydrodeoxygenation of Furfural over Ruthenium-Based Catalysts*

61) Spencer Burton, Polymer Science & Engineering (NSF REU) (Case Western Reserve University)  
    Thomas Epps, Chemical & Biomolecular Engineering  
    *Materials from Nature: Synthesis and Characterization of Bio-based Polymers from Cashews*

62) John Saltwick, Chemical Engineering (SE)  
    Thomas Epps, Chemical & Biomolecular Engineering  
    *Stabilizing Long-Range Morphologies in Block Copolymer Thin Films*

63) George Wieber, Chemical Engineering (Plastino)  
    Thomas Epps, Chemical & Biomolecular Engineering  
    *Synthesis and Characterization of Bio-Based Sustainable Polymers*

64) Ian Heffner, Chemical Engineering (Plastino)  
    Eric Furst, Chemical & Biomolecular Engineering  
    *Microscopy and Differential Dynamic Microscopy of Complex Viscoelastic Materials*

65) Paul Blanchard, Chemical Engineering (NSF REU) (Pennsylvania State University)  
    Arthi Jayaraman, Chemical & Biomolecular Engineering  
    *Coarse-grained Molecular Dynamics Simulation Studies of Polymer Nanocomposites*

66) Charles Collins, Chemical Engineering (SE)  
    Feng Jiao, Chemical & Biomolecular Engineering  
    *Efficient Electroreduction of Carbon Dioxide to Formate via a Silver-Tin Catalyst*

67) Christopher Addonizio, Chemical Engineering (NSF-REU)  
    Kristi Kiick, Materials Science & Engineering & Christopher Roberts, Chemical & Biomolecular Engineering  
    *Synthesis and Conformational Characterization of Peptides Derived from Granulocyte Colony-Stimulating Factor*

68) Benjamin Kelly, Chemical Engineering (SE)  
    Michael Klein, Chemical & Biomolecular Engineering  
    *Modeling the Production of Deoxygenated Biomass Fast Pyrolysis Oils via Product Recycling*

69) Mark LaRue, Biomedical Engineering (NSF CAREER Award)  
    April Kloxin, Chemical & Biomolecular Engineering  
    *Mimicking the Fibrillar Structure of the Extracellular Matrix using Collagen Mimetic Peptides*
70) Joseph Spohn, Biomedical Engineering (Pew Charitable Trusts)
    April Kloxin, Chemical & Biomolecular Engineering
    Understanding Fibroblast Response to Cell Polarization using
    Layered Hydrogels
71) Shea Cole, Chemical Engineering (SE)
    Christopher Kloxin, Chemical & Biomolecular Engineering
    Novel Restorative Dental Materials Using Copper(I)-
    Catalyzed-Azide-Alkyne Cycloaddition (CuAAC) Reaction
72) Grant Knappe, Chemical Engineering (SE)
    Christopher Kloxin, Chemical & Biomolecular Engineering
    Novel Mechanophores for Self-Healing and Strengthening
    Polymer Systems
73) Laura Mumper, Chemical Engineering (SE)
    Christopher Kloxin, Chemical & Biomolecular Engineering
    Kinetic Analysis of Thiol-Ene Photo-Polymerization Reactions
    Incorporating Charged Monomers
74) Lauren Bartels, Chemical Engineering (NSF-REU)
    Raul Lobo, Chemical & Biomolecular Engineering
    Synthesis of a Novel Organometallic Metal Organic Framework
    for Water Desalination
75) Natalie Lefton, Chemical & Biomolecular Engineering, (NSF-REU)
    Raul Lobo, Chemical & Biomolecular Engineering
    Comparison of Zinc Substituted Zeolites for Carbon Monoxide
    Oxidation
76) Clare Wunder, Chemical Engineering (CCEI)
    Raul Lobo, Chemical & Biomolecular Engineering
    Producing Industrially Important Chemicals via
    Heterogeneously Catalyzed Formaldehyde-Olefins
    Condensation Reaction
77) Kevin Schmalbach, Chemical Engineering (NSF) (Rowan University)
    Michael Mackay, Chemical & Biomolecular Engineering
    Utilization of Shear-Induced Particle Migration to Produce
    Polymer-Metal Composites
78) Carly Battistoni, Chemical Engineering (SE)
    Christopher Roberts, Chemical & Biomolecular Engineering
    Multiple Particle Tracking Microrheology: A Technique to
    Measure Protein Solution Viscosity
79) Gabrielle Parker, Chemical Engineering (MedImmune)
    Christopher Roberts, Chemical & Biomolecular Engineering
    Expression and Purification of Granulocyte-Colony
    Stimulating Factor
80) Curtis Strab, Chemical Engineering (NIH, NSF)
    Christopher Roberts, Chemical & Biomolecular Engineering
    Specific Protein-excipient Interactions and Conformational
    Stability of α-Chymotrypsinogen A with Density and
    Calorimetric Measurements
81) Connor Shannon, Biomedical Engineering (SE)
    Millicent Sullivan, Chemical & Biomolecular Engineering
    Stabilizing pDNA polyplexes through Covalent Crosslinking of
    H3 tails and PEI
82) Shuzhen Chen, Chemical & Biomolecular Engineering (NSF-REU) (New York University)
    Norman Wagner, Chemical & Biomolecular Engineering
    Characterizing Carbon Black Aggregate Size and Stability in
    Model Flow Battery Electrolyte Mixtures
83) Cameron Merz, Chemical Engineering (NSF-REU)
    Norman Wagner, Chemical & Biomolecular Engineering
    Predicting the Viscosity of Polydisperse Suspensions: A
    Systematic Approach
84) David Brown, Chemical Engineering (NSF-REU) (Columbia University)
    Yushan Yan, Chemical & Biomolecular Engineering
    Membrane-less Redox Flow Batteries Based on Hydrophobic
    Ferrocenes

CIVIL & ENVIRONMENTAL ENGINEERING

85) Minghan Xian, Chemical Engineering (SE)
    Pei Chiu, Civil & Environmental Engineering
    Development of a Redox Titration Method for a Wood Derived
    Black Carbon on its Electrochemical Behavior
86) Celine Robinson, Environmental Engineering (SE)
    Rachel Davidson, Civil & Environmental Engineering
    Voluntary Home Acquisition to Reduce Hurricane Risk: A
    Multivariate Analysis
87) Zachary Merritt, Computer Engineering (SL Fellow)
    Ardeshir Faghri, Civil & Environmental Engineering
    Community Partner: Delaware Department of
    Transportation
    DELDOT GIS Software Development
88) Tyler Seidel, Chemical Engineering (SE)
    Paul Imhoff, Civil & Environmental Engineering
    Examining the Effect on Water Retention of Soils Amended
    with Biochar
89) Alison Treglia, Environmental Engineering (SE)
    Julia Maresca, Civil & Environmental Engineering
    Role of Carotenoid Compounds in Oxidative Stress Response in
    Bacteria Isolated from Concrete
ORAL PRESENTATIONS

9:00 – 10:00 Oral Session 1

EDUCATIONAL ENRICHMENT (ROOM 110)

Moderator: Jenni Buckley, Mechanical Engineering
Taylor Tewksbury, Marine Biology (SL)
Jacqueline Fajardo, Chemistry & Biochemistry
Community Partner: Delaware Nature Society
*Improving Educational Accessibility of Water Quality Data*

Srinivasa Gajjala, Biomedical Engineering & Grace Ruiz Cooper, Mechanical Engineering (SL)
Jenni Buckley, Mechanical Engineering
Community Partner: The Perry Initiative and Orthopaedics in Action
*OLA Development and Perry Initiative*

Marielle Kraft, Elementary Teacher Education (ArtsBridge)
Lynnette Overby, Theatre
*South African and United States History: A Middle School Curriculum to Teach the Art of Understanding Culture*

Rebecca Jewell, Human Services (SL)
Brian Freedman, Center for Disability Studies
Community Partner: UD Career and Life Studies
*Certificate Program*
*CLSC Residential Experience*

CRIMINAL JUSTICE REFORM (ROOM 215)

Moderator: Ben Fleury-Steiner, Sociology & Criminal Justice
Grace Wood, Criminal Justice (AHSS)
Aaron Kupchik, Sociology & Criminal Justice
*Inequality and Counseling*

Lauren McCrea, Political Science (McNair)
Chrysanthi Leon, Sociology & Criminal Justice
*Street Life: The Lived Experience of Black Men and the Carceral State*

Stan Cuff, Human Services (McNair)
Christy Visher, Sociology & Criminal Justice
*Recidivism Prevention Programs*

Hugh Bayard, Psychology (McNair)
Benjamin Fleury-Steiner, Sociology & Criminal Justice
*Ex-offenders and the Pardon Process*

SUSTAINABLE APPAREL (ROOM 322)

Moderator: Kelly Cobb, Fashion & Apparel Studies
Isabella Aswad, Fashion Merchandising (NUCLEUS/AHSS)
Abigail Clarke-Sather, Fashion & Apparel Studies
*Geotextiles Research*

Mikayla DuBreuil, Apparel Design, Fashion Merchandising (AHSS)
Kelly Cobb, Fashion & Apparel Studies
*Sustainability Impacts of Local vs. Global Sourcing*

Jennifer Saunders, Fashion Merchandising (AHSS)
Sheng Lu, Fashion & Apparel Studies
*Artisan Trade: Unseen Impact*

10:10 – 11:10 Oral Session 2

CAMP (ROOM 110)

Moderator: Suzanne Burton, Music
Chu Zhou, Dietetics (Extension Scholars)
Karen Johnston, 4-H Youth Development
*Teen Leadership Development*

Ali Keith, Plant Science (Extension Scholars)
Kaitlin Blair, 4-H Youth Development
*4-H Summer Youth Development*

Christina Conlin, Anthropology; Greta Sweeney & Elizabeth Van Winkle, Art Conservation (SL)
Vicki Cassman, Art Conservation
Community Partners: Winterthur Museum, Garden & Library; Salvation Army Summer Camp
*Making Art Accessible: Our Summer at Winterthur Museum and the Salvation Army*

Meaghan Anderson & Olivia Giglio, Music Education (SL)
Suzanne Burton, Music
Community Partner: Salvation Army Summer Camp
*Beat Goes On*

AGRICULTURE & FOOD (ROOM 215)

Moderator: Michelle Rodgers, Cooperative Extension
Amanda O’Keeffe, Public Policy (SL)
Mia Papas, Behavioral Health & Nutrition
Community Partner: Bright Spot Ventures
*Expanding Food Accessibility*

Jayme Soyak, Geography (SL)
Lindsay Naylor, Geography
Community Partner: Bright Spot Ventures
*Urban Agriculture and Youth Aging Out of the Foster Care System*
Alexis Omar, Animal & Food Science (Extension Scholars)
Michelle Rodgers, Cooperative Extension
_Beyond Fork to Table Summer EDGE_ program
Jackie Arpie, Agriculture & Natural Resources (Extension Scholars)
Jennifer Volk, Plant & Soil Sciences
_Documenting Climate Adaptations in Agriculture_

**FASHION & DYE** (ROOM 322)

**Moderator:** Jocelyn Alacantara-Garcia, Art Conservation

Taylor Pearlstein, Art Conservation (AHSS)
Jocelyn Alacantara-Garcia, Art Conservation
_The Norwich Textile Industry: Uncovering the Secrets of Dyeing in 18th c. England_

Riley Thomas, Art Conservation (AHSS)
Jocelyn Alacantara-Garcia, Art Conservation
_Benedict Codex’s Swatch Book: A Snapshot of the Viennese Textile Industry_

Ariana Bishop, Fashion Merchandising (AHSS)
Belinda Orzada, Fashion & Apparel Studies
_Fashion on All Fronts: The Significance of Dress During World War I_

**POLITICS & POLICY** (ROOM 417)

**Moderator:** Lindsay Hoffman, Communication

Kristina Demou, Communication (CPC/AHSS)
Lindsay Hoffman, Communication
_#Politics: Social Media and the Presidential Race_

Julian Jackson, Communication (McNair)
Jennifer Lambe, Communication
_The Tensions Between Hate Speech and Free Speech_

Benjamin Carleton, Sociology (AHSS)
Ronet Bachman, Sociology & Criminal Justice
_Citizen Trust in the Police: A Cross-National Examination_

Nicole Carmichael & Tyler Shade, Public Policy (SL)
Steven Peuquet, Public Policy & Administration
_Community Partner: Community Legal Aid Society, Inc. Fair Housing for CLASI_

**ENGLISH EDUCATION** (ROOM 417)

**Moderator:** Melissa Ianetta, English

Lisa Pham, History Education (McNair)
Robert Hampel, Education
_Teachers on the Countryside: How Teaching Influenced Women’s Roles in Rural Communities_

Kristen Todd, English Education (AHSS)
William Lewis, Education
_Getting Graphic: Creating a Graphic Novel Database for English Language Arts Teachers_

Claire Armann, English (NUCLEUS)
Melissa Ianetta, English
_Comparison of Attitudes towards Writing between STEM and Humanities Students_

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1:30 – 2:30 Oral Session 4

WELL-BEING (ROOM 110)

Moderator: Karen Edwards, Behavioral Health & Nutrition

Juliana Mbakwe, Exercise Science & Chante’ Vann, Health & Physical Education (SL)
Karen Edwards, Behavioral Health & Nutrition
Community Partner: Girls, Inc.

Does Using a Fitness Game Format Increase Summer Campers Fitness Levels?

Dominique Carpio, Health Behavior Science & Justin Mitchell, Exercise Science (SL)
Iva Obrusnikova, Behavioral Health & Nutrition
Community Partner: EPIC (Endless Possibilities in the Community); Meadwood Transition Program, Red Clay School District

Using Video Prompting to Promote the Acquisition of Fitness Tasks in Adults with Developmental Disabilities

Erica Rathie, Health Behavior Science (SL)
Elizabeth Orsega-Smith, Behavioral Health & Nutrition
Community Partner: Howard Weston Senior Center; Claymore Center; Rockland Place

Happiness Project

Amanda Raker, Apparel Design (SL)
Kelly Cobb, Fashion & Apparel Studies
Community Partner: Newark Senior Center

Wearing Well-Being

ANTHROPOLOGY (ROOM 215)

Moderator: Patricia Sloane-White, Anthropology

Kayla Morrell, Biological Sciences (NUCLEUS)
Melissa Melby, Anthropology

Celiac Disease, An Unwelcome Protector: A Look at the Positive Selection of Celiac Disease Genes

Emaline Reyes, Anthropology (AHSS)
Karen Rosenberg, Anthropology

Hips Don’t Lie: What Pelvic Morphology Can Tell Us about Bipedalism and Childbirth in Humans

Darian Lawrence, Political Science (McNair)
Patricia Sloane-White, Anthropology

Blackness and Race in Japan

Chelsea Adebiyi, Health Behavior Science (McNair/Pattison)
Kelebogile Setiloane, Behavioral Health & Nutrition

Exploring Cultural Beliefs and Young Child Feeding Among African Immigrants in Delaware

ART (ROOM 322)

Moderator: Amy Hicks, Art & Design

Madison Bacon, Fine Arts (AHSS)
Abigail Donovan, Art & Design

The Art of Storytelling

Stefanie Hamill, Fine Arts (AHSS)
Amy Hicks & Abigail Donovan, Art & Design

Talking to Myself: A Stop-Motion Dream Animation*

Joseph Gardner, Fine Arts (AHSS)
Abigail Donovan, Art & Design

Humans: A New Breed

Ilia Burgos, Comparative Literature (McNair)
Martha Carothers, Art & Design

Radioactive Reactors

ECONOMICS & STATISTICS (ROOM 417)

Moderator: Ronet Bachman, Sociology

Paul Mooney, Economics (AHSS)
Farley Grubb, Economics

A Quantitative View of Chandler’s Thesis

Xingguo Wang, Economics (AHSS)
Joshua Duke, Applied Economics & Statistics

Evidence on the Success of Land Value Taxation: A Synthesis and Preliminary Model

Mengzheng Yao, Sociology (AHSS)
Alan Fox, Philosophy

Applying Statistical Methods to the Study of Classical Chinese Philosophy

2:40 – 3:55 Oral Session 5

HEALTHY COMMUNITIES (ROOM 110)

Moderator: Mia Papas, Behavioral Health & Nutrition

Taylor Ryan, Human Services (SL)
Steve Eidelman, Human Development & Family Studies
Community Partner: National Leadership Consortium on Developmental Disabilities

Dual Diagnosis: How to Best Support Individuals with both a Disability and Mental Illness

Alexa Meinhardt & Jaclyn Natale, Biological Sciences (SL Scholars)
Mia Papas, Behavioral Health & Nutrition
Community Partner: Westside Family Healthcare

Understanding the Social Determinants of Health in Underserved Communities: A Partnership with Westside Family Healthcare

* This presentation includes images of female nudity
Catie Cottrell & Felicia Kriner, Psychology; Jessica Prucha, Neuroscience; & Jillian Solomon, Early Childhood Education (SL)
Mary Dozier, Psychological & Brain Sciences
Community Partner: Delaware Division of Family Services
Providing Support to High-Risk Families in the Community

Selina Delgado & Victoria Kager, Psychology (SL)
Mary Dozier, Psychological & Brain Sciences
Community Partner: Delaware Division of Family Services
Enhancing Fidelity Among Parent Coaches

Kadisha Mack, Psychology (McNair)
Mary Dozier, Psychological & Brain Sciences
Disruptive Behavior in Toddlerhood: A Developmental Precursor to Maladaptive Social Information Processing at Age Eight

PSYCHOLOGY & DIVERSITY (ROOM 215)

Moderator: James Jones, Psychological & Brain Sciences
Vanessa Hatton, Black American Studies (CSD /AHSS)
James Jones, Psychological & Brain Sciences
Personalizing the IAT to Measure Attitudes about Diversity
Rosmeiry Valera, Psychology (McNair) (Bloomfield College)
Jean-Phillipe Laurenceau, Psychological & Brain Sciences
The Relationship between Fear of Cancer Recurrence and Checking Behavior in Breast Cancer Survivors
Greg Sieber, Cognitive Science (NUCLEUS/ AHSS)
Beth Morling, Psychological & Brain Sciences
The Impact of Empathy on Design Idea Generation
Season Cooper, English & Branham Menard, Political Science/Black American Studies (CSD/McNair)
Rosalie Rolon Dow, School of Education & James Jones, Psychological & Brain Sciences
Tell it Like it Is: Race Stories at UD
Sarah Wong, Medical Diagnostics (Siemens Healthineers/INBRE/TWSTEM)
Dara Morey, (Siemens Healthineers)
TBA

ENGLISH & MUSIC (ROOM 322)

Moderator: Daniel Stevens, Music
Cherie Larkin, English (AHSS)
Siobhan Carroll, English
Circulating Nature: Planetary Politics in the Transatlantic Imagination, 1791-1914
DONORS AND CONTRIBUTORS

University of Delaware
Alfred Lerner College of Business and Economics
ArtsBridge Scholars Program
Catalysis Center for Energy Innovation
Center for Biomechanical Engineering Research
Center for Composite Materials
Center for Political Communication
College of Agriculture & Natural Resources
College of Arts & Sciences
College of Earth, Ocean & Environment
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Other Contributors
Carolyn Acheson
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Delaware Department of Transportation
Delaware Governor's Biotechnology Fellowship
Delaware Community Foundation
Delaware Rehabilitation Institute
E.I. DuPont de Nemours & Co
Ethel and Donald Hofmann Scholars Endowment
Gale Cengage Learning
General Electric Foundation
Ben Hadden
Heather Ann Hartman
David M. Heitzer Award
IDEA Networks of Biomedical Research Excellence Program (INBRE)
Craig Lincoln Krammes
Lafayette College LEARN
Ronald E. McNair Post-Baccalaureate Scholars Program
Heather Ann Meyer
Burnaby Munson
National Eye Institute
National Science Foundation Chemistry Research Experience for Undergraduates Program
National Science Foundation's Experimental Program to Stimulate Competitive Research (EPSCoR)
National Science Foundation Nanotechnology Undergraduate Education
National Institute of General Medical Sciences
Northeastern Chemical Association (NECA)
NUCLEUS
Research Experiences to Advance Chemists in Training (REACT)
Hellen Pattison Scholar Award
Liam Phibbs
David A. Plastino Scholar Award
David Roselle
T.W. Fraser Russell Undergraduate Enrichment Endowment
Milton H. Stetson Memorial Fellowship
United States Department of Agriculture Animal & Plant Health Inspection Service
Leland Vane
Verizon Foundation
Karen Wagner
Charles Peter White Fellowships
COMMUNITY PARTNERS

4-H
Bright Spot Ventures
Claymore Center
Community Legal Aid Society, Inc.
Delaware Nature Society
Delaware Department of Transportation
Delaware Division of Family Services
EPIC (Endless Possibilities in the Community)
Girls, Inc. of Delaware
Howard Weston Senior Center
Lutheran Community Services
Meadowood Transition Program, Red Clay School District
National Leadership Consortium on Developmental Disabilities
Newark Senior Center
Orthopaedics in Action
Perry Initiative
Rockland Place
Salvation Army
UD Career and Life Studies Certificate Program
Westside Family Healthcare
Winterthur Museum, Garden and Library
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Akilah Alleyne, Program Assistant, McNair Scholars Program
Lauren Barsky, Associate Director, Undergraduate Research Program
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Matthias Seisay, Interim Director, McNair Scholars Program
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