Summer Research Symposium
~2013~

Sayles Hall
11:00 a.m. to 1 p.m.

Thursday, August 1
Life Sciences and Humanities

&

Friday, August 2
Physical and Social Sciences

PRESENTED BY
The Office of the Dean of the College
Summer Research Symposium
Sayles Hall
Main Green

Thursday, August 1

Life Sciences and Humanities Posters

11:00-11:10 a.m Welcome
Dean Oludurotimi Adetunji

11:10-11:20 a.m Brief remarks
Provost Mark Schlissel
Dean of the College Katherine Bergeron

11 a.m.-1 p.m. Research Poster Presentations

Friday, August 2

Physical and Social Sciences Posters

11:00–11:10 a.m: Welcome

Dean Oludurotimi Adetunji
Dean Besenia Rodriguez

11:00 a.m.-1 p.m. Research Poster Presentations

~A light lunch will be provided both days~
Descriptions of each poster session include a poster number indicating the poster’s placement in Sayles. To locate a poster, refer to the layout maps at the end of this pamphlet.
Summer Research Symposium Posters
Thursday, August 1
Humanities & Life Sciences

**Humanities**

Mary-Evelyn Farrior Poster # A13
*Home Institution:* Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
*Faculty Mentor:* Professor John Bodel, Department of Classics
*Poster Title:* Funera Romana

Madeline High Poster # A14
*Home Institution:* Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
*Faculty Mentor:* Professor Lisa Mignone, Department of Classics
*Poster Title:* Preserving Rome’s Cultural Heritage in the Digital Age

Tori Lee Poster # A15
*Home Institution:* Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
*Faculty Mentor:* Professor John Bodel, Department of Classics and Elli Mylonas, University Librarian
*Poster Title:* Epigraphy at Brown and Across the U.S.

Rebecca Wolinsky Poster # B1
*Home Institution:* Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
*Faculty Mentor:* Professor Lundy Braun, Department of Africana Studies
*Poster Title:* Healthcare Access for Refugee Families in Providence

**Life Sciences**

Krishan Aghi Poster # B2
*Home Institution:* Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
*Faculty Mentor:* Professor Rebecca Burwell, Department of Cognitive Linguistic & Psychological Sciences
*Poster Title:* The Effect of Cross-Hemispheric Lesions of the Perirhinal and Postrhinal Cortices on Contextual Memory

Uday Agrawal Poster # B3
*Home Institution:* Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
*Faculty Mentor:* Professor Catherine Kerr, Department of Bio Med Family Medicine
*Poster Title:* Enhanced Beta Rhythm Synchrony Amongst Tai Chi Practitioners

Mio Akasako Poster # B4
*Home Institution:* Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
*Faculty Mentor:* Professor David Berson, Department of Neuroscience
*Poster Title:* Specialized retinal inputs provide light information to lateral habenula circuitry
Seth Akers-Campbell Poster #B5
**Home Institution:** Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
**Faculty Mentor:** Professor Michael Paradiso, Department of Neuroscience
**Poster Title:** Neural Activity in Macaque V1 Predicts Timing and Direction of Eye Movements

Luc Amdahl Poster #B6
**Home Institution:** Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
**Faculty Mentor:** Professor David Sheinberg, Department of Neuroscience
**Poster Title:** Object Processing in the Dorsal Visual Stream

David Barrera Poster #B7-8
**Home Institution:** Brown University
Summer Research Program: Howard Hughes Medical Institute (HHMI)
**Faculty Mentor:** Professor Mark Johnson, Department of Molecular and Cellular Biology and Professor Alison DeLong, Department of Molecular and Cellular Biology
**Poster Title:** The Impact of Heat Stress on Pollen Tube Growth in Tomato

Justin Batcheller Poster #B9
**Home Institution:** Brown University
Summer Research Program: Howard Hughes Medical Institute (HHMI)
**Faculty Mentor:** Professor Stephen McGarvey, Department of Epidemiology
**Poster Title:** The Role of Snail Colonies in the Prevalence of Schistosomiasis in 50 Philippine Villages

Catherine Bautista Poster #B10
**Home Institution:** Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
**Faculty Mentor:** Professor Bahar Bilgen, Department of Orthopaedics
**Poster Title:** Dynamic Mechanical Stimulation of Tissue-Engineered Cartilage

Matthew Bevil Poster #B11-12
**Home Institution:** Brown University
Summer Research Program: Voss Environmental Fellows
**Faculty Mentor:** Professor Mark Bertness, Department of Bio Med Ecology & Evolutionary Biology
**Poster Title:** The Spread of Sesarma-Driven Salt Marsh Die-off into Narragansett Bay

Emma Blake Poster #B13-14
**Home Institution:** Brown University
Summer Research Program: Howard Hughes Medical Institute (HHMI)
**Faculty Mentor:** Professor David Rand, Department of Ecology and Evolutionary Biology
**Poster Title:** Fertility Assay: Egg Production and Egg-to-Adult Viability in Drosophila

Alexander Blum Poster #B15
**Home Institution:** Brown University
Summer Research Program: Howard Hughes Medical Institute (HHMI)
**Faculty Mentor:** Professor Mark Johnson, Department of Molecular Biology and Professor Alison DeLong, Department of Molecular Biology
**Poster Title:** Toward Thermotolerant Plant Reproduction: Expression of Heat Shock Factors and Heat Shock Proteins in Tomato Pollen Tubes
James Blum — Poster #C1
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards
Faculty Mentor: Professor James Sello, Department of Chemistry
Poster Title: Characterization of indolmycin biosynthesis and resistance in streptomyces griseus

Sonia Boor — Poster #C2
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards
Faculty Mentor: Professor Erica Larschan, Department of Molecular Biology, Cell Biology, and Biochemistry
Poster Title: Establishing Domains of Coordinate Gene Regulation

Briana Borgolini — Poster #C3
Home Institution: Brown University
Summer Research Program: Internship at the International Health Institute
Faculty Mentor: Professor Stephen McGarvey, Department of Public Health Epidemiology
Poster Title: The impact of annual case finding and treatment for Schistosomiasis japonica on individual and community levels of childhood nutritional status in Leyte, Philippines

Chelsea Boyd — Poster #C4
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards
Faculty Mentor: Professor Tara White, Department of Bio Med Alcohol & Addiction and Edward Walsh, Department of Neuroscience
Poster Title: A Pilot Study of Metabolic Chemistry in the Anterior Cingulate: Magnetic Resonance Spectroscopy in Healthy Volunteers

Samantha Brady — Poster #C5
Home Institution: Brown University
Summer Research Program: Bard Fellowship
Faculty Mentor: Professor Diane Hoffman-Kim, Department of Molecular Pharmacology, Physiology & Biotechnology
Poster Title: Schwann Cell Dynamics on Polydimethylsiloxane Substrates with Varying Stiffness

Julia Bu — Poster #C6
Home Institution: Brown University
Summer Research Program: Summer Research Assistant in Pathology
Faculty Mentor: Professor Thomas Bartnikas, Department of Bio Med Pathology & Laboratory Medicine
Poster Title: Iron Distribution and Regulation in the Central Nervous System of the Hypotransferrinemic Mouse

Erin Capra — Poster #C7
Home Institution: Brown University
Summer Research Program: Voss Environmental Fellows
Faculty Mentor: Professor Dov Sax, Department of Bio Med Ecology & Evolutionary Biology
Poster Title: Assessing Extinction Risk from Climate Change for Endangered Plant Species

Jennifer Cardona — Poster #C8
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards
Faculty Mentor: Professor Erika Edwards, Department of Ecology and Evolutionary Biology
Poster Title: A Comparison of Developing Leaves in Viburnum
Deepa Chellappa Poster #C9
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor David Berson, Department of Neuroscience
Poster Title: Dendrites of melanopsin ganglion cells transiently extend into the outer retina in early postnatal development

Gerianne Connell Poster #C13-14
Home Institution: Brown University
Summer Research Program: Howard Hughes Medical Institute (HHMI)
Faculty Mentor: Professor Jeffrey Morgan, Department of Bio Med Molecular Pharmacology, Physiology & Biotechnology
Poster Title: A Novel Assay for Screening Compounds for both Gap Junction and P-gp Inhibition in 3D Microtissues

Eric Chen Poster #C10
Home Institution: Brown University
Summer Research Program: Howard Hughes Medical Institute (HHMI)
Faculty Mentor: Professor Alison DeLong, Department of Molecular Biology, Cell Biology and Biochemistry and Professor Mark Johnson, Department of Molecular Biology, Cell Biology and Biochemistry
Poster Title: Tomato Heat Tree Viewer: Integrating Phylogenetic and Expression Data into a Visual Tool

Emma Corcoran Poster #B7-8
Home Institution: Brown University
Summer Research Program: Howard Hughes Medical Institute (HHMI)
Faculty Mentor: Professor Alison DeLong, Department of Bio Med Molecular, Cellular Biology Biochemistry and Professor Mark Johnson, Department of Bio Med Molecular, Cellular Biology
Poster Title: The Impact of Heat Stress on Pollen Tube Growth in Tomato

Rudy Chen Poster #C11
Home Institution: Brown University
Summer Research Program: Summer Research Assistantship in Biomedical Sciences
Faculty Mentor: Professor Julie Kauer, Department of Bio Med Molecular Pharmacology, Physiology & Biotechnology
Poster Title: Optogenetic Stimulation of GABAergic Projections to the Ventral Tegmental Area

Karen Cortes Poster #C15
Home Institution: Brown University
Summer Research Program: Voss Environmental
Faculty Mentor: Professor Heather Leslie, Department of Ecology and Evolutionary Biology
Poster Title: How Healthy Is The Bay? A Regional Scale Application Of The Ocean Health Index, Focusing On Clean Water

Denise Croote Poster #D1
Home Institution: Brown University
Summer Research Program: Howard Hughes Medical Institute (HHMI)
Faculty Mentor: Professor David Rand, Department of Ecology and Evolutionary Biology
Poster Title: Effect of Rapamycin, Diet, and Mitotype Interactions on Aconitase Activity in Drosophila
Sinead Crotty  
**Poster #B11-12**

**Home Institution:** Brown University  
Summer Research Program: Voss  
Environmental Fellows  
**Faculty Mentor:** Professor Mark Bertness,  
Department of Ecology and Evolutionary Biology  
**Poster Title:** The Spread of Sesarma-Driven Salt Marsh Die-off into Narragansett Bay

Colby Davis  
**Poster #D2**

**Home Institution:** Brown University  
Summer Research Program: Funded by Science Without Borders and Dean Discretionary Grant  
**Faculty Mentor:** Professor Rachel Altura,  
Department of Bio Med Pediatrics  
**Poster Title:** Analysis of Vinca Alkaloid Induced Peripheral Neuropathy in a Zebrafish Model

Michael DeBerardine  
**Poster #D3**

**Home Institution:** Brown University  
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)  
**Faculty Mentor:** Professor Kristi Wharton,  
Department of Molecular Biology, Cell Biology, and Biochemistry  
**Poster Title:** Role of regional expression & BMP ligand type on activation of signaling during Drosophila wing development

Austin DeChalus  
**Poster #D4**

**Home Institution:** Brown University  
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)  
**Faculty Mentor:** Professor Devasis Chatterjee, Department of Bio Med Medicine  
**Poster Title:** The characterization of extracellular vesicles mediating phenotype shifting in prostate cancer

Julie Diamond  
**Poster #D5**

**Home Institution:** Brown University  
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)  
**Faculty Mentor:** Professor Mark Johnson,  
Department of Molecular and Cell Biology  
**Poster Title:** BGAL11 and BGAL13 are essential for extension of the pollen tube cell wall

Julia Donner  
**Poster #D6**

**Home Institution:** Brown University  
Summer Research Program: Howard Hughes Medical Institute (HHMI)  
**Faculty Mentor:** Professor David Rand,  
Department of Bio Med Ecology & Evolutionary Biology  
**Poster Title:** Effect of Rapamycin, Diet, and Mitotype interactions on Aconitase activity in Drosophila

Margaret Dushko  
**Poster #C13-14**

**Home Institution:** Brown University  
Summer Research Program: Howard Hughes Medical Institute (HHMI)  
**Faculty Mentor:** Professor Jeffrey Morgan,  
Department of Molecular Pharmacology, Physiology & Biotechnology  
**Poster Title:** A Novel Assay for Screening Compounds for both Gap Junction and P-gp Inhibition in 3D Microtissues

Michael Fernandopulle  
**Poster #D7**

**Home Institution:** Brown University  
Summer Research Program: Royce Fellows  
**Faculty Mentor:** Professor Jason Sello,  
Department of Chemistry  
**Poster Title:** Toward a Biochemical Characterization of Bacterial Proteasome Physiology
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<th>Poster #</th>
<th>Home Institution: Brown University</th>
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<td>D8</td>
<td>Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)</td>
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<td>Faculty Mentor:</td>
<td>Professor Daniel Dickstein, Department of Bio Med Psychiatry &amp; Human Behavior</td>
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<td>Poster Title:</td>
<td>Obesity, Psychopathology, and Cognition</td>
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<td>Jamie Fried</td>
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<td>Professor Nicolas Fawzi, Department of Bio Med Molecular Pharmacology, Physiology &amp; Biotechnology</td>
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<td>Poster Title:</td>
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<td>Hannah Graham</td>
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<td>Faculty Mentor:</td>
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<td>Kathryn Hawrot</td>
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<td>Stephanie Hojsak</td>
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<td>Faculty Mentor:</td>
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<td>Gillian Horwitz</td>
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<td>Anthony Jang</td>
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<td>Faculty Mentor:</td>
<td>Professor Michael Frank, Department of Cognitive Linguistic &amp; Psychological Sciences and James Cavanagh, Department of Cognitive Linguistic &amp; Psychological Sciences</td>
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<td>Poster Title:</td>
<td>Manipulation of emotion influences learning in cognitive systems: electrophysiological correlates</td>
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Ronak Jani  Poster #E1-2
**Home Institution:** Brown University
Summer Research Program: Howard Hughes Medical Institute (HHMI)
**Faculty Mentor:** Professor Michael McKeown, Department of Molecular Biology, Cell Biology and Biochemistry and Professor Robert Reenan, Department of Bio Med Molecular, Cellular Biology Biochemistry
**Poster Title:** Characterization of SOD1 Mediated ALS Mutations in Drosophila Melanogaster

Jonathan Juliano  Poster # C13-14
**Home Institution:** Brown University
Summer Research Program: Howard Hughes Medical Institute (HHMI)
**Faculty Mentor:** Professor Jeffrey Morgan, Department of Biomedical Engineering Molecular Pharmacology, Physiology & Biotechnology
**Poster Title:** A Novel Assay for Screening Compounds for both Gap Junction and P-gp Inhibition in 3D Microtissues

Michael Kader  Poster #E3
**Home Institution:** Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
**Faculty Mentor:** Professor Diane Hoffman-Kim, Department of Molecular Pharmacology Physiology and Biotechnology
**Poster Title:** Understanding Neuronal Differentiation: a microtissue imaging technique and novel biomimetic substrate

Raghava Kamalesh  Poster #E4
**Home Institution:** Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
**Faculty Mentor:** Professor Wentian Yang, Department of Bio Med Orthopaedics
**Poster Title:** The Role of Protein Tyrosine Phosphatase Shp2 in Regulation of Chondrogenesis and Cartilage Homeostasis

Ifeoma Kamalu  Poster #E5
**Home Institution:** Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
**Faculty Mentor:** Professor Stephanie Parade, Department of Bio Med Psychiatry & Human Behavior
**Poster Title:** Maternal smoking during pregnancy and its effect on infant biological and behavioral stress response

Rachel Kaplan  Poster #E6-7
**Home Institution:** Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
**Faculty Mentor:** Professor Casey Dunn, Department of Ecology and Evolutionary Biology
**Poster Title:** Searching for Siphonophores in Rhode Island

Rachel A. Kaplan  Poster #E8
**Home Institution:** Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
**Faculty Mentor:** Professor Nicole McLaughlin, Department of Bio Med Psychiatry & Human Behavior
**Poster Title:** Development of Functional Connectivity of Inhibitory Control in Early Adulthood

Perri Katzman  Poster #E9
**Home Institution:** Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
**Faculty Mentor:** Professor David Badre, Department of Cognitive, Linguistic & Psychological Sciences
**Poster Title:** Effects of Task Success on Subsequent Memory
Aimie Kawai  Poster #D12-13  
**Home Institution:** Brown University  
Summer Research Program:  
Undergraduate Teaching and Research Awards (UTRAs)  
**Faculty Mentor:** Professor Josiah Rich, Department of Bio Med Medicine  
**Poster Title:** The War On Drugs and the Epidemic of Incarceration in the U.S.: Policy and Infectious Diseases

Hannah Kerman  Poster #E6-7  
**Home Institution:** Brown University  
Summer Research Program:  
Experimental Program to Stimulate Competitive Research (EPSCoR-NSF)  
**Faculty Mentor:** Professor Casey Dunn, Department of Ecology Evolutionary Biology  
**Poster Title:** Searching for Siphonophores

Inkyu Kim  Poster #E10  
**Home Institution:** Brown University  
Summer Research Program:  
Undergraduate Teaching and Research Awards (UTRAs)  
**Faculty Mentor:** Professor David Berson, Department of Neuroscience  
**Poster Title:** Characterizing a Novel Cell Type in the Mouse Retina

Michelle Koh  Poster #E11  
**Home Institution:** Brown University  
Summer Research Program:  
Howard Hughes Medical Institute (HHMI)  
**Faculty Mentor:** Professor David Rand, Department of Bio Med Ecology & Evolutionary Biology  
**Poster Title:** Effects of Rapamycin on Climbing and Flight Performance in Drosophila

Ayano Kondo  Poster #E12  
**Home Institution:** Brown University  
Summer Research Program:  
Undergraduate Teaching and Research Awards (UTRAs)  
**Faculty Mentor:** Professor Deborah Ciombor, Department of Bio Med Orthopaedics  
**Poster Title:** Characterization of Bioactive Components in Human Blood Clot

Edward Lee  Poster #E13  
**Home Institution:** Brown University  
Summer Research Program:  
Undergraduate Teaching and Research Awards (UTRAs)  
**Faculty Mentor:** Professor Michael McKeown, Department of Bio Med Molecular, Cellular Biology Biochemistry  
**Poster Title:** Controlling dissatisfaction expression in D. melanogaster via RNAi

Rebecca Lichtin  Poster #E14  
**Home Institution:** Brown University  
Summer Research Program:  
Undergraduate Teaching and Research Awards (UTRAs)  
**Faculty Mentor:** Professor Christopher Moore, Department of Neuroscience  
**Poster Title:** State dependent neuronal dynamics in reciprocally connected cortical networks

Russyan Mark Mabeza  Poster #B13-14  
**Home Institution:** Brown University  
Summer Research Program:  
Howard Hughes Medical Institute (HHMI)  
**Faculty Mentor:** Professor David Rand, Department of Ecology and Evolutionary Biology  
**Poster Title:** Fertility Assay: Egg Production and Egg-Adult Viability in Drosophila
Emily Matteson  Poster #E15
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor John Simeral, School of Engineering
Poster Title: Improving the performance of an intracortical brain-computer interface

Neha Mehta  Poster #F1
Home Institution: Brown University
Summer Research Program: Howard Hughes Medical Institute (HHMI)
Faculty Mentor: Professor David Rand, Department of Bio Med Ecology and Evolutionary Biology
Poster Title: Measuring Egg Production and Egg to Adult Viability in Drosophila

Matthew Min  Poster #F2
Home Institution: Brown University
Summer Research Program: Howard Hughes Medical Institute (HHMI)
Faculty Mentor: Professor David Rand, Department of Bio Med Ecology and Evolutionary Biology
Poster Title: Effect of Rapamycin on Climbing and Flight Performance in Drosophila

Jonathan Moore  Poster #F3
Home Institution: Tougaloo College
Summer Research Program: Howard Hughes Medical Institute (HHMI)
Faculty Mentor: Professor Kristi Wharton, Cellular Biology Biochemistry and Professor Mark Johnson, Department of Bio Med Molecular, Cellular Biology Biochemistry
Poster Title: How Apoptosis Effect Stalk Cell Number

Rachel Occhiogrosso  Poster #F4
Home Institution: Brown University
Summer Research Program: Summer Research Assistantship in Biomedical Sciences
Faculty Mentor: Professor James Padbury, Department of Bio Med Pediatrics
Poster Title: Gene Set Enrichment Analysis (GSEA) and bi-clustering identify novel gene sets and variants for pre-eclampsia

Ndubisi Onah  Poster #E1-2
Home Institution: Brown University
Summer Research Program: Howard Hughes Medical Institute (HHMI)
Faculty Mentor: Professor Michael McKeown, Department of Bio Med Molecular, Cellular Biology Biochemistry and Professor Robert Reenan, Department of Bio Med Molecular, Cellular Biology Biochemistry
Poster Title: Characterization of SOD1 Mediated ALS Mutations in Drosophila Melanogaster

Hannah O'Neill  Poster #F5
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Steve Gatesy, Department of Bio Med Ecology and Evolutionary Biology
Poster Title: Form and Function of the Avian Foot

Megan Palmer  Poster #F6
Home Institution: Brown University
Summer Research Program: Department Research
Faculty Mentor: Professor Heather Leslie, Department of Bio Med Ecology and Evolutionary Biology
Poster Title: The Effects of Innovative Tidal Energy Devices on Ocean Health
Valentina Parisi  Poster #F7
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Jonathan Reichner, Department of Bio Med Surgery
Poster Title: Expression and Activation of Integrins in response to the human immune response to fungal pathogens.

Hee Jun Park  Poster #F8
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Bahar Bilgen, Department of Bio Med Orthopeadics
Poster Title: Decellularized Matrix as a Scaffold for Development of Cartilage Tissue Engineering

Seon Yeong Park  Poster #F9
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Barbara Stonestreet, Department of Bio Med Pediatrics
Poster Title: Treatment with Inter-alpha-inhibitor protein (IaIp) reduces the production of pro-inflammatory cytokines and prevents hypoxic-ischemic injury in the ovine fetal brain.

Alejandro Perez  Poster #C13-14
Home Institution: Brown University
Summer Research Program: Howard Hughes Medical Institute (HHMI)
Faculty Mentor: Professor Jeffery Morgan, Department of Molecular Pharmacology, Physiology & Biotechnology
Poster Title: A Novel Assay for Screening Compounds for both Gap Junction and P-gp Inhibition in 3D Microtissues

Maya Ramchandran  Poster #F10
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Sohini Ramachandran, Department of Bio Med Ecology and Evolutionary Biology
Poster Title: The cumulative effect of genetic markers on classification of individuals

Claire Rhee  Poster #C13-14
Home Institution: Brown University
Summer Research Program: Howard Hughes Medical Institute (HHMI)
Faculty Mentor: Professor Jeffrey Morgan, Department of Bio Med Molecular Pharmacology, Physiology & Biotechnology and Professor Elizabeth Leary, Department of Department of Bio Med Molecular Pharmacology, Physiology & Biotechnology
Poster Title: A Novel Assay for Screening Compounds for both Gap Junction and P-gp Inhibition in 3D Microtissues

James Roose  Poster #F11
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Stephen McGarvey, Department of Public Health-Epidemiology
Poster Title: Genetic Epidemiology of Obesity in Samoa

Juan Santoyo  Poster #F12
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Catherine Kerr, Department of Bio Med Family Medicine
Poster Title: A Case Study and Methodological Review on Correlating Brain Activity with First Person Data
Maxwell Sherman Poster #F13
Home Institution: Brown University
Summer Research Program: Summer Research Assistantship in Biomedical Sciences
Faculty Mentor: Professor Stephanie Jones, Department of Neuroscience
Poster Title: Disrupted Cortical Beta (15-29Hz) Rhythms in Psychiatric and Neurodegenerative Disorders: A Novel Computational Hypothesis

Katarzyna Sierzputowska Poster #F14
Home Institution: Brown University
Summer Research Program: Summer Research Assistantship in Biomedical Sciences
Faculty Mentor: Professor Robert Reenan, Department of Bio Med Molecular, Cellular Biology Biochemistry
Poster Title: Using novel TALEN technology to engineer precise mutations in the genome of D.melanogaster

Andrew Silverman Poster #F15
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Carl Saab, Department of Bio Med Neurosurgery
Poster Title: In Search of a Pain Biomarker: Altered Thalamocortical Oscillations in Acute and Chronic Pain

Max Song Poster #G1
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Ben Raphael, Department of Computer Science
Poster Title: Graph Algorithms on Cancer Mutations

Mark St. Louis Poster #G2
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Leigh Hochberg, School of Engineering
Poster Title: Quantitative Comparison of Motion-Related Microelectrode Recordings between Human and Monkey Subjects

Elena Suglia Poster #G3
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Mark Bertness, Department of Bio Med Ecology and Evolutionary Biology
Poster Title: A Direct Experimental Test of Cape Cod Consumer-Driven Salt Marsh Die-off

Conor Sullivan Poster #G4
Home Institution: Brown University
Summer Research Program: Voss Environmental Fellows
Faculty Mentor: Professor Stephen Porder, Department of Bio Med Ecology & Evolutionary Biology
Poster Title: A landscape-scale assessment of nutrient limitation in the tropical forests of Luquillo, Puerto Rico.

Margaret Thorsen Poster #G5
Home Institution: Brown University
Summer Research Program: Summer Research Assistantship in Emergency Medicine
Faculty Mentor: Professor Megan Ranney, Department of Bio-Med Emergency Medicine
Poster Title: DOVE4G: Qualitative Development of a Text-Message-Based Intervention to Reduce Depression and Peer Violence among High-risk Adolescent Female Emergency Department Patients
Kaitlyn Tracy Poster #G6
Home Institution: Brown University
Summer Research Program: Royce Fellows
Faculty Mentor: Professor Qian Chen, Department of Bio Med Orthopaedics and Professor Yupeng Chen, Department of Bio Med Orthopaedics
Poster Title: Nanopieces as Delivery Method for siRNA Gene Knockdown

Laura van Dyck Poster #G7
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Julie Kauer, Department of Molecular Pharmacology, Physiology & Biotechnology
Poster Title: Clarifying the Spinal Cord

Natalie Van Houten Poster #G8
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Sohini Ramachandran, Department of Bio Med Ecology and Evolutionary Biology
Poster Title: The cumulative effect of genetic markers on classification of individuals

Tina Voelcker Poster #G9
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Mark Zervas, Department of Molecular Biology, Cellular Biology and Biochemistry
Poster Title: The Role of TSC1 in the Developing Thalamus and in Tuberous Sclerosis

Angelia Wang Poster #G10
Home Institution: Brown University
Summer Research Program: Independent
Faculty Mentor: Professor Carlos Aizenman, Department of Neuroscience and Professor Christopher Ciarleglio, Department of Neuroscience
Poster Title: Characterizing gene expression within the developing Xenopus laevis brain

Nelly Marianne Weledji Poster #G11
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Wayne Bowen, Department of Molecular Pharmacology, Physiology and Biotechnology
Poster Title: Identifying the Source of the Progesterone Induced Calcium Signal in SKNSH Neuroblastoma Cells

Benjamin Wilks Poster #G12
Home Institution: Brown University
Summer Research Program: MCB Department
Faculty Mentor: Professor Jacquelyn Schell, Department of Bio Med Molecular Pharmacology, Physiology & Biotechnology and Professor Jeffrey Morgan, Department of Bio Med Molecular Pharmacology, Physiology & Biotechnology
Poster Title: Quantifying cellular forces in dogbone microtissues

Katherine Xiong Poster #G13
Home Institution: Brown University
Summer Research Program: MCB Department
Faculty Mentor: Professor Mark Zervas, Department of Bio Med Molecular, Cellular Biology Biochemistry
Poster Title: The Role of Shh and FGF8 in the Differentiation of Embryonic Stem Cells to Dopamine Neurons
Leadership Alliance

Cynthia Barajas Poster # A1
Home Institution: California Polytechnic State University, San Luis Obispo
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Jacob Rosenstein, School of Engineering
Poster Title: Real-Time Hardware Identification of Single Ion Channel Gating

Rajshekhar Basak Poster #H13
Home Institution: Macaulay Honors College, The City College of New York, CUNY
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Quig Lu, and Professor Sharon Rounds, Department of Bio Med Medicine
Poster Title: The Mechanism of Acrolein-Induced Vascular Endothelial Cell Permeability.

Melissa Carr-Reynolds Poster #A2
Home Institution: Spelman College
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Kevin Bath, Department of Neuroscience
Poster Title: Potential Mechanisms Underlying Stress Effects on Neurogenesis

Bao Ying Chen Poster #A3
Home Institution: Grinnell College
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Alison DeLong, Department of Molecular Biology, Cell Biology, and Biochemistry
Poster Title: Defining Protein Phosphatase 2A Complexes and Substrates that Regulate Ethylene Biosynthesis in Arabidopsis

Laura Craciun Poster #A4
Home Institution: New York University
Summer Research Program: BP-Endure---Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Barry Connors, Department of Bio Med Neuroscience
Poster Title: Classification of Neurons in the Thalamic Reticular Nucleus

Fartun Dirie Poster #A5
Home Institution: University of St. Thomas
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Michael White, Department of Sociology
Poster Title: Antenatal Care and Healthcare Access in Mozambique: An Issue of Spatial Inequality?

Jennifer Garraway Poster #A6
Home Institution: Hunter College- City University of New York
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Tara White, Department of Neuroscience
Poster Title: Stimulant Effects on Emotion in Healthy Volunteers

Sherry Gee Poster #A7
Home Institution: University of Michigan-Ann Arbor
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Gaurav Choudhary, Department of Biomedical Engineering Molecular Pharmacology, Physiology & Biotechnology
Poster Title: Role of Ano-1 in endothelial cell proliferation and migration
Jean Guillaume  Poster #A8
Home Institution: Brooklyn College- City University of New York
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Johnny Guzman, Department of Applied Mathematics
Poster Title: Blending Finite Element with Penalty Immersed Boundary to Investigate Hemodynamics in Aorta

Robert Gutierrez  Poster #A9
Home Institution: Santa Barbara City College
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Qian Chen, Department of Bio Med Orthopaedics
Poster Title: Nanopiece: a stabilizing and protecting vehicle for molecular beacon delivery

Marilyn Lee  Poster #A10
Home Institution: University of Rhode Island
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor John Sedivy, Department of Molecular Biology, Cell Biology, and Biochemistry
Poster Title: The effects of reverse transcriptase inhibitors on LINE-1 retrotransposon expression in human fibroblasts

Noe Lopez  Poster #A11
Home Institution: University of California- Santa Barbara
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Evelyn Hu-DeHart, Department of History
Poster Title: Living in Between Nations: Mixtec Transnationalism in Mexico and the United States

Katryna Mahoney  Poster #A12
Home Institution: Spelman College
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Keisha-Khan Perry, Department of Africana Studies
Poster Title: Black Activists in 'White Africa': Exploring sub-Saharan Migrant-Activism in Morocco

Peter Mercado-Reyes  Poster #H1
Home Institution: Purdue University
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Christopher Moore, Department of Neuroscience and Postdoctoral Research Associate Nathan Vierling-Claassen, Department of Neuroscience
Poster Title: Study on the long-term effects of antipsychotics: the impact of sustained D2 neuron activity on motor learning and motor performance

Javier Morales-Gonzalez  Poster #H2
Home Institution: University of Puerto Rico
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Cesario Bianchi, Department of Bio Med Surgery
Poster Title: Is mTOR steady-state PI3K dependent?
Isaël Morgan  Poster #H3
Home Institution: Mt. Holyoke College
Summer Research Program:
Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Stephen Buka,
Department of Public Health-Epidemiology
Poster Title: Socioeconomic Status and Child Cognitive Outcomes at Age 7; Maternal Cortisol as a Possible Mediator

Onyemaechi Nwanaji-Enwerem  Poster #H4
Home Institution: University of North Carolina at Chapel Hill
Summer Research Program:
Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Alfred Ayala,
Department of Bio Med Surgery
Poster Title: Soluble Co-Inhibitory Receptors, B-/T-Lymphocyte Attenuator (BTLA), and its Ligand, Hepatitis Virus Entry Protein (HVEM) and their Biological Significance in Septic Mice.

Daniel Powell  Poster #H5
Home Institution: The University of Utah
Summer Research Program:
Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Richard Freiman,
Department of Molecular Biology, Cell Biology, & Biochemistry and Jennifer Wardell,
Department of Bio Med
Poster Title: Molecular and Cellular Mechanisms of TAF4B Upregulation by Estrogens

Michael Rabadi  Poster #H6
Home Institution: New York University
Summer Research Program: BP-Endure---Leadership Alliance-Summer Research Early Identification Program(SR-EIP)
Faculty Mentor: Professor David Sheinberg,
Department of Neuroscience
Poster Title: Exploring the Temporal Limits of Visual Processing of Familiar and Unfamiliar Objects at the Subordinate-Category Level

Vani Ravichandran  Poster #H7
Home Institution: University of Maryland, Baltimore County
Summer Research Program:
Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Ruhul Abid,
Department of Bio Med Surgery
Poster Title: Overexpress Yourself: It's Good For The Heart!

Stephon Richardson  Poster #H8
Home Institution: Clark University
Summer Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Keisha-Khan Perry, Department of African Studies
Poster Title: The Black New Left: African-American Radical Groups of the Late 1950s to the Early '60s

Mayra Rios  Poster #H9
Home Institution: Canada College
Summer Research Program:
Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
Faculty Mentor: Professor Juan Sanchez-Esteban, Department of Bio Med Pediatrics
Poster Title: Expression Level of Transient Receptor Potential Vanilloid-4 (TRPV4) in Mice During Lung Development
**Amber Shaffer**  **Poster #H10**  
**Home Institution:** Tougaloo College  
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)  
**Faculty Mentor:** Professor Wen-Chih (Hank) Wu, Department of Bio Med Medicine and Tracey Traveria, Pharmacy Practice  
**Poster Title:** Does Depression Lead to Diabetes in African Americans

**Darius Stanton**  **Poster # H11**  
**Home Institution:** Claflin University  
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)  
**Faculty Mentor:** Professor Jeremy Rich, Department of Ecology and Evolutionary Biology and Professor Heather Leslie, Department of Ecology and Evolutionary Biology  
**Poster Title:** Microbial community structure along an estuarine gradient along the Narragansett Bay

**Tayler Ulmer**  **Poster #H12**  
**Home Institution:** Spelman College  
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)  
**Faculty Mentor:** Professor Matthew Guterl, Department of Africana Studies  
**Poster Title:** A House Divided: Ethno-Racial Understanding in the Black American and Black African Community

**Amy Zhang**  **Poster #H13**  
**Home Institution:** Carnegie Mellon University  
Summer Research Program: Leadership Alliance-Summer Research Early Identification Program (SR-EIP)  
**Faculty Mentor:** Professor Barry Connors, Department of Bio Med Neuroscience  
**Poster Title:** A Quirky Inhibitory Circuit in the Cerebral Cortex
Physical Sciences

Heather Aruffo Poster #C1-2
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Amit Basu, Department of Chemistry
Poster Title: Developing Glycolipid Functionalized Liposomes to Colorimetrically Detect E. Coli

Rebecca Barron Poster #G14-15*
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Karen Haberstroh, School of Engineering
Poster Title: Spira Engineering Camp: An Exploration of Engineering for the Young Women of Providence (*Scheduled to present on Thursday)

Vira Behnam Roudsari Poster #C3
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Wayne Bowen, Department of Molecular Pharmacology, Physiology and Biotechnology
Poster Title: Effects of Sigma-2 Receptor Ligands in a 3D Tumor Model of Human

Nicholas Bower Poster #C5
Home Institution: Brown University
Summer Research Program: Institute for Molecular and Nanoscale Innovation (IMNI)
Faculty Mentor: Professor Derek Stein, Department of Physics
Poster Title: Experimental Studies of Micro- and Nanoscale Capillarity

Eliza Brine Poster #C6-7
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Christopher Bull, School of Engineering and Professor Derek Stein, Department of Physics
Poster Title: Solar Decathlon

Ryan Brown Poster #C6-7
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Derek Stein, Department of Physics and Professor Christopher Bull, School of Engineering
Poster Title: Solar Decathlon

Julia Carr Poster #C8
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Greg Hirth, Department of Geology
Poster Title: Microstructural Analysis of Harbor Island, Maine Pseudotachylites
Elizabeth Castner  Poster #C9
Home Institution: Brown University  
Summer Research Program:  
Undergraduate Teaching and Research Awards (UTRAs)  
Faculty Mentor: Professor Meredith Hastings, Department of Geological Sciences and Postdoctoral Research Associate Rebecca Ryals, Department of Geology  
Poster Title: Soil Nitrogen Fluxes on Farms in the Chesapeake Bay Watershed

Francois Cevallos  Poster #C10
Home Institution: Brown University  
Summer Research Program:  
Undergraduate Teaching and Research Awards (UTRAs)  
Faculty Mentor: Professor Eunsuk Kim, Department of Chemistry  
Poster Title: Mechanistic studies on phenolic nitration by dinitrosyl iron complexes (DNICs)

Veronica Chiou  Poster #C11
Home Institution: Brown University  
Summer Research Program:  
Undergraduate Teaching and Research Awards (UTRAs)  
Faculty Mentor: Professor Eric Darling, Department of Molecular Pharmacology, Physiology and Biotechnology  
Poster Title: Examining live-cell traction forces in stem cells during osteogenic differentiation

Eunice Cho  Poster #C12
Home Institution: Brown University  
Summer Research Program:  
Undergraduate Teaching and Research Awards (UTRAs)  
Faculty Mentor: Professor Eric Darling, Department of Molecular Pharmacology, Physiology and Biotechnology  
Poster Title: MR imaging of gene expression in live cells via F19 molecular beacons

Ah Choe  Poster #C13
Home Institution: Brown University  
Summer Research Program:  
Undergraduate Teaching and Research Awards (UTRAs)  
Faculty Mentor: Professor Allan Bower, School of Engineering  
Poster Title: From Engineering Mechanics to the Hunger Games: the Engineering, History and Mythology of the Bow and Arrow

Kate DeSimone  Poster #C14
Home Institution: Brown University  
Summer Research Program:  
C.R. Bard Summer Fellowship  
Faculty Mentor: Professor Anubhav Tripathi, School of Engineering  
Poster Title: Isolation of RNA using magnetic beads in a microfluidic oil channel

Montana Feiger  Poster #C6-7
Home Institution: Brown University  
Summer Research Program:  
Undergraduate Teaching and Research Awards (UTRAs)  
Faculty Mentor: Professor Derek Stein, Department of Physics and Christopher Bull, School of Engineering  
Poster Title: Solar Decathlon

Sarah Frank  Poster #C15
Home Institution: Brown University  
Summer Research Program:  
Undergraduate Teaching and Research Awards (UTRAs)  
Faculty Mentor: Professor Jennifer Franck, School of Engineering  
Poster Title: Optimal Hydrofoil Kinematics for Tidal Energy Extraction

Layne Frechette  Poster #D1-2
Home Institution: Brown University  
Summer Research Program: NIH  
Faculty Mentor: Professor Derek Stein, Department of Physics  
Poster Title: Nanoscale Electrospray for Single-Molecule Mass Spectrometry
Ellen Goldberg  Poster #D1-2
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research
Awards (UTRAs)
Faculty Mentor: Professor Derek Stein, Department of Physics
Poster Title: Nanoscale ElectrospRAY for Single-Molecule Mass Spectrometry

Pat Holland-Strengar  Poster #D3
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research
Awards (UTRAs)
Faculty Mentor: Professor James Russell, Department of Geological Sciences
Poster Title: Reconstructing the paleoclimate of Papua, Indonesia using hydrogen/deuterium ratios in leaf waxes preserved in marine sediments

Conan Huang  Poster #C1-2
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research
Awards (UTRAs)
Faculty Mentor: Professor Amit Basu, Department of Chemistry
Poster Title: Developing polydiacetylene-based liposomes as colorimetric biosensors to detect the presence of bacterial endotoxins and to identify different bacteria strains

Vidur Joshee  Poster #D4
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research
Awards (UTRAs)
Faculty Mentor: Professor Eliezer Upfal Department of Computer Science and Professor Fabio Vandin, Department of Computer Science
Poster Title: Clustering Large Graphs

Sukhyun (Kevin) Jung  Poster #D5
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research
Awards (UTRAs)
Faculty Mentor: Professor Jacob Rosenstein, School of Engineering
Poster Title: Biomimetic Lipid Membranes on Electronic Circuit Boards

Audrey Lew  Poster #D6
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research
Awards (UTRAs)
Faculty Mentor: Professor Meredith Hastings, Department of Geological Sciences
Poster Title: Analyzing the Isotopic Signature of NOx in the Field

Jesus Leyva  Poster #D7
Home Institution: Brown University
Summer Research Program: Research Assistant for the Center for Computational Molecular Biology
Faculty Mentor: Professor Charles Lawrence, Department of Applied Mathematics and Professor William Thompson, Department of Applied Mathematics
Poster Title: Monte Carlo Methods for Phylogenetic Analysis.

Rory Macfarlane  Poster #D8
Home Institution: Brown University
Summer Research Program: Institute for Molecular and Nanoscale Innovation (IMNI)
Faculty Mentor: Professor G. Tayhas Palmore, School of Engineering
Poster Title: Detect, Splice and Glow: Engineering a DNA biocircuit for biochemical sensing

Chezev Matthew  Poster #D9
Home Institution: Brown University
Summer Research Program: Institute for Molecular and Nanoscale Innovation (IMNI)
Faculty Mentor: Professor G. Tayhas Palmore, School of Engineering
Poster Title: Detect, Splice and Glow: Engineering a DNA biocircuit for biochemical sensing
Amrita Mazumdar    Poster #D10
Home Institution: Columbia University
Summer Research Program: Distributed Research Program for Undergraduates (DREU)
Faculty Mentor: Professor Iris Bahar, School of Engineering
Poster Title: An Automated Synthesis Tool for Generating Noise-Immune Sub-Threshold Circuits

Christopher Miller    Poster #D11
Home Institution: University of Colorado-Boulder
Summer Research Program: Institute for Molecular and Nanoscale Innovation (IMNI)
Faculty Mentor: Professor Eric Chason, School of Engineering
Poster Title: Modeling Stress Development in Thin Film Growth

Samuel Moore    Poster #C6-7
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Derek Stein, Department of Physics and Professor Christopher Bull, School of Engineering
Poster Title: Solar Decathlon

Adrian Nadeau    Poster #D12
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Eric Chason, School of Engineering
Poster Title: Understanding Tin Whiskers

Gaurav Nakhare    Poster #D13
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Harvey Silverman, School of Engineering
Poster Title: Talker locationing and speaker enhancement with the octoMIC

Khoi Nguyen    Poster #D14
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Shreyas Mandre, School of Engineering
Poster Title: Fluid Surface Deformation by Objects in the Cheerios Effect

Daniel Parker    Poster #D15
Home Institution: Brown University
Summer Research Program: Other
Faculty Mentor: Professor Ian Dell’Antonio, Department of Physics
Poster Title: Measuring Galaxy Cluster Masses with Gravitational Lensing

Anthony Pellegrino    Poster #E1-2
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Johnny Guzman, Department of Applied Mathematics
Poster Title: Blending the Finite Element Method with the Penalty Immersed Boundary Method to Investigate Hemodynamics in the Aorta
John Ribbans  Poster #E3
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Brad Marston, Department of Physics
Poster Title: A Global Climate Model For Your iPhone

Eugene Robinson  Poster #E4
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Baylor Fox-Kemper, Department of Geological Sciences
Poster Title: Modeling Climate Variability through EOF Analysis of Ocean Heat Content

Danielle Rothermel  Poster #E5
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Nabil Lawandy, School of Engineering
Poster Title: Laser Oscillation in Nanoparticle Plasmonic Systems

Viktor Rozsa  Poster #E6
Home Institution: Hillsdale College
Summer Research Program: Institute for Molecular and Nanoscale Innovation (IMNI)
Faculty Mentor: Professor Nitin Padture, School of Engineering and Professor Stephan Parman, Department of Geological Sciences
Poster Title: Experimental and Analytic Methods towards Synthesis of Ultrahard Nanotwinned Cubic Boron Nitride

Subhradip Sarker  Poster #E7
Home Institution: Brown University
Summer Research Program: Royce Fellows
Faculty Mentor: Professor Lawrence Larson, School of Engineering
Poster Title: Wireless transceiver in the brain

Peter Simpson  Poster #E8
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Jason Sello, Department of Chemistry
Poster Title: Rational Design and Syntheses of Selective Inhibitors of the Human and Bacterial Proteasomes

Julia Stevens  Poster #E9
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Jason Sello, Department of Chemistry
Poster Title: Redesign of Antibacterial Small Molecule ClpP Activators Based on the ADEP Pharmacophore

Mary Tarantino  Poster #E10
Home Institution: Brown University
Summer Research Program: Summer Research Assistantship in Biomedical Sciences
Faculty Mentor: Professor Sarah Delaney, Department of Chemistry
Poster Title: The Effect of DNA Secondary Hairpin Structure on Flap Endonuclease-1 Activity
Jennifer Thomas Poster #G14-15*
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Karen Haberstroh, School of Engineering
Poster Title: Spira Engineering Camp: An Exploration of Engineering for the Young Women of Providence (*Scheduled to present on Thursday)

Tegan Tingley Poster #E11
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Joseph Calo, School of Engineering
Poster Title: Removal of Mercury, Arsenic, and Lead from Water with Iron Compounds

Edwin Willig Poster #E12
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Timothy Herbert, Department of Geological Sciences
Poster Title: 5 Ma Paleotemperature Study of the Northwest Pacific Ocean

Lukas Winkler Prins Poster #E13
Home Institution: Brown University
Summer Research Program: REU
Faculty Mentor: Professor Martin Maxey, Department of Applied Mathematics
Poster Title: Statistical Analysis on Viscous Particulate Fluid Flows

Jie Ying Wu Poster #E14
Home Institution: Brown University
Summer Research Program: NSF
Faculty Mentor: Professor Sherief Reda, School of Engineering
Poster Title: Measuring the Energy Consumption of Servers

Samy Wu Poster #E1-2
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Johnny Guzman, Department of Applied Mathematics
Poster Title: Blending the Finite Element Method with the Penalty Immersed Boundary Method to Investigate Hemodynamics in the Aorta

Sam Zeif Poster #C6-7
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Derek Stein, Department of Physics and Professor Christopher Bull, School of Engineering
Poster Title: Solar Decathlon

Yifan Zhang Poster #E15
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Yongsong Huang, Department of Geological Sciences
Poster Title: Isolation and Characterization of Novel Long Chain Alkenones from Greenland Lake Sediments

Abigail Zimmermann-Niefeld Poster #F1
Home Institution: Williams College
Summer Research Program: Distributed Research Experience for Undergraduates (DREU)
Faculty Mentor: Professor Iris Bahar, School of Engineering
Poster Title: Energy and Performance Efficient Parallel Computing for Embedded Systems
Social Sciences

Sarah Durney Poster #F2
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Kate Carey, Department of Public Health-Health-Behavioral & Social Sciences
Poster Title: Understanding the Role of Alcohol in College Sexual Assaults

Jane Furey Poster #F3
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Michael White, Department of Sociology
Poster Title: Water, Sanitation and Spatial Inequality in West Africa

Christopher Lam Poster #F4-5
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Jin Li, Department of Education Studies
Poster Title: Children’s Learning and Socialization: Cross-Cultural Differences Between European-American and Chinese Immigrant Families

Emma Lamothe Poster #F6
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Patricia Risica, Department of Bio-Med Institute of Community Health Promotion
Poster Title: Improving Nutrition and Physical Activity Environments in Home-Based Childcare

Julia Lynford Poster #F7
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor John Boekamp, Department of Bio Med Psychiatry & Human Behavior
Poster Title: Parent expectancy and treatment response in psychiatrically disordered preschoolers

Jennifer Nedow Poster #F4-5
Home Institution: Brown University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Jin Li, Department of Education Studies
Poster Title: Children’s Learning and Socialization: Cross-Cultural Differences Between European-American and Chinese Immigrant Families

Jonatan Perez Poster #F8
Home Institution: Clark University
Summer Research Program: Undergraduate Teaching and Research Awards (UTRAs)
Faculty Mentor: Professor Evelyn Hu-DeHart, Department of History
Poster Title: Researching and Designing an Immigration Course for Brown Undergraduates

Robin Sifre Poster #F9
Home Institution: Brown University
Summer Research Program: RA in Fiery Cushman’s Lab (MPRL)
Faculty Mentor: Professor Fiery Cushman, Department of Cognitive Linguistic & Psychological Sciences
Poster Title: Rationalization & Religion
**Julia Stoller** **Poster #F10**
**Home Institution:** Brown University
Summer Research Program:
Undergraduate Teaching and Research Awards (UTRAs)
**Faculty Mentor:** Professor Kenneth Wong,
Department of Education Studies
**Poster Title:** Innovative School Reform in Providence and its Effects on Diverse Learners

**Derik Wagner** **Poster #F11**
**Home Institution:** Brown University
Summer Research Program:
Undergraduate Teaching and Research Awards (UTRAs)
**Faculty Mentor:** Professor Fiery Cushman,
Department of Cognitive Linguistic & Psychological Sciences
**Poster Title:** Mechanisms of Social Reciprocation

**Kiana Ward** **Poster #F12**
**Home Institution:** Brown University
Summer Research Program:
Undergraduate Teaching and Research Awards (UTRAs)
**Faculty Mentor:** Professor Caroline Karp,
Center for Environmental Studies
**Poster Title:** Green/Blue Alliance: Social Unionism in the Construction Trades

**Luyu Zhang** **Poster #F4-5**
**Home Institution:** Brown University
Summer Research Program:
Undergraduate Teaching and Research Awards (UTRAs)
**Faculty Mentor:** Professor Jin Li,
Department of Education Studies
**Poster Title:** Children’s Learning and Socialization: Cross-Cultural Differences Between European-American and Chinese Immigrant Families

**Klara Zimmerman** **Poster #F13**
**Home Institution:** Brown University
Summer Research Program:
Undergraduate Teaching and Research Awards (UTRAs)
**Faculty Mentor:** Professor Leah VanWey,
Department of Sociology
**Poster Title:** Agricultural Technology and Land Use Change in Mato Grosso, Brazil
Summer Research Programs at Brown

Generous support for the undergraduate summer research presented in this symposium has been provided by:

- Beckman Scholars Program
- Experimental Program to Stimulate Competitive Research (EPSCoR-NSF)
- Howard Hughes Medical Institute (HHMI)
- Institute for Computational and Experimental Research in Mathematics (ICERM)
- Institute for Molecular and Nanoscale Innovation (IMNI)
- Leadership Alliance-Summer Research Early Identification Program (SR-EIP)
- Royce Fellows (Swearer Center for Public Service)
- Space Grant/NASA
- Summer Research Assistantship in Biomedical Sciences
- Mellon Mays Undergraduate Fellowship
- Undergraduate Teaching and Research Awards (UTRA)
- Voss Environmental Fellows
### Poster Layout—Thursday, August 1

**Humanities & Life Sciences**

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Poster Layout—Friday, August 2

Physical & Social Sciences

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Symposium Organizers

Oludurotimi O. Adetunji,  
Assistant Dean of the College  
Director, UTRA program

Janice Rego, Program Coordinator  
Kendra Cornejo, Symposium Intern

Acknowledgements

Mark Schlissel, Provost  
Katherine Bergeron, Dean of the College