

UNDERGRADUATE RESEARCH AND SCHOLARLY ACHIEVEMENT

URSA SCHOLARS WEEK

MARCH 31 - APRIL 4 2014



**Students: Show us your favorite
moments from Scholars Week!
Tweet pics with the hashtag #URSA14.
URSA will award a prize for
the best picture!**



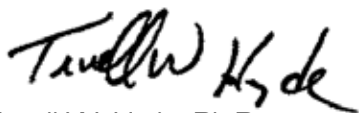
#URSA14

Dear Colleagues:

Please allow me to be the first to welcome you to URSA Scholars Week 2014. It's easy to see that Baylor *Research is Making a Difference* both across the world and in the lives of our undergraduates.

As we pause to acknowledge and appreciate the achievements of the students and faculty represented in this seventh annual Scholars Week celebration, I encourage you to take the time to embrace all the scholarship on display. The quality of the presentations demonstrates the monumental commitment provided by Baylor faculty as well as the quality of student Baylor attracts to campus.

I would also ask that you thank your faculty colleagues and the dedicated Baylor students who have worked so hard to bring URSA to where it is today. Their unwavering enthusiasm promises a bright future for the undergraduate research experience at Baylor!

A handwritten signature in black ink that reads "Truell W. Hyde". The signature is written in a cursive, flowing style.

Truell W. Hyde, Ph.D.

Vice Provost for Research

Scholars Week 2014

Welcome to
Undergraduate Research and Scholarly Achievement
Scholars Week

Letter from Dr. Truell Hyde Page 1

Platform Presentations in Bill Daniel Student Center

Monday, March 31, 2014 (2:00 pm) Pages 4-10

Sam Ballard. Houston
Derek Byrne Baines
Eric Cline Cowden
Madison Cloud White
Emily Edmondson. Baines
Alexander Gardere. Fentress
Karin Gibson Cowden
William Gregory Beckham
Haley Hamlin Houston
Dustin Lyles. Cowden

Jacob Maher Baines
Kaleia Marsden Fentress
Laura McMillan. Fentress
Hayden Murphy Beckham
Katherine Novak White
Cameron Strong Baines
Robert Taff Houston
Kurt Terry. White
Alyssa Vannatter. Beckham
Amy Welch Fentress

Monday, March 31, 2014 (3:30 pm) Pages 11-16

Jessica Abbey Cowden
Tiffany Auber White
Kellie Bassett. Houston
Kaley Branstetter Fentress
Cameron Brewer. Houston
Kevin Burns. Fentress
Dillon Camp. Cowden
Jessie Carver. Baines
Jacquelyn Clark. Houston
Chance Coppedge Beckham
Katherine Ellis Baines
Virginia Gallardo Beckham
Da'Monica Hunter White
Natasha Jordan Houston

Ellie Lastrapes Houston
Jonathan McElroy Fentress
Katherine Nick Cowden
Cimarron Parker. White
Jackson Perry Fentress
Morgan Raley. Houston
Kristin Smart. Cowden
Jesus Sotelo Houston
Christine Stanulonis Baines
Scott Sykes Beckham
Sarah Van Dyke Beckham
Katherine Walker White
Connor Warme Baines

Tuesday, April 1, 2014 (2:00 pm) Pages 17-21

Dustin Buller Baines	Emily Peirce White
Joseph DiNatale III White	Abigail Pinto Fentress
April Fleming Beckham	Rachel Petersen Baines
Thomas Gibson White	Jeremy Quintana Baines
Chelsea Goodman Fentress	Ellen Scott Beckham
Emily Johnson Fentress	Zacharie J. Seifert Baines
Richa Manglorkar Baines	Swathi Shankar Cowden
Amanda Mintz Cowden	Hayley Sharma Beckham
Vy Nguyen White	Ellen Vitercik White
Melissa Pforr Fentress	Rebecca Young Cowden

Tuesday, April 1, 2014 (3:30 pm) Pages 22-26

Alex Alford Cowden	Melissa Lasater Cowden
Christopher Blewett . . . Beckham	Lauren Linthicum White
Courtney Carter Cowden	Linda Nguyen Fentress
Hailey Cowan Cowden	Vivian Nguyen Fentress
Michelle Cruz White	Keith Robertson Beckham
Nicole Abraham Downing . Fentress	Meredith Rosenthal Baines
Bayless Drum Baines	Taylor Roth Fentress
Thomas Elston Fentress	Paul Schlaudraff Beckham
Molly Hall-Harvey White	Parmida Schahhosseini . Cowden
Alexa Christian Hoisager . . Cowden	Collin Smith Cowden
Rachel Kim White	Michael Webbon Beckham
Rebecca Klein White	

Poster Presentations in Baylor Sciences Building

Wednesday and Thursday, April 2-3. Pages 27-41

Hankamer School of Business

Business Fellows Sessions in Cashion 409

Monday, March 31	Page 42
Tuesday, April 1, 2014	Page 43
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Thursday, April 3, 2014.	Page 45
Future Undergraduate Research Events	Page 46
Art Student Exhibition	Page 47

PLATFORM PRESENTATIONS

Monday, March 31, 2014
Bill Daniel Student Center
Fentress Room

2:00

VISUAL ARTS

Laura McMillan

Faculty Mentor: Dr. Heidi J. Hornik

Historiography of Francesco Salviati

[Art]

Kaleia Marsden

Faculty Mentor: Dr. Heidi J. Hornik

Baylor's Architecture in Regards to Classical Greek and Roman Architecture

[Art]

Amy Welch and Alexander Gardere

Faculty Mentor: Dr. Nathan Elkins

Coins and the Communication of Power in the Reign of Nerva, A.D. 96-98

[Art]

Monday, March 31, 2014
Bill Daniel Student Center
Baines Room

2:00

HUMAN DIGNITY & SUFFERING

Cameron Strong

Faculty Mentor: Dr. William Hoy

Death Criteria: What It Takes To Die

[Medical Humanities]

Jacob Maher

Faculty Mentor: Dr. William Hoy

Physician-assisted Dying: A New Model for Current
Clinical Application

[Medical Humanities]

Derek Byrne

Faculty Mentor: Janet Norden, MA

Integral Perspectives on Dignity in B. Traven's
"Assembly Line"

[Modern Languages & Cultures]

Emily Edmondson

Faculty Mentor: Dr. Natalie Carnes

"Salvifici Doloris": John Paul II's Take on Redemptive Suffering

[Religion]

Monday, March 31, 2014
Bill Daniel Student Center
Beckham Room

2:00

GLOBAL PERSPECTIVES

Hayden Murphy

Faculty Mentor: Dr. Ivy Hamerly

Means, Motive, and Opportunity: Why Modern Civil Wars
Begin & Why They Last So Long

[Political Science]

Alyssa Vannatter

Faculty Mentor: Dr. Ivy Hamerly

State Strength in China

[Political Science]

William Gregory

Faculty Mentor: Dr. Lizbeth Souza-Fuertes

South American Consumptive Wildlife Tourism

[Modern Languages & Cultures]

Monday, March 31, 2014
Bill Daniel Student Center
White Room

2:00

HISTORY

Kurt Terry

Faculty Mentor: Dr. Bracy Hill

Dialogue of Reformation: Luther, Henry VIII, More,
and Erasmus

[History]

Katherine Novak

Faculty Mentor: Dr. Bracy Hill

Wyatt's Rebellion under Mary I of England

[History]

Madison Cloud

Faculty Mentor: Dr. Bracy Hill

From Protestant Princess to Holy Heroine: Elizabethan
Propaganda in the Arts

[History]

Monday, March 31, 2014
Bill Daniel Student Center
Cowden Room

2:00

Eric Cline

Faculty Mentor: Dr. Karol Hardin

Effectiveness of Spanish Language and Culture Education
on Healthcare Providers

[Modern Language & Cultures]

Dustin Lyles

Faculty Mentor: Dr. Frieda Blackwell

Feminist Ideals in the Short Stories of Emilia Pardo Bazán

[Modern Language & Cultures]

Karin Gibson

Faculty Mentor: Dr. Frieda Blackwell

The Function of Children in Galdós' "La de Bringas"

[Modern Language & Cultures]

SPANISH LANGUAGE & CULTURE

Monday, March 31, 2014
Bill Daniel Student Center
Houston Room

2:00

ENVIRONMENTAL LAW

Haley Hamlin

Faculty Mentor: Dr. Julie King

Killer Whales (*Orcinus orca*) in Captivity: The Legalities and Ethics

[Environmental Science]

Robert Taff

Faculty Mentor: Dr. Julie King

Impacts of Bycatch Regulations on Leatherback Sea Turtles

[Environmental Science]

Sam Ballard

Faculty Mentor: Dr. Sascha Usenko and Dr. Julie King

The Red River Rivalry: Recent Disputes and Solutions for the Future

[Environmental Science]

Monday, March 31, 2014
Bill Daniel Student Center
Fentress Room

3:30

CLASSICS - HONORS COLLEGE

Jackson Perry

Faculty Mentor: Dr. Nathan Elkins

Dionysian and Eucharistic Imagery in "Santa Costanza"
[Art]

Kevin Burns

Faculty Mentor: Dr. David Jeffery

Judaism's Use of Dionysiac Iconography: A Study of the
Dura Europos Synagogue
[Honors College - University Scholars]

Kaley Branstetter and Jonathan McElroy

Faculty Mentor: Dr. William Weaver and Dr. Greg Hamerly

Annotating Critical Soliloquies in the Browning Letters
[Honors College - Great Texts]
[Computer Science]

Jonathan McElroy and Kaley Branstetter

Faculty Mentor: Dr. William Weaver and Dr. Greg Hamerly

Supervised Classification of Genre in the Browning Letters
[Honors College - Great Texts]
[Computer Science]

Monday, March 31, 2014
Bill Daniel Student Center
Baines Room

3:30

RELIGION & LITERATURE

Christine Stanulonis

Faculty Mentor: Dr. Ralph Wood

The Tree of Knowledge and the Tree of Life
[Religion]

Connor Warne

Faculty Mentor: Dr. Lidija Novakovic

Christotelic Interpretation of Isaiah 7:14 in Matthew 1:22-23
[Religion]

Katherine Ellis

Faculty Mentor: Dr. William Bellinger

The Divine Speeches and Job
[Religion]

Jessie Carver

Faculty Mentor: Dr. David Jeffery

A Musical Interpretation of Dante Alighieri's "Divina Commedia"
[Honors College]

Monday, March 31, 2014
Bill Daniel Student Center
Beckham Room

3:30

GLOBAL PERSPECTIVES & ECONOMICS

Chance Coppedge

Faculty Mentor: Dr. Scott Spinks and Holly Joyner, MS

Mercosur: Protectionism and Quality of Life in Argentina and Brazil

[Modern Languages & Cultures]

[Global Community Living - Learning Center]

Virginia Gallardo

Faculty Mentor: Dr. Scott Spinks and Holly Joyner, MS

Poverty in South Africa: Why Race is Still a Factor After the Apartheid

[Modern Languages & Cultures]

[Global Community Living - Learning Center]

Scott Sykes

Faculty Mentor: Dr. Scott Spinks and Holly Joyner, MS

The Efficacy and Evolution of Microfinance

[Modern Languages & Cultures]

[Global Community Living - Learning Center]

Sarah Van Dyke

Faculty Mentor: Dr. Van Pham

Prediction Model for Baylor Admissions

[Economics - School of Business]

Monday, March 31, 2014
Bill Daniel Student Center
White Room

3:30

FRENCH LANGUAGE & CULTURE

Cimarron Parker

Faculty Mentor: Dr. Theresa Varney Kennedy

The Treatment of Women in "Tristan and Iseult"
[Modern Languages & Cultures]

Tiffany Auber

Faculty Mentor: Dr. Cristian Bratu

Rousseau: Another Interpretation
[Modern Languages & Cultures]

Katherine Walker

Faculty Mentor: Dr. Richard Duran

The Existentialist Basis Underlying Simone de Beauvoir's
"The Second Sex"
[Modern Languages & Cultures]

Da'Monica Hunter

Faculty Mentor: Dr. Holly Collins and Dr. Richard Duran

La Francophonie Désintègre L'Identité Culturelle
[Modern Languages & Cultures]

Monday, March 31, 2014
Bill Daniel Student Center
Cowden Room

3:30

SPANISH LANGUAGE & CULTURE

Katherine Nick

Faculty Mentor: Dr. Paul Larson

Pious Charity in the Fifth Miracle of our Lady, Gonzalo de Berceo: El pobre caritativo
[Modern Languages & Cultures]

Kristin Smart

Faculty Mentor: Dr. Paul Larson

The Portrayal of Mary in Berceo's "La Casulla de San Ildelfonso"
[Modern Languages & Cultures]

Jessica Abbey

Faculty Mentor: Dr. Paul Larson

A Question of Poverty: Juan Rulfo's "Es que somos muy pobres"
[Modern Languages & Cultures]

Dillon Camp

Faculty Mentor: Dr. Paul Larson

The Question of Servant Leadership in Exemplo LI of "El Conde Lucanor"
[Modern Languages & Cultures]

Monday, March 31, 2014
Bill Daniel Student Center
Houston Room

3:30

ANTHROPOLOGY

Cameron Brewer

Faculty Mentor: Dr. Garrett Cook

An Ethnographic Encounter with Wicca in the UK
[Anthropology]

Natasha Jordan and Jacquelyn Clark

Faculty Mentor: Carol Macaulay-Jameson, MA

Bringing Down the House: Waco Urban Renewal
[Anthropology]

Jesus Sotelo

Faculty Mentor: Dr. Garrett Cook

Ethnography in the Clinic: The Experiential Approach
among Men with Diabetes
[Anthropology]

Ellie Lastrapes, Morgan Raley and Kelli Bassett

Faculty Mentor: Dr. Garrett Cook

Some Implications of Ethnomedical Patterns in
a Mayan Town
[Anthropology]

Tuesday, April 1, 2014
Bill Daniel Student Center
Fentress Room

2:00

HEALTH CARE

Emily Johnson

Faculty Mentor: Dr. Andrew Meyer

Active Catharsis in the Great Brazos Relay
[Health, Human Performance & Recreation]

Melissa Pforr

Faculty Mentor: Dr. Matthea Hungerford

Cyclops Lesion in a Collegiate Football Player Following
ACL Reconstruction
[Health, Human Performance & Recreation]

Abigail Pinto and Chelsea Goodman

Faculty Mentor: Dr. Shelby Garner

Identification of Student Nurses' Perceptions of Nursing in
Bengaluru India: A Photovoice Study
[Louise Herrington School of Nursing]

Tuesday, April 1, 2014
Bill Daniel Student Center
Baines Room

2:00

Dustin Buller

Faculty Mentor: Dr. Kevin Shuford

Effects of Ethanol on Ion Transport in the NavMs Channel
Via Molecular Dynamics
[Chemistry & Biochemistry]

**Rachel Petersen, Zacharie J. Seifert
and Jeremy Quintana**

Faculty Mentor: Dr. Robert R. Kane

Synthesis of Sulfur and Amino 8-Substituted Adenine
Derivatives as TLR7 Agonists
[Chemistry & Biochemistry]

Richa Manglorkar

Faculty Mentor: Dr. Myeongwoo Lee

The Effects of the egl-13 Transcription Factor is Linked
to pat-3 β Integrin
[Biology]

CHEMISTRY & MOLECULAR LIFE SCIENCE

Tuesday, April 1, 2014
Bill Daniel Student Center
Beckham Room

2:00

Hayley Sharma

Faculty Mentor: Dr. Frieda Blackwell

Moratin's Solution for Spanish Theater Reform
in the 18th Century

[Modern Languages & Cultures]

Ellen Scott

Faculty Mentor: Dr. Frieda Blackwell

Censorship and Repression in Jardiel Poncela's "Eloísa está
debajo de un almendro"

[Modern Languages & Cultures]

April Fleming

Faculty Mentor: Dr. Frieda Blackwell

Political Pessimism in Spanish Literature: Mariano Jose
de Larra's Essays

[Modern Languages & Cultures]

SPANISH LITERATURE & CULTURE

Tuesday, April 1, 2014
Bill Daniel Student Center
White Room

2:00

MATHEMATICS

Emily Peirce, Ellen Vitercik and Joseph DiNatale III

Faculty Mentor: Dr. Casey Mann and Dr. Lance Littlejohn

Unilateral and Equitransitive Tilings by Squares of Four Sizes
[Mathematics]

Thomas Gibson

Faculty Mentor: Dr. Ron Morgan and Dr. Mark Embree

Variations of The Arnoldi Method for Computing
Multiple Eigenvalues
[Mathematics]

Vy Nguyen

Faculty Mentor: Dr. Johnny L. Henderson

Smoothness of Solutions with Respect to Boundary Value
Conditions for ODE
[Mathematics]

Tuesday, April 1, 2014
Bill Daniel Student Center
Cowden Room

2:00

Swathi Shankar

Faculty Mentor: Dr. Sarah Ford

The Legal, Racial and Moral Conflicts in Mark Twain's
"Pudd'nhead Wilson"

[English]

Rebecca Young

Faculty Mentor: Marie Smart, MA

Mystical Spirituality in American Abstract Expressionism

[English]

Amanda Mintz

Faculty Mentor: Dr. Clay Butler

Who's got the power? Conversational Dominance in
Same-gender Discourse

[English]

ENGLISH LITERATURE & LINGUISTICS

Tuesday, April 1, 2014
Bill Daniel Student Center
Fentress Room

3:30

PSYCHOLOGY & NEUROSCIENCE

Taylor Roth

Faculty Mentor: Dr. Christine Limbers

How Coping Styles Influence Emotional Eating Habits
in a University Population

[Psychology & Neuroscience]

Linda Nguyen

Faculty Mentor: Dr. Wade Rowatt

Correlates of Implicit and Explicit Attitudes Toward Interracial
Attraction

[Psychology & Neuroscience]

Thomas Elston

Faculty Mentor: Dr. Joaquin N. Lugo

Aniracetam and Behavior

[Psychology & Neuroscience]

Vivian Nguyen and Nicole Abraham Downing

Faculty Mentor: Dr. L. Joseph Achor

"Survival of the Fittest": Selecting the Right Fit in Electronic
Databases for a Given Search

[Psychology & Neuroscience]

Tuesday, April 1, 2014
Bill Daniel Student Center
Baines Room

3:45

LIFE SCIENCE

Meredith Rosenthal

Faculty Mentor: Dr. Tamarah Adair

Variation in Response to Blue Light among *Staphylococcus aureus* Isolates

[Biology]

Bayless Drum

Faculty Mentor: Dr. Tamarah Adair

RNA-seq Reveals Changes in *S. aureus* transcriptome after Blue Light Illumination

[Biology]

Tuesday, April 1, 2014
Bill Daniel Student Center
Beckham Room

3:30

RUSSIAN LANGUAGE & CULTURE

Paul Schlaudraff

Faculty Mentor: Dr. Adrienne Harris

Dostoevsky's View of the Russian Soul and Its Impact
on the Russian Question

[Modern Languages & Cultures]

Keith Robertson

Faculty Mentor: Dr. Adrienne Harris

Improving Understanding of Russian Grammar
through Reading

[Modern Languages & Cultures]

Christopher Blewett

Faculty Mentor: Dr. Adrienne Harris

E'ryday Repin

[Modern Languages & Cultures]

Michael Webbon

Faculty Mentor: Dr. Adrienne Harris

Architected Chaos: The Smorgasbord Dialectics
of Nikolai Gogol's "Dead Souls"

[Modern Languages & Cultures]

Tuesday, April 1, 2014
Bill Daniel Student Center
White Room

ARCHEOLOGY

3:30

Lauren Linthicum

Faculty Mentor: Carol Macaulay-Jameson, MA

Overview of Baylor University's Second Field Season
at Barnhill Rockshelter 33

[Anthropology]

Molly Hall-Harvey

Faculty Mentor: Dr. Leslie Busch,

Carol Macaulay-Jameson, MA

Macrobotanical Analysis of Carbonized Plant Remains
from Barnhill Rockshelter

[Anthropology]

Michelle Cruz and Rachel Kim

Faculty Mentor: Carol Macaulay-Jameson, MA

An Analysis of the Faunal Remains from Barnhill Rockshelter
#3 (41CV1646)

[Anthropology]

Rebecca Klein

Faculty Mentor: Dr. Linda Perry, Foundation for

Archaeobotanical Research in Microfossils,

Carol Macaulay-Jameson, MA

Metates and Starch Grains: Evidence of Maize and Seed
Processing in Coryell Co.

[Anthropology]

Tuesday, April 1, 2014
Bill Daniel Student Center
Cowden Room

3:30

JOURNALISM & COMMUNICATION STUDIES

Parmida Schahhosseini

Faculty Mentor: Carol Perry, MA

Center of International Education Magazine

[Journalism, Public Relations, & New Media]

Courtney Carter, Hailey Cowan and Alex Alford

Faculty Mentor: Carol Perry, MA

Baylor FCS Fashion Merchandising & Design Magazine

[Journalism, Public Relations, & New Media]

**Melissa Lasater, Alexa Christian Hoisager
and Collin Smith**

Faculty Mentor: Dr. Sara Stone

Journalism, Public Relations and New Media Online Magazine

[Journalism, Public Relations, & New Media]

POSTER PRESENTATIONS

Poster Presentations
April 2 and 3, 2014
12:30 pm – 1:30 pm
Baylor Sciences Building

- Board 1 Kaitlyn Drenckpohl**
Faculty Mentor: Dr. Becky Spencer
Addressing the Health Needs of Somali Refugees
[Louise Herrington Nursing School]
- Board 2 Amanda Holub**
Faculty Mentor: Dr. Becky Spencer
The Psychological Effects of Pediculosis in School
Children and their Caregivers
[Louise Herrington Nursing School]
- Board 3 Tate Cooper**
Faculty Mentor: Dr. Becky Spencer
Prevention of Intraventricular Hemorrhage
in Premature Infants
[Louise Herrington Nursing School]
- Board 4 Audrey Sisson**
Faculty Mentor: Dr. Becky Spencer
Open Visitation in Intensive Care Units
[Louise Herrington Nursing School]
- Board 5 Kelli Davis**
Faculty Mentor: Dr. Becky Spencer
Supportive Care of the Family: End of Life Care through
the Bereavement Process
[Louise Herrington Nursing School]
- Board 6 Charlie Ann Anderson**
Faculty Mentor: Dr. Becky Spencer
The Nurse's Role in Helping Patients and Families Cope
with Fetal Demise
[Louise Herrington Nursing School]

Board 7 Brooke Roy

Faculty Mentor: Dr. Cathy Miller

Recognizing Chiari Malformation Symptoms During Initial Nursing Assessment

[Louise Herrington Nursing School]

Board 8 Regan Nicewander

Faculty Mentor: Dr. Cathy Miller

The Impact of Stress on Student Nurses

[Louise Herrington Nursing School]

Board 9 Shannon Marek

Faculty Mentor: Dr. Andrew Gallucci

Unilateral Stress Fracture at the L4 Vertebra in a Collegiate Tennis Player

[Health, Human Performance & Recreation]

Board 10 Katherine Barnes

Faculty Mentor: Dr. Andrew Gallucci

Left Shoulder Glenohumeral Instability and Anterior Inferior Labral Tear

[Health, Human Performance & Recreation]

Board 11 Kelli Gunter

Faculty Mentor: Dr. Andrew Gallucci

Grade III Chondromalacia in a Recreational Power Lifter

[Health, Human Performance & Recreation]

Board 12 Kyle Wolff

Faculty Mentor: Dr. Andrew Gallucci

Non-Contact Tibia-Fibula Fracture In the Collegiate Football Player

[Health, Human Performance & Recreation]

Board 13 Stephanie Post

Faculty Mentor: Dr. Matthea Hungerford

Acetabular Labral Tear in a Collegiate Baseball Pitcher: A Case Study

[Health, Human Performance & Recreation]

Board 14 Briana Trevino

Faculty Mentor: Dr. Donna Burnett

Why College Students Gain Weight:

A Qualitative Investigation

[Family and Consumer Sciences]

**Board 15 Katherine Hooker, Pamela K. Kostka
and Coowe M. Walker**

Faculty Mentor: Dr. Ryan King

and Dr. William Hockaday

NMR Reveals Effects of Alder Cover on Leaf Litter

Breakdown in Alaskan Streams

[Biology]

[Geology]

**Board 16 Jemima McCluskey, Moncie V. Wright
and Leanne F. Baker**

Faculty Mentor: Dr. Ryan S. King

and Dr. Cole Matson

Interactions between Titanium Dioxide Nanoparticles

and Snail Grazing

[Biology]

[Environmental Science]

Board 17 Caitlyn Brashears and Ming Chen

Faculty Mentor: Dr. Patrick Danley

Post Zygotic Isolation in Two Closely Related Lake Malawi

Cichlid Species

[Biology]

Board 18 Alyssa Pantle

Faculty Mentor: Dr. Richard Duhrkopf

Oviposition of Container-Breeding Mosquitoes Associated
with ORGIN 3-6-9 Water

[Biology]

Board 19 Richa Manglorkar and Bryan Brautigam

Faculty Mentor: Dr. Myeongwoo Lee and

Dr. Lyn Jakeman(NIH/NINDS, Repair and Plasticity)

Characterization of CD200 Expression in the Mouse Spinal
Cord Following Injury

[Biology]

Board 20 David Crabtree

Faculty Mentor: Dr. Sanghoon Kang

The Effect of Magnetic Fields on Human Skin Microbiota
[Biology]

Board 21 Nick Norris, Annie Janise and Molly Kudela

**Faculty Mentor: Dr. Erika Abel, Dr. Crystal Usenko
and Dr. Erica D. Bruce**

Investigation of the Role of Oxidative Stress
in PBDE-induced Toxicity

[Biology]

[Environmental Science]

**Board 22 Gerardo Martinez, Aaron Hopkins, Lana Joudeh,
Molly Kudela and Nick Norris**

**Faculty Mentor: Dr. Crystal Usenko,
Dr. Erika L. Abel and Dr. Erica D. Bruce**

Comparative Toxicity of Brominated Flame Retardants
in Zebrafish

[Biology]

[Environmental Science]

Board 23 Stephanie Ortiz and Jonathan Tijerina

**Faculty Mentor: Dr. Crystal Usenko,
Dr. Erika Abel and Dr. Erica D. Bruce**

Effects of Brominated Flame Retardants on Neurological
Development in Zebrafish

[Biology]

[Environmental Science]

Board 24 Catherine Howard

Faculty Mentor: Dr. Bill Neilson

Fibroblast-Endothelial Cell Interaction in the Heart
[Honors College]

**Board 25 Saira Sanghera, Bindiya Patel
and Elizabeth Andersen**

**Faculty Mentor: Dr. Jacquelyn Duke
and Dr. Diane Hartman**

Escaping the ESKAPE

[Biology]

**Board 26 Shelby Garcia, Michael Jacobs, Thuc Pham
and Ali Staples**
**Faculty Mentor: Dr. Diane Hartman
and Dr. Jacquelyn Duke**
Investigating Soil Microbes for Antibiotics
[Biology]

**Board 27 Shelby Armstrong, Sam Marshall
and Shanze Zar**
**Faculty Mentor: Dr. Diane Hartman
and Dr. Jacquelyn Duke**
The Unearthing of New Antibiotics Produced
by Soil Microbes
[Biology]

Board 28 Ohm Pandya, Jesse McNicoll and Prisca Pungwe
**Faculty Mentor: Dr. Diane Hartman
and Dr. Jacquelyn Duke**
Road to Discovering New Antibiotics
[Biology]

Board 29 Sarah Yuen
Faculty Mentor: Dr. Tamarah Adair
Determining the Dosage of 470 nm Light Required
to Completely Inhibit *S. aureus*
[Biology]

Board 30 William Jones and Meredith Rosenthal
Faculty Mentor: Dr. Tamarah Adair
The Effect of Pigmentation and Passaging on Response
of *S. aureus* to Blue Light
[Biology]

Board 31 Kyra Deaton, Filippa G. Bagnasco,
Zachary S. Brynell, Sydney O. Burke,
Nitish S. Chimalakonda, Jade A. Connor,
Kyra N. Curtis, Bethany M. Deaton,
Abby K. Fahnstock, Christopher R. Fratus,
Allen W. Karstens, Sai A. Konde, Carter N. Lantz,
Scott M. Lee, Sierra N. Miller, Josephine E. Minick,
Katelyn M. Pruett, Victoria A. Rose,
Amelia M. Schick, Chloe' A. Sells,
Jeremy W. Sieker, Daniel S. Thomas,
Yasmene M. Warrad and Jacqueline F. Wyper
**Faculty Mentor: Dr. Tamarah Adair
and Dr. Bryan Gibbon**

The Isolation and Analysis of Novel Bacteriophage
[Biology]

Board 32 William Judge, Purvi Prajapati and Hijab Ahmed
Faculty Mentor: Dr. Marty Harvill

Population Growth of *Simocephalus serrulatus*
in Lake Waco Wetlands
[Biology]

Board 33 Nick Obias and Nicole Feragen
Faculty Mentor: Dr. Marty Harvill

Examining *Pontederia cordata* Population Growth
[Biology]

Board 34 Christopher McElrath, Annam Husain
and Bryanna Wells
Faculty Mentor: Dr. Marty Harvill

Evaluating the Rate of Population Decline of *Daphnia*
in Elevated Levels of CuSO_4
[Biology]

Board 35 Niloy Shah, Julian Aliche and Bhargavi Karumuri
Faculty Mentor: Dr. Marty Harvill

Role of Cu^{2+} and Fe^{2+} Rich Environments
on Respiratory Output of *Chironomus sp.*
[Biology]

- Board 36 Ana Garcia, Andrea Tabb and Amy Schatz**
Faculty Mentor: Dr. Marty Harvill
Comparison of Unburned and Burned Soil Properties
in Waco Wetlands
[Biology]
- Board 37 Mahsa Madani, Jacob Moran and Alyssa Pantle**
Faculty Mentor: Dr. Marty Harvill
Poverty in Waco, TX: Awareness and Use
of Medical Services
[Biology]
- Board 38 Sabrina Stinson and David Heath**
Faculty Mentor: Dr. Marty Harvill
General Public Knowledge of Vaccinations:
An Investigative Study in Central TX
[Biology]
- Board 39 Tara Hutchison, Aleia Slack and Emily Knox**
Faculty Mentor: Dr. Marty Harvill
General Population's Knowledge of Food Serving Sizes
[Biology]
- Board 40 Tracey Tran, Sozit Yousuf and Garrett Gray**
Faculty Mentor: Dr. Marty Harvill
The Evaluation of General Sun Safety Knowledge
Amongst Baylor University Students
[Biology]
- Board 41 Elizabeth Yuan, Ale Aguado
and Johnathan Whatley**
Faculty Mentor: Dr. Marty Harvill
Plastic Products: How Much Do You Know?
[Biology]
- Board 42 Amanda Berger, Nhat Hoang and Bisola Dada**
Faculty Mentor: Dr. Marty Harvill
Investigation of pH on Mosquito Larvae
(*Aedes sp.*) Sustainability
[Biology]

- Board 43 Jennifer Misenhimer and Dev Merugumala**
Faculty Mentor: Dr. Marty Harvill
Sexually Transmitted Disease Awareness Among
Baylor Students
[Biology]
- Board 44 Anna Berry, Addie Abohosh and Gigi Jolly**
Faculty Mentor: Dr. Marty Harvill
Temperature Effects on Growth Rate:
Cambarellus puer (Crayfish)
[Biology]
- Board 45 Nikhilesh Srinivasan, Raj Patel and Savan Patel**
Faculty Mentor: Dr. Marty Harvill
Nitrogen and Phosphorus vs. *Typha* Growth Rate
at the Lake Waco Wetlands
[Biology]
- Board 46 Sarah Cheney, Ashley Wallace and Brenda Camacho**
Faculty Mentor: Dr. Marty Harvill
Competition For Phosphorus Between Macroalgae
and Microalgae
[Biology]
- Board 47 Amanda Edinger, Brian Engelhardt and Christine Ge**
Faculty Mentor: Dr. Marty Harvill
June Bug Larvae (*Phyllophaga crinita*) Response to Burned
Wetlands Habitat
[Biology]
- Board 48 Elsa Felten, Alexandra Morales and Ehi Agboje**
Faculty Mentor: Dr. Marty Harvill
Simocephalus serrulatus' Adapted Efficiency
of Water Filtration
[Biology]
- Board 49 Cassidy Daw, Erin Keck and Meredith McCarty**
Faculty Mentor: Dr. Marty Harvill
The Effects of Concentrated pH on Survival and Reproduction
Rates: *Simocephalus serrulatus* v. *pulex*
[Biology]

Board 50 Taylor Dess, Chris Horn and Grace Berry

Faculty Mentor: Dr. Marty Harvill

Lake Waco Wetlands: Competition between Microscopic Algae and Filamentous Algae

[Biology]

Board 51 Andrea Bodale, Asha Scott and Marisa Pinton

Faculty Mentor: Dr. Marty Harvill

Effect of Acetaminophen on *Simocephalus serrulatus* Offspring Survivability

[Biology]

Board 52 Randall Bennett

Faculty Mentor: Dr. Steven Driese

Influence of Paleoenvironment on Source-Rock Potential of the Bakken Shale

[Geology]

Board 53 Hunter Allen

Faculty Mentor: Dr. Steven Driese

Depositional Environments and Petroleum Resources of the Eagle Ford Shale

[Geology]

Board 54 Patrick Wagstaff

Faculty Mentor: Dr. Steven Driese

An Assessment of Steam Assisted Gravity Drainage of Bitumen Reservoirs

[Geology]

Board 55 Thomas Fletcher

Faculty Mentor: Dr. Steven Driese

Lower Middle Miocene (MM4) Depositional Setting, Gulf of Mexico

[Geology]

Board 56 Nick Castillo

Faculty Mentor: Dr. Steven Driese, Dr. Bruce Byars and Andrew Worsley

Sub-Surface Characterization of an Upper Terrace of the Brazos River Alluvium

[Geology]

[Center for Spatial Research]

[Environmental Science]

Board 57 Charlie Keracik and Todd Longbottom

**Faculty Mentor: Dr. Steven Driese
and Dr. William Hockaday**

Assessing Source Rock Potential of the Eagle Ford Shale
Using Solid-State NMR
[Geology]

Board 58 Creighton Meyers

Faculty Mentor: Dr. William Hockaday

Sampling Methods for Suspended Particulate Matter:
A Study of the Brazos River
[Geology]

Board 59 Rebecca Davis

Faculty Mentor: Dr. William Hockaday

Burn It To The Ground: An Investigation of
Geosequestered Bioxhars Using ^{13}C NMR
[Geology]

Board 60 Curtis Fenley

Faculty Mentor: Dr. Daniel Peppe

Magnetostratigraphy of the San Juan Basin, New Mexico
[Geology]

Board 61 Veronica Lyons

Faculty Mentor: Dr. Patrick Farmer

Synthesis of Fe(III)hydroxy-octaethylporphyrin and its
Derivatives to Understand the Reaction Mechanism
of Heme Degredation
[Chemistry & Biochemistry]

Board 62 Cassie Robertson, Jarrod P. Tunnell,

Laxman Devkota and Zhe Shi

Faculty Mentor: Dr. Kevin G. Pinney

Design and Synthesis of Bridge-Modified
Combretastatin Analogues
[Chemistry & Biochemistry]

**Board 63 Tyler Goddard, Christine A. Herdman
and Tracy E. Strecker**

**Faculty Mentor: Dr. Kevin G. Pinney
and Dr. Mary Lynn Trawick**

Design and Synthesis of Benzosuberene Analogues as
Potential Anti-Cancer Agents

[Chemistry & Biochemistry]

**Board 64 William Wesson, Howard Chen
and Charles Chang**

Faculty Mentor: Dr. Bob Kane

Synthesis of a Crosslinker for Linking TLR Agonists
to Proteins

[Chemistry & Biochemistry]

Board 65 Brandon Summerlin

Faculty Mentor: Dr. Kevin Chambliss

IM-MS Characterization of Asphaltene using
a Violanthrone-79 Standard

[Chemistry & Biochemistry]

Board 66 Cody Scruggs

Faculty Mentor: Dr. Kevin L. Shuford

Tensile and Compressive Loading of Class 5 Amyloid
Fibrils using MD Simulations

[Chemistry & Biochemistry]

Board 67 Jesse Hilton, Samuel Odutola and Jiangli Song

**Faculty Mentor: Dr. Mary Lynn Trawick
and Dr. Kevin G. Pinney**

Cruzain Inhibition by Thiosemicarbazones as Therapeutics
for Chagas' Disease

[Chemistry & Biochemistry]

Board 68 Derek Newberger

**Faculty Mentor: Dr. George P. Cobb (Baylor Univ.),
Dr. Thomas Rainwater (Medical Univ. of South
Carolina), Dr. Frank Mazzotti (Univ. Florida),
Cherie Rose-Chenot (ACES, Belize)
and Vince Rose (ACES, Belize)**

Mercury and Transition Metal Accumulation in Scutes
of American Crocodiles from Belize

[Environmental Science]

**Board 69 Madison Baxter, Joel Kaufman, Marnie Hazelhurst,
Cynn timer Curl and Amanda Gassett**
Faculty Mentor: Dr. Rebecca Sheesley
Residential Exposure to Indoor and Outdoor Volatile
Organic Compounds
[Environmental Science]

Board 70 David Dreier and Kristin Connor
Faculty Mentor: Dr. Bryan Brooks
Comparative Probabilistic Hazard Assessment of Estrogen
Agonist Activity
[Environmental Science]

Board 71 Stacy Sebastian
Faculty Mentor: Dr. Erica Bruce
The Development of a State Geodatabase for the Analysis
of Vector-Borne Diseases
[Environmental Science]

**Board 72 Alec Sabatini, Byron Griffin, Capri Woolridge,
Eliana Pelfrey, James Britven,
Matt Ponder-Waldrup, Rachel Johnson, Sean Suris,
Stephen Julian and Lissette Aguilar**
Faculty Mentor: Dr. Sascha Usenko
Copper, Free Chlorine, and Total Chlorine Concentrations in
Drinking Water Fountains
[Environmental Science]

Board 73 Kevin Healy
Faculty Mentor: Dr. Vanessa Castleberry
Proof-of-Concept for Horizon Liquid Fuel Rocket
[Chemistry and Biochemistry]

Board 74 Jeremy Smallwood
Faculty Mentor: Dr. Lorin Matthews
Investigation of the Photophoretic Force
[Physics]

- Board 75 Blake Birmingham, Yaobiao Xia, Dmitri Voronine and Kenneth Park**
Faculty Mentor: Dr. Zhenrong Zhang
Copper Phthalocyanine Thin Film Growth for Surface Enhanced Raman Scattering
[Physics]
- Board 76 Dean Leonard, Darijana Horvat, Madhava R. Beeram, Steven R. Allen, Cynthia J. Meininger, David C. Zawieja, Thomas J. Kuehl and M. Nasir Uddin**
Faculty Mentor: Dr. Richard Sanker
Hyperglycemia Induces Apoptotic Signaling in Cytotrophoblast Cells
[Pre Health Studies]
- Board 77 Nanjing Gao and Gregory Smith**
Faculty Mentor: Dr. Joaquin Lugo
Kv4.2 Knockout Mice have Learning Deficits in the Lashley Maze.
[Psychology and Neuroscience]
- Board 78 Christopher Harrison-Missimo and Megan Haggard**
Faculty Mentor: Dr. Wade Rowatt
Generation Me: Personality Correlates of Narcissism
[Psychology and Neuroscience]
- Board 79 Samantha Synett, Bryann B. DeBeer, Nathan A. Kimbrel, Eric Meyer, Suzy B. Gulliver and Sandra B. Morissette**
Faculty Mentor: Dr. Michael B. Frisch
Impact of Deployments on Military Children
[Psychology and Neuroscience]
- Board 80 Tara Brynell and Jessica Hinshaw**
Faculty Mentor: Dr. Sara Alexander
Risky Business? Challenges of Climate Change for the Tourism Industry in Belize
[Anthropology]

Board 81 Matt Wiesehan and Erica Lathan

Faculty Mentor: Carol Macaulay-Jameson, MA

Analysis of the Lithic Assemblage from the 2013 Baylor
University Field School

[Anthropology]

Board 82 Jennifer Husak

Faculty Mentor: Dr. Lori Baker

A Voice for the Unknown: Identification of Deceased
Border Crossers

[Anthropology]

Hankamer School of Business
BUSINESS FELLOWS SESSIONS

Monday, March 31, 2014

Cashion 409

3:30 Ryan Johnson

Advisor: Marjorie Cooper

Comparing the Marketing Environment of the Modern
Church and the Modern Corporation

[Department of Marketing]

Stuart Miller

Advisor: George Gawrych

Iraqi Kurds: Road to Genocide

[Department of History]

5:00 Lexi Luckenbill

Advisor: Gia Chevis

The Unintended Effects of Dodd Frank Act Section 1502:
Conflict Minerals

[Department of Accounting]

Amy Miller

Advisor: Kathy Hurtt

Would You Blow-the-Whistle on a Friend? Analysis on the
Significance of Relationships on Whistleblower Intentions

[Department of Accounting]

Tuesday, April 1, 2014
Cashion 408

3:30

Luke Smith

Advisor: Lisa Baker

Attitudes, Knowledge, and Behavior Concerning Reproductive Health and High-Risk Sexual Behavior among Males in Rural Western Kenya

[Honors College]

Cami Hebert

Advisor: Joyce Nuner

Premature Birth and the Impact on the Family System

[Department of Family & Consumer Sciences]

Drew McBrayer

Advisor: Jim Henderson

Title TBA

[Department of Economics]

5:00

Cassandra Maier

Advisor: Rita Abercrombie

Comparing Healthcare in the United States and Germany

[Department of Modern Foreign Languages]

Stephanie Ting

Advisor: Janya Martin

Gender Roles in German Fairy Tales

[Department of Modern Foreign Languages]

Paul Schlaudraff

Advisor: Adrienne Harris

Dostoevsky: An Exploration of the Russian Soul and Utopian Socialism in "The Brothers Karamazov"

[Department of Modern Foreign Languages]

Wednesday, April 2, 2014

Cashion 409

3:30 Alex Dixon and Chris Workman

Advisor: Andrea Dixon

Developing an Internal Listening Program

[Department of Marketing]

Chelsea Richwine

Advisor: Scott Cunningham

Texas Natural Experiment: Examining the Causal Effects of Mass Incarceration on Crime

[Department of Economics]

Sarah Van Dyke

Advisor: Van Pham

Estimating an Admitted Student's Propensity to Enroll at Baylor

[Department of Economics]

5:00 Dustin Luse

Advisor: Steve Green

Primary Care Delivery Models: Improving Quality and Controlling Costs

[Department of Economics]

Daniel Lin

Advisor: Steve Green

Informal Economies in Caribbean Nations

[Department of Economics]

Kevin Kelly

Advisor: Steve Gardner

The Economy of Galilee During the Time of Jesus

[Department of Economics]

Thursday, April 3, 2014

Cashion 409

3:30

Tara Funk

Advisor: Steve Bradley

Economic Freedom and Health

[Department of Management and Entrepreneurship]

Richard Ashley

Advisor: Steve Bradley

Organizational Identification as a Factor in Microloan
Repayment for Urwego Bank

[Department of Management and Entrepreneurship]

Wesley Hodges

Advisor: Mitch Neubert

Organizational Visioning

[Department of Management and Entrepreneurship]

5:00

Andrew Bowman

Advisor: Bryan Shaw

Leucocoria and Its Qualitative Associativeness to the Onset
of Retinoblastoma

[Department of Chemistry and Biochemistry]

Sarah Smith

Advisor: William Hillis

Aldosterone Synthesis in the Adrenal Glands of Fetal Bovine
Embryos: An Overview of Laboratory Techniques

[Department of Biology]

***Other business fellows:**

Cassie Robertson

Swathi Shankar

FUTURE UNDERGRADUATE RESEARCH EVENTS

School of Education 6th Annual Student Research Symposium

The Science of Wondering

April 1, 2014, 4:30 PM to 6:00 PM

Lee Lockwood Library, 2801 West Waco Drive, Waco, TX

Honors Week

Alexander Classroom

Honors Theses Presentations: Monday-Friday, April 7-11

Barfield Drawing Room

Honors Banquet: TBA;

Honors Convocation: 2 PM, Friday, April 11

For more details, visit www.baylor.edu/honorscollege

CUR (Council on Undergraduate Research)

National Conference on Undergraduate Research:

University of Kentucky, April 3-5

Undergraduate Research Week: April 14-18

For more details visit www.cur.org

Art Student Exhibition

March 27 – April 15

The Martin Museum of Art at Baylor University will feature the annual Baylor Art Student Exhibition beginning March 27th at 5:30pm and running through April 15th. Renowned Texas artist, Sedrick Huckaby, is the guest juror and will present awards to the students March 27.

Sedrick Huckaby's rich impasto paintings celebrate family history, faith, and community. Combining the languages of representation and abstraction, they evoke overlooked cultural traditions and the improvisational colors of jazz. Born in 1975 in Fort Worth, Texas, Huckaby earned his BFA at Boston University in 1997 and his MFA from Yale University in 1999, before returning home to Fort Worth where he currently lives and works. His paintings and drawings have been featured in numerous exhibitions across the country and his works are included in the permanent collection of the Museum of Fine Arts, Boston; the Whitney Museum of American Art, New York City; and the African American Museum in Dallas.

Hours are 10am-6pm Tuesday- Friday,
10am-4pm Saturday and 1-4pm Sunday.

For more information call 254.710.1867
or visit the museum website at www.baylor.edu/martinmuseum



BAYLOR

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