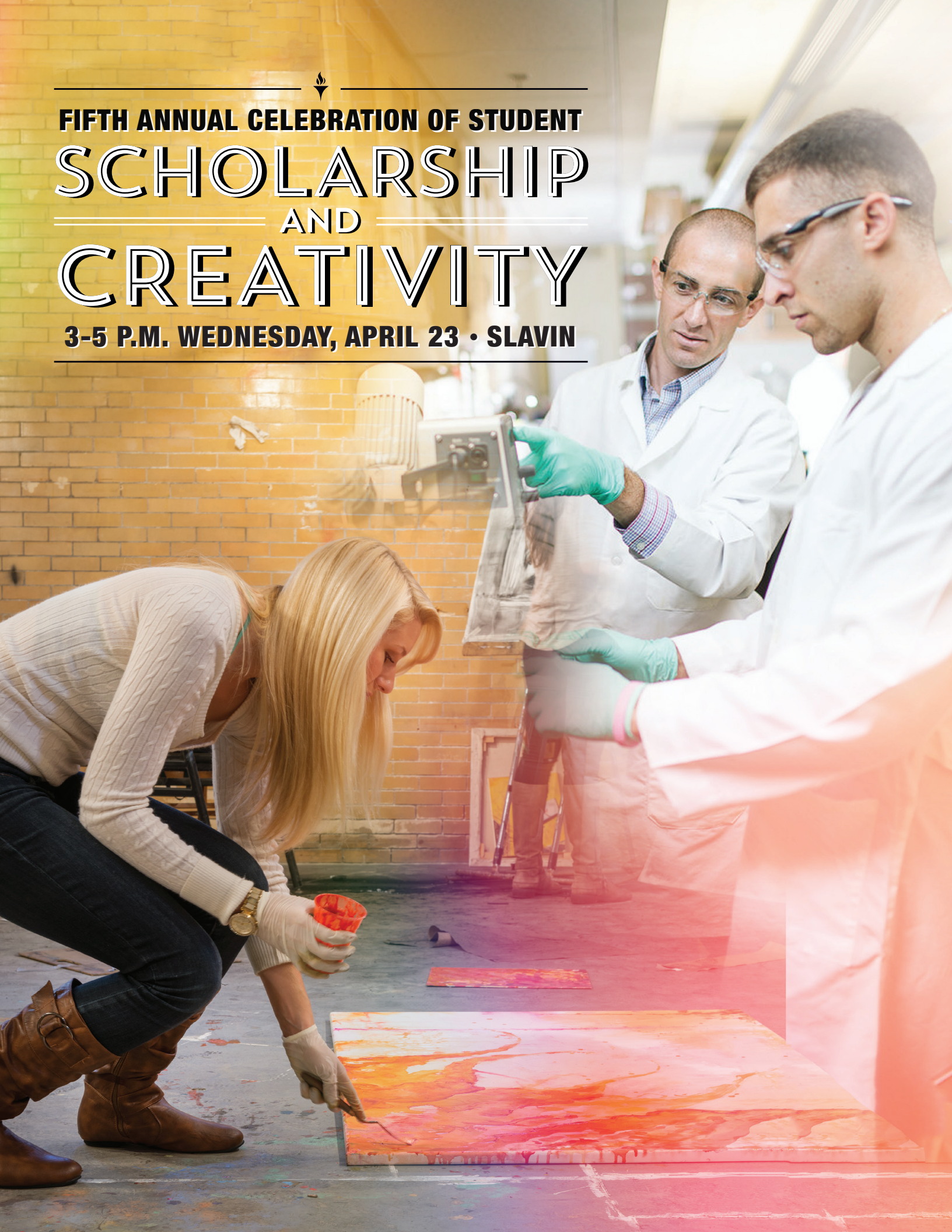

FIFTH ANNUAL CELEBRATION OF STUDENT
SCHOLARSHIP
AND
CREATIVITY

3-5 P.M. WEDNESDAY, APRIL 23 • SLAVIN



Prevalence of Homelessness in R.I.

Nearly 4,000 people were homeless in Rhode Island in 2007. This number is only growing.

Between one-third and one-fourth of this population also has a mental illness.

Other organizations provide "wrap-around services," which include:

- Permanent housing
- Substance abuse counseling
- Therapy
- Medical care

Best Practices in Homelessness and Mental Illness

So what's out there?

Subsidized housing targets individuals and families who have a certain income.

Shelters provide a temporary place to sleep and food to eat.

Best Interventions for Homelessness and Mental Illness

"I just didn't get the total package of care that I needed. Some [programs] are strictly clinical, some strictly work of narcotics."

"I have my doctor here, I have groups here, I have a therapist here. It's like a wrap around service, where everything is in one place."

"I came here, and they gave me keys. I'm at peace now. I can see my future."



**TALK ABOUT THE ANNUAL CELEBRATION
ON TWITTER USING #PCANNUALCELEB**

Welcome!

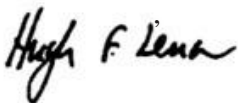
Thank you for joining us at Providence College's Fifth Annual Celebration of Student Scholarship and Creativity. Over two hundred students (eighty-seven projects), all nominated by faculty from a wide range of academic disciplines, have prepared poster, laptop and other types of presentations to showcase their exciting and innovative research and creative work.

The projects of these students, supported by their faculty mentors, are exemplary because of the depth of commitment and understanding they reflect as well as the high quality of the finished product. We congratulate both the students and the faculty on their outstanding accomplishments. We hope that their enriching experiences serve as the foundation for future academic and professional endeavors.

The Celebration of Student Scholarship and Creativity was inspired by Providence College's three-year *Fostering a Culture of Student Engagement* grant from the Davis Educational Foundation. The purpose of this grant was to strengthen student engagement in learning as a means of fulfilling the College's central mission to promote, sustain and enhance academic excellence. Providence College expresses its deep gratitude to the Davis Educational Foundation for its critical partnership in this effort.

This celebration is also an important feature of the College's Strategic Plan where student engagement is a critical step in our effort to enhance academic excellence by engaging students deeply in their learning through expanded experiential research, study, and service opportunities, and by recognizing publicly students' best scholarly and creative work.

Congratulations to all of the participants in this year's Celebration.

A handwritten signature in black ink that reads "Hugh F. Lena". The signature is written in a cursive, flowing style.

Hugh Lena, Ph.D.

Provost & Senior Vice President for Academic Affairs

Annual Celebration of Student
Scholarship and Creativity
PROJECTS 2014

ARTS



Make Them Strange

Studio Arts Area

Grant Bay, Class of 2014, Studio Art

As an artist, my primary medium is painting. For reference I look at recorded moments in time through found photographs and captured video stills, coupled with ideas from my imagination and sketchbook. I take compositions that are populated with objects and figures that are recognizable and make them strange. My work reflects this by living in the nebulous spectrum between abstract and representational: there are always commonly discernible objects or figures, but they are in contrast with abstracted areas of color and mark-making. This yields an inability to fully establish a sense of one's bearings within the painting, revealing it as a condition that is engaging and fascinating but tragically impossible.

Faculty Mentor: Professor Heather McPherson, Department of Art and Art History



3D Imaging of Melanoma Cells

Project 71

David Calienes, Class of 2014, Biology

The objective of my work is to utilize my knowledge of molecular biology and also my experience in cellular research to synthesize three dimensional sculptures of cells. The cells that I have designed are placed in various contexts found inside and outside of their natural environment. The motivation for my project is derived from my desire to break through the seemingly restrictive dimensionality of microscopic analysis and employ three dimensional techniques in order to stimulate scientific innovation.

Faculty Mentor: Professor James Janecek, Department of Art and Art History



Prostitution and Prayer: An Examination of Ruega por Ella of Francisco Goya's Los Caprichos

Project 1

Eileen Donovan, Class of 2014, Art History

Plate 31 of Francisco Goya's Los Caprichos, titled Ruega por ella (She prays for her), went through a drastic evolution in becoming the final print. Goya altered a simple bathing scene to make a larger commentary on prostitution and religion in late eighteenth-century Spanish society. By allusion to the visual tradition of Bathsheba, Goya not only addressed the problems of prostitution, he also raised questions regarding popular faith and the efficacy of Catholic doctrine.

Faculty Mentor: Professor Paul Crenshaw, Department of Art and Art History



A New Visual Vocabulary

Studio Arts Area

Michael Gallucci, Class of 2014, Marketing

I am a designer with a background in commercial and studio art. My visual vocabulary sets out to create a group of consistent yet individual styles that describe how content occupies space. Through the work here, I break down my process, and diagram the role that the visual vocabulary plays in my art.

Faculty Mentor: Professor James Janecek, Department of Art and Art History



Gino Severini's Dancers and His Theatrical Milieu

Project 2

Maria Haidinger, Class of 2014, Art History and Management

Senior Thesis project in Art History, delivered as a PowerPoint presentation at our departmental symposium. This study looks at one of the most important Italian Futurist artists of the 1910s, and sees his unusual (for the Futurists) dedication to the theme of dance within a complex cultural and intellectual environment in Paris. A strong case is presented that Severini considered the dance as a marker of modernity, just as his peers were marveling at the industrial machines of the early 20th century.

Faculty Mentor: Professor Paul Crenshaw, Department of Art and Art History



Impropriety, Informality and Intimacy in Vigée Le Brun's *Marie Antoinette en Chemise*

Project 3

Kelly Hall, Class of 2014, Art History

This investigation surrounding the painting by Elisabeth Louise Vigée Le Brun, contextualizes the work in several facets in order to better understand the significance of the response the portrait garnered at the Salon of 1783. This study closely examines the political climate at the time the portrait was made; compares the portrait to contemporary models of regal, especially female, portraiture; and explores the relationship of Vigée Le Brun and Marie Antoinette as expressed through the artist's memoirs written late in her life.

Faculty Mentor: Professor Paul Crenshaw, Department of Art and Art History



The Auto Show

Studio Arts Area

Jessica Ho, Class of 2014, Studio Art

My work combines my interests in both automotive and digital imaging to portray the cars as works of art, rather than just a means of transportation. The palette of colors and the mosaic surfaces give the cars more personality while emphasizing the individual characteristics that make it a unified whole.

Faculty Mentor: Professor James Janecek, Department of Art and Art History



Kinetic Serenity

Studio Arts Area

Katherine Kaiser, Class of 2014, Studio Art

I want to connect to the energy found in nature by implementing two types of painting languages. The juxtaposition between the serenity of pouring paint and the sharp kinetic energy of my hand-drawn marks creates a balance in the composition. The combination of mark making puts me in a meditative state where everything is connected as if it is one continued journey and growth experience.

Faculty Mentor: Professor Heather McPherson, Department of Art and Art History



Arsy-Versy Fairytales

Studio Arts Area

Kristen Kern, Class of 2014, Studio Art

This body of work is focused on retelling a series of well-known fairy-tales backwards. By inverting the original tale, I create an entirely new narrative. With the new stories came new characters, so I began to further develop them as individuals by producing drawings and sketches which portray these characters interacting with each other and expressing their unique personalities. In this way, I use my work to introduce my characters to the viewer, and to let the viewer get to know them as well as I do.

Faculty Mentor: Professor James Janecek, Department of Art and Art History



Stacking Paper

Studio Arts Area

Ryan Martin, Class of 2014, Studio Art

My work depicts late-adolescent masculinity and the sometimes suspect behavior attached to it. I represent a type of lifestyle that is generally familiar from college sports and chum movies, which I treat with humor and aggression. I approach it in a personal way, recording my own daily life with my friends and describing these moments with found materials and messy demanding markmaking. I often select imagery from the past that deals with male role models, for example my heroic Grandfather, Evel Knievel, movie characters, and manipulate those pictures through cutting, painting, embroidery, digital drawing, and wood burning. My work uses text to give life to the characters and interact with the viewer. I enjoy a wide variety of materials; I use vernacular materials like discarded plywood, fabric, and yarn in combination with oil and acrylic paint, and view everything around me as a potential art material.

Faculty Mentor: Professor Heather McPherson, Department of Art and Art History

The Significance of Walker Evans' *Many are Called* in Two Distinct Moments

Project 4

Maggie North, Class of 2014, Art History

In 1938, photographer Walker Evans ventured into the NYC subway to capture passengers' faces lulled into repose by the jostling train. The research presented aims to better understand these experimental images. Although Evans created some of the first candid stealth photographs, they remained largely unknown until the series *Many Are Called* was published twenty-five years later. Explaining this gap is necessary to determine the significance of this series, but also to our understanding of America's identity politics and its documentation through photographs.

Faculty Mentor: Professor Paul Crenshaw, Department of Art and Art History



The Places Between Events: "Architectural Interest" and the Shifting Cultural Definition of America in Stephen Shore's *Uncommon Places*

Project 5

John Ronalter, Class of 2014, Art History

Stephen Shore's monograph *Uncommon Places* defined 1970s America through the road trip tradition established by Walker Evans and Robert Frank. By applying the concept of "architectural interest," the significance of the places he photographed is revealed not in individual images, but in the series as a whole. His photographs of the built environment serve as an indicator of cultural forces and thus defined America as the deliberate awareness of everyday and ubiquitous places.

Faculty Mentor: Professor Paul Crenshaw, Department of Art and Art History



Subliminal

Studio Arts Area

Emily Smith, Class of 2014, Studio Art

In all of my work I have a common goal: I want to alter what the eye sees in a picture to spark a question: what is happening? I collect fashion and surf magazines —the images within ignite my artistic process and serve as the physical surfaces for my paintings. I observe color and space within an image and then interfere in order to camouflage what is originally being shown.

Faculty Mentor: Professor Heather McPherson, Department of Art and Art History



Imperialism, Economics, and Sacred Experience in the Golden Mosaics of the Basilica of San Marco

Project 6

Alexandra Steadman, Class of 2014, Art History

The golden mosaics of the Basilica of San Marco in Venice exemplify a physical manifestation of Venice's new political and economic power, amplify the sacrality of the space, and intensify the theological and metaphysical experience of San Marco. The problem presented is understanding the significance of the golden mosaics used in the ornamentation of the basilica. This investigation will attempt to answer this question of meaning in relation to Venice's transformation from a small city-state into a major political force.

Faculty Mentor: Professor Paul Crenshaw, Department of Art and Art History



Providence Women's Hockey All Access: The Courage to be Uncommon

Project 7

Victoria Virtue, Class of 2015, Management

Angelo Marciano, Class of 2015, Health Policy and Management

Providence Women's Hockey All Access: The Courage to be Uncommon" is a documentary that focuses on how the student-athletes of the PC women's ice hockey team handle themselves on and off the ice. The film provides an in-depth look at how the women train, study, practice, and execute during a game. Overall, the documentary demonstrates why being a Friar is an experience of a lifetime filled with wonderful memories.

Faculty Mentor: Rev. Kenneth Gumbert, O.P. Department of Theater, Dance and Film

The Creative Process of "The Ring"

Project 8

Kate Corrigan, Class of 2016, Public and Community Service Studies

This project describes the creative process behind choreographing a piece exploring the dynamic of a struggle between that which is controlled and that which is controlling. It is an embodiment of the times in life when one feels controlled-emotionally, mentally, or physically.

Faculty Mentor: Professor Wendy Oliver, Department of Theatre, Dance and Film



The Art of Conducting and the Science of Rehearsal

Project 9

James Brodeur*, Class of 2014, Music Education

Sadie Ahlquist, Class of 2017, Psychology

Christopher Cacciavillani, Class of 2014, Political Science

Kevin Doran, Class of 2017, Undeclared

Olivia Goliger, Class of 2017, Music Education

Sarah Gothers, Class of 2014, Music Education

Joseph Graziano, Class of 2014, Philosophy and Theology

Sara Indish, Class of 2015, Music

Anastasia Krawiecki, Class of 2014, Music

Dylan Levinson, Class of 2016, Management

Steven Marchand, Class of 2014, Philosophy

Eric Lebel*, Class of 2015, Biochemistry and Music

Patrick McCall, Class of 2015, History

Mary McDermott, Class of 2014, Music Education

Brendan Murray, Class of 2017, Music/Education

Kelsey O'Hare, Class of 2014, Music Education

Claire O'Connor, Class of 2017, Psychology

Elizabeth Randall, Class of 2014, Music and Psychology

Becky Sawicki, Class of 2014, Music

Alanna Smith, Class of 2014, English/Creative Writing

Christopher Garrepy

Choral Performance/Rehearsal Demonstration/Lecture: Student Conductors Eric Lebel '15 and James Brodeur '14 will lead Department of Music choral ensemble, I Cantori in a demonstration of clear visual technique and effective rehearsal technique.

Faculty Mentor: Dr. T.J. Harper, Department of Music

*Celebration Presenter



BUSINESS



A business process and internal control analysis of MacDogalls Cape Code Marine Service

Project 16

Patrick Bowler, Class of 2014, Accountancy
Matthew Conti, Class of 2014, Accountancy
Benjamin Phillips, Class of 2014, Accountancy

This semester-long team project makes the students reach out to the real world, find an organization, study in detail one of its business processes and come up with recommendations for improvement. The project integrates all themes covered in Accounting Information Systems class, helps understand the material in depth and provides students with a unique hands-on experience with business processes and internal control.

Faculty Mentor: Dr. Sonia Gantman, Department of Accountancy



The Physical Plant Work Order Process System

Project 17

Sean Clark, Class of 2015, Accountancy
Matthew D'Ambra, Class of 2015, Accountancy and Finance
Riley Dowd, Class of 2015, Accountancy

The Physical Plant of Providence College is responsible for the maintenance and upkeep of the various facilities located throughout the college's campus. This presentation outlines the specific processes and controls that are implemented into their work order process system. By understanding these important aspects of this business process, our group was able to uncover inefficiencies and missing controls within the Physical Plant system.

Faculty Mentor: Dr. Sonia Gantman, Department of Accountancy



United Way of Southeastern Connecticut Financial Review Panel

Project 18

Rory Healy, Class of 2014, Accountancy
Erin O'Grady, Class of 2014, Accountancy
Frank Taylor, Class of 2014, Accountancy

Every year the United Way of Southeastern Connecticut puts together a Financial Review Panel to evaluate the organizations it supports. This year, three Providence College students volunteered for the panel and helped to determine the stability of eight non-profits associated with United Way. As part of the evaluation they looked at the organizations' audited financial statements and different financial ratios, and then submitted their findings on the standing of the organizations.

Faculty Mentor: Dr. Patrick Kelly, Department of Accountancy



The Expiration of Tax Deductions for Teacher Expenses

Project 19

Erin O'Grady, Class of 2014, Accountancy

As a part of ACC 406, Taxes and Business Decisions, I was able to conduct research regarding the expiration of a tax deduction for teachers' expenses, and send my findings to the Committee on Ways and Means as well as an argument against its expiration

Faculty Mentor: Dr. Julia Camp, Department of Accountancy



Elizabeth DeVivo*, Class of 2014, Marketing
Katherine Kenny*, Class of 2014, Marketing
Sara Corben, Class of 2014, Marketing
Daniel Cudgma, Class of 2014, Marketing
Thomas du Bois de Montule, Class of 2014, Marketing
Lucy Ford, Class of 2014, Marketing
Lauren Hudson, Class of 2014, Marketing
Stephen Kogut, Class of 2014, Marketing
Danielle Lockhart, Class of 2014, Marketing
Olivia Matteo, Class of 2014, Marketing

Jessica Di Pietro*, Class of 2014, Marketing
Nicholas Mizera*, Class of 2014, Marketing
Thomas Migliaccio, Class of 2014, Marketing
Reaghan O'Brien, Class of 2014, Marketing
Conner O'Meara, Class of 2014, Marketing
Courtney O'Rourke, Class of 2014, Marketing
Alexia Polachek, Class of 2014, Marketing
Paul Sullivan, Class of 2014, Marketing
Alexandra Tilden, Class of 2015, Marketing
Zachary Trombly, Class of 2014, Marketing

Providence College's entry in American Marketing Association's integrated marketing plan competition for Hershey's Take 5 candy bar, which finished in the top 20 among 86 submissions and earned an honorable mention. This comprehensive plan is comprised of the following sections: Situational Analysis, SWOT Analysis, PEST Analysis, Porter Analysis, Brand Personality Assessment, Competitive Analysis, Market Research, Survey Information, Research Analysis, Brand Strategy and Objectives, Target Market, Product Positioning, Marketing Tactics, Integrated Marketing Communications Plan, Public Relations Plan, Distribution Plan, Pricing Plan, Appendix, and Bibliography.

Faculty Mentor: Dr. Mark DeFanti, Department of Marketing

*Celebration Presenter



Students' Perceived Brand Image of Providence College

Project 12

Samantha DeGroff, Class of 2014, Marketing
Katharine Harris, Class of 2014, Marketing
Erin Murphy, Class of 2014, Marketing
Samantha Stump, Class of 2014, Marketing

The purpose of our marketing research project was to conceptualize the perceived brand image of Providence College from freshmen finishing their first year. We have defined perceived brand image as what others think about Providence College. For our conceptual model, our literature review helped us to identify antecedents and moderators for brand image. The antecedents ranking from most important to least important are as follows, Student Characteristics, College Performance, Service Offerings, and Marketing Efforts by Providence College. Our moderators, also ranked from most important to least important based on image are Geographic Location, Student Quality, High School Quality, Legacy, Catholic Family, and High School's Catholic Affiliation. Our hope is that our research can strengthen Providence College's understanding of the relationship its marketing has with both current and prospective students.

Faculty Mentor: Dr. Mark DeFanti, Department of Marketing



Providence College Seniors' Attitudes Toward the Job Search

Project 11

Erika Flanagan, Class of 2014, Marketing
Elizabeth DeVivo, Class of 2014, Marketing

Our research project was designed to assess which group of Providence College seniors feel most prepared for the job search, as well as which group feels most confident that they will obtain a job prior to or within one month of graduation.

Faculty Mentor: Dr. Scott Wright, Department of Marketing



Promotional Strategy: Salt Water Farm

Project 13

Emily McClellan, Marketing, Class of 2015

Rachel Mano, Marketing, Class of 2015

Chuan Ru (Natasha) Tree, Marketing, Class of 2015

Saltwater Farm in Maine was researched to create an integrated marketing communication plan for promotional strategies (spring 2013). A small organization providing farm-fresh communal dining & cooking classes defines their mission as *“buy local and eat well.”*

Choosing a target audience, we designed five print ads, two video ads, revitalized social media pages, and suggested a publicity plan, sales promotion ideas, direct response mediums, & branding approaches. A high-quality DVD was produced for all digital media avenues.

Faculty Mentor: Professor Janet M. Letourneau, Department of Marketing



Promotional Strategy for St. Cecelia School

Project 14

Kelsey Dermody*, Class of 2015, Marketing

Irma Babaic, Class of 2015, Marketing

Corinne Buie, Class of 2014, Marketing

Claire Chambers, Class of 2015, Marketing

Elisabetta DeWitt, Class of 2015, Marketing

Kelly Dolan, Class of 2015, Marketing

Virginia Fanelli, Class of 2015, Accountancy and Marketing

Emily Goodnow, Class of 2014, Marketing

Kelly Hand, Class of 2015, Marketing

Kathryn Jancsy, Class of 2015, Marketing

Marie Kelly, Class of 2015, Marketing

Stephen Kogut*, Class of 2014, Marketing

Luke Kochanowski, Class of 2014, Marketing

James Macedo, Class of 2014, Marketing

Rebecca Morse, Class of 2014, Marketing

Courtney O'Rourke, Class of 2014, Marketing

Alexia Polachek, Class of 2014, Marketing

Lorraine Reynolds, Class of 2014, Marketing

Robert Stack, Class of 2014, Marketing

Cory Stratford, Class of 2014, Marketing

Alexandra Tilden, Class of 2015, Marketing

Howland Ungemach, Class of 2014, General Studies

Promotional Strategies Class Section 001 was asked to create a marketing plan to increase enrollment at St. Cecilia School, a local Catholic elementary school in Rhode Island. Through advertising, direct mail, personal selling, sales promotion, social media, and public relations we devised a plan that they could implement as they saw fitting. It has been a busy year for St. Cecilia, as they have begun to use some of our suggestions to get closer to reaching their goal.

Faculty Mentor: Professor Janet M. Letourneau, Department of Marketing

*Celebration Presenter



Promotional Strategy: Society of Saint John the Evangelist

Project 15

Christopher Baker, Marketing, Class of 2015

Alessandra Foresti, Marketing, Class of 2016

Shannon Kane, Marketing, Class of 2015

Rachael Yeadon, Marketing, Class of 2015

We created an Integrated Marketing Communication Plan (promotional strategies fall 2013) for The Society of Saint John the Evangelist, a Massachusetts Episcopal Monastery offering ‘down time’ from everyday stress.

We chose a target audience, developed a customized plan using branding, PR, advertising, direct-response, sales promotion, & social media elements. Our semester-long project culminated in a detailed plan with exhibits & video. A surprise visit from Jamie Coats, the Communications Director of SSJE transpired, with teams presenting their best ideas.

Faculty Mentor: Professor Janet M. Letourneau, Department of Marketing



HUMANITIES



Sanctuary: Faulkner's Assimilation of The Waste Land

Project 22

Ealish Cassidy, Class of 2014, English

Faulkner's description of the modern waste land in Sanctuary is equally as bleak as that of Eliot. Although this world is terrifying, somehow man is not utterly depraved. Faulkner does not insinuate that all men are like Popeye, without a conscience and doomed since birth to practice evil. Instead, he suggests that mankind is more like Temple, made restless by the tedium of the parched waste land and attracted by the thrills offered by evil.

Faculty Mentor: Dr. Brian Barbour, Department of English and Dr. Suzanne Fournier, Department of English



Christian Providence: An Exploration of Suffering and Fortune in The Man of Law's Tale, The Knight's Tale, and Troilus and Criseyde

Project 23

Jill Heckenliable, Class of 2014, English

My thesis explores the problem of suffering and its relation to the wheel of fortune and divine providence through the works of medieval poet Geoffrey Chaucer, arguing that he presents a Christian solution to this pervasive problem. I explore this issue in The Man of Law's Tale, highlighting its clear Christian elements. Primarily because of the influence of Boethius, I also argue for a Christian interpretation of The Knight's Tale and Troilus and Criseyde, despite their pre-Christian settings.

Faculty Mentor: Dr. Robert Stretter, Department of English and Dr. Margaret Healy-Varley, Department of English



Reforming (Native) America: Indian Self-Determination Before Red Power

Project 24

Caitlin Charette, Class of 2014, American Studies, French, and History

The Association on American Indian Affairs (Association), an Indian advocacy organization founded by white Americans, created the We Shake Hands Program (WSH) in 1957. WSH provided several Native American tribes, including the Oglala Sioux, with the technical and financial support to design economic development programs on their impoverished reservations. Through WSH members of the Association rejected a longstanding paternalistic approach to Native American politics and affirmed the legitimacy of tribal authority and self-determination.

Faculty Mentor: Dr. Darra Mulderry, Department of History



Amerindian Shamanism and Iberian Catholicism in the Relación of Álvaro Núñez Cabeza de Vaca

Project 21

Kristian Fabian, Class of 2014, History

In 1527, Álvaro Núñez Cabeza de Vaca participated in the notorious Pánfilo de Narváez expedition, which was an attempt to colonize La Florida, the southeastern central part of North America. The excursion was a disaster, as within just several months, the initial on-land crew of five-hundred men was reduced to just four remaining survivors. This research explores how Cabeza de Vaca blended New World Amerindian shamanism with Old World Christianity so that the conquistador was able to endure hardship, hostility, and fear as well as attain ostensible popularity among the native populations.

Faculty Mentor: Rev. David Thomas Orique, O.P., Department of History



The Legacy of 1940: The Election of Franklin D. Roosevelt to a Third Term

Project 25

Kyle Lindsay, Class of 2014, American Studies and History

For my history honors thesis, I examined the decision of Franklin D. Roosevelt to run for a third presidential term in 1940. This decision was an important one, for no other President in American history had been elected to a third term. My research indicated that despite his personal wishes, Roosevelt believed that he had to run again in 1940 to guide the United States during the uncertain period leading up to World War II.

Faculty Mentor: Dr. Richard Grace, Department of History



Turkish Acculturation into German Society

Project 26

Erik Pottinger, Class of 2014, History

Following the Anwerbestopp the dynamic of immigration to Germany changed from workers seen as temporary to family units. With the change, Germany needed to address how these new immigrants would fit into mainstream German society. Germans favor the assimilationist method, which cause Turks to react against the status quo, retreat into their own pockets of parallel society, or break the mold and try to affect public opinion. Germany needs to affect change with better schooling, education on stereotypes, and more acceptance so Turks feel part of mainstream society. Germany also needs more accepting governmental policies especially those about citizenship as well as those Turks who have broke the mold, such as Özil and media figures to show that Turks can achieve great success when given the chance. Full integration and assimilation are not compatible and assimilation is psychologically damaging[1], but Germans fear opening the borders to all immigrants would hurt their own culture. By promoting friendships between Turks and Germans, extraordinary Turks that break down stereotypes, and the use of art and social media can positively impact the integration of Turkish Germans in society.

Faculty Mentor: Dr. Jennifer Illuzzi, Department of History



"I am willing to serve the public but I think that I have a right to choose that way of performing that service that will be most honorable to myself:"

Project 27

Honor and Virtue in the Birth of America

Matthew Riordan, Class of 2014, History

Thesis examining the importance and influence of the relationship between the language of honor and virtue spoken by military and civilian leaders during birth of America (1775-1789).

Faculty Mentor: Dr. Patrick Breen, Department of History



"In Her Shoes": Victorian Lady Explorers in Imperial Africa and their Relationship to Contemporary Travellers in a Commercialized, Nostalgic Landscape

Project 28

Mary Elizabeth Smith, Class of 2016, Political Science

Smith uses the framework of the Cape to Cairo trek to illuminate both the problematic maternalist feminism of early 19th century women, and to draw parallels with contemporary nostalgia for a romanticized and racialized past.

Faculty Mentor: Dr. Jennifer Illuzzi, Department of History



Yo, siguiendo el camino de Santa Teresa (I, Walking the Path of St. Teresa)

Project 29

Melissa Scott, Class of 2014, Political Science and Spanish

This work is an illustrated spiritual biography that captures in words and photographs the rich experiences that Melissa had as an American Catholic student studying and researching in Spain as a Father Smith Fellow. Melissa recounts in clear Spanish prose her own intellectual and spiritual reflections as she retraced St. Teresa of Avila's life in Spain. This project contributes in a unique way to the biography of St. Teresa because Melissa successfully unveils the subtle Dominican influences in Teresa's's life and works. Melissa shares fascinating examples of the direct and indirect impact that St. Dominic and his thought had on the sixteenth century nun in this multilayered work that integrates texts, photos, popular and personal anecdotes.

Faculty Mentor: Dr. Alison Caplan, Department of Foreign Language Studies



Hispanic Art Online

Lucy Reynoso*, Class of 2016, Spanish
Kristian Fabian*, Class of 2014, History
Collin Anderson, Class of 2015, Global Studies and Spanish
Katherine Bacino, Class of 2014, Global Studies and Spanish
Amanda Centrella, Class of 2014, English
Jose Cruz, Class of 2015, Management
Victoria Cuartas, Class of 2015, Global Studies
Christina D'Agostino, Class of 2014, Biology
Matthew Daniele, Class of 2015, English
Gabriella DeMarco, Class of 2014, Biology
Andrea DePauw
Michael DiFrancesco, Class of 2014, Health Policy and Management
Benjamin Donarum, Class of 2015, Economics
Katelyn Henderson, Class of 2014, History
Elvis Huertas, Class of 2014, Spanish
Jose Jimenez, Class of 2014, Global Studies and Sociology

We sought to illustrate how *MediaKron* is helpful in our learning of Hispanic Art in relevance with its time period and its geographic location. It provided us with an opportunity to do research on an artist and a piece of artwork and compare it in relation to art of other time periods and artwork in other countries.

Faculty Mentor: Dr. Edgar Mejia, Department of Foreign Language Studies and Dr. Monica Simal, Department of Foreign Language Studies

*Celebration Presenter

Project 20

Amanda Schaefer*, Class of 2014 Political Science and Spanish
Hilary Johnson, Class of 2014, Marketing
Marissa Jones, Class of 2015, Spanish
Brittany Kowaleski
Jessica Lacy, Class of 2014, Health Policy and Management
Daniela Licalzi, Class of 2015, Elementary Education
Bryan McNamara, Class of 2015, Global Studies and Spanish
John McGowan, Class of 2014, Finance
Nicole Mirabile, Class of 2014, Global Studies and Spanish
Julia Monti, Class of 2014, Spanish
Leslie Raygoza, Class of 2016, Spanish/Secondary Education
Nicole Roche
Esteban Rojas, Class of 2014, Political Science
Ryan Siegel, Class of 2014, Biology
Jacqueline Stimola, Class of 2014, Health Policy and Management.
Brian Sweeney, Class of 2015, Global Studies
Rafael Tavares
Samantha Wood



PROFESSIONAL STUDIES



Portrayals of Post-Traumatic Stress Disorder in the Media: Symptoms and Treatment for Veterans from Operation Enduring Freedom and Operation Iraqi Freedom

Project 30

Olivia Haddad, Class of 2014, Health Policy Management

My paper examines how PTSD is portrayed in the media and how it compares to the clinical symptoms of the disorder. PTSD can be a life-changing disorder and is estimated to affect nearly 1.5 million veterans by 2020, according to the US Department of Veterans Affairs (VA). Four distinct symptoms have been identified by the VA, namely soldiers reliving the event, avoiding situations that remind him/her of the event, negative changes in beliefs and feelings, and feeling 'keyed' up or hyperarousal. My paper briefly discusses the evolution of PTSD and reasons why it is so prevalent. The discussion is followed by an analysis on the four symptom types highlighted above. In the analysis, I include possible treatments and how each are portrayed in popular culture. My paper demonstrates how film, both documentaries and fictional movies focused on the wars in the Middle East, accurately reflect soldiers' real-life experiences with each of the symptoms of PTSD. In addition, I explain that the media also exposes effective treatments for the debilitating disorder that leaves soldiers vulnerable and unable to connect with family and friends when they return home.

Faculty Mentor: Dr. Robert Hackey, Health Policy and Management Program



The Side Effects of Direct-to-Consumer Advertising: Representations of Antidepressant Medications in Film

Project 31

Laura Kurjanowicz, Class of 2014, Biology

Popular culture is prevalent, easily accessible, and widely influences the minds of the audience. A recent film by Steven Soderbergh, *Side Effects*, portrays violence as a major side effect of antidepressants. My research includes a comparison between the main character's experience of depression and literature about documented side effects of antidepressants. I also analyze the pitfalls of direct-to-consumer advertisements of antidepressants and discuss how images of these medications influence viewers' beliefs about side effects of antidepressants.

Faculty Mentor: Dr. Robert Hackey, Health Policy and Management Program



A Comparative Analysis of Healthy, Local Food Initiatives in Massachusetts and Rhode Island

Project 32

Alexandra Male, Class of 2014, Health Policy and Management and Psychology

The mainstream food system perpetuates harmful eating habits in America that influence the increasing risk of chronic conditions. An emphasis on local food possesses potential to address four specific concerns: quality and health, industrial agriculture, environmental, and community concerns. The comparison of healthy, local food initiatives involved program observations and interviews. Initiatives were assessed qualitatively for their approaches to affordability, access, connection, and logistics. Potential policy and initiative recommendations were discussed based on the analysis.

Faculty Mentor: Dr. Todd Olszewski, Health Policy and Management Program



Native American Students: Challenges In Education

Project 33

Kevin Porras, Class of 2014, Finance

Dominique Calixte, Class of 2014, Sociology and Public Administration

Adrianna Ramirez, Class of 2014, Global Studies

Brian Johnson, Class of 2015, Health Policy Management

James Walker, Class of 2014, Sociology

What we aim to accomplish with this project is a sense of what it takes for a teacher to be culturally competent; specifically with Native American students. We give specific ideas on how to deal with Native American students in a classroom. We explain what it takes to abolish the distrust that stems from their involvement in the past educational system. We also explain how to deal with stereotypes when it comes to the people as a whole.

Faculty Mentor: Dr. Comfort Ateh, Secondary Education Program

Asian Americans in the Classroom

Project 34

Abby Vorenberg, Class of 2014, Psychology

Jessica Craig, Class of 2014, Spanish/Secondary Education

Emily Babcock, Class of 2015, Education/Elementary Education

Natalie Sabia, Class of 2015, Biology/Secondary Education

Our urban schools are becoming more and more culturally diverse, and there is a growing need for our teachers to become culturally competent, as teachers are required to be able to accommodate all of their students. One such group of students that requires cultural competency among our schools' teachers is the Asian American community. Our hope is to communicate through our poster the diversity of Asian culture, the challenges Asian American students encounter in the classroom, and effective strategies teachers can employ to help these students reach their full academic potential.

Faculty Mentor: Dr. Comfort Ateh, Secondary Education Program



The 21st Century Social Studies Classroom: A Marriage between the Common Core State Standards and Formative Assessment

Project 35

Aaron Wyngowski, Class of 2014, History/Secondary Education

This project dealt with researching the opportunity that the Common Core State Standards provide for formative assessment and deeper level understanding in the classroom. Lesson plans of pre-service history/secondary education teachers from Providence College were analyzed to find connections between formative assessment and the use of Common Core Standards. The findings point to the conclusion that knowledge of the standards provides an opportunity to formatively assess students and build twenty-first century skills within America's students.

Faculty Mentor: Dr. Comfort Ateh, Secondary Education Program



The Application of Prochaska's Transtheoretical (Stages of Change) Model to Clinical Practice with Victims of Domestic Violence in Rhode Island

Project 36

Meghan Bernier, Class of 2014, Social Work

This is a study regarding the application of Prochaska's Transtheoretical (Stages of Change) Model to work with women victims of domestic violence. The researcher conducted a pretest/posttest and training of a number of volunteers, interns, and staff of a Rhode Island domestic violence safe house and drop-in center to both educate participants on the model and its use with victims of domestic violence and to determine their ability to understand this material and its use.

Faculty Mentor: Dr. Susan Grossman, Department of Social Work and Dr. Michael Hayes, Department of Social Work



It Takes A Village to Raise a Family: An Evaluation of Rhode Island's Safe Families for Children Pilot Program

Project 37

Sara Melucci, Class of 2014, Social Work

Program evaluation is critical for evidence-based social work practice. This work evaluates the first eighteen months of a pilot program within Rhode Island's branch of Safe Families for Children (SFFC), a national movement serving families in crisis. The pilot program finds volunteer host families for pregnant and homeless young women and their children. Semi-structured interviews were conducted with past and present clients (n=6), as well as with several key leaders in the program's development.

Faculty Mentor: Dr. Susan Grossman, Department of Social Work and Dr. Michael Hayes, Department of Social Work



Social Work Practice with Clients and the 2010 Patient Protection and Affordable Care Act

Project 38

Taylor Thibault, Class of 2014, Health Policy Management and Social Work

The 2010 Patient Protection and Affordable Care Act (ACA) dramatically changed healthcare in the United States. Rhode Islanders are faced with these healthcare changes, and often experience the healthcare changes as a result of the Medicaid expansion and the Individual Mandate within the ACA. Most, if not all, clients of social workers are affected by these healthcare changes. Social workers must be knowledgeable about the ACA in order to best serve these clients. This relational study examines the usefulness of educational trainings about the ACA for social workers' work with clients. This study finds that educational trainings about the ACA are useful for social workers to better serve their clients.

Faculty Mentor: Dr. Susan Grossman, Department of Social Work



SCIENCES



Automorphism Groups of Compact Riemann Surfaces

Project 52

Daniel Kubala, Class of 2014, Math

In our research we explore the action of the group Z_p on a compact Riemann surface S . In particular we find necessary and sufficient conditions that determine when the action of Z_p is a maximal action on S , presenting these conditions in terms of generating vectors since there is a one-to-one correspondence between group actions and generating vectors.

Faculty Mentor: Dr. Liam Donohoe, Department of Mathematics and Computer Science



The Whirlpool Hash Function: Generalizations, Applications and Connections

Project 53

Laura Wells, Class of 2014, Math and Humanities

In the field of cryptography, it is essential to anticipate attacks that will result in insecure electronic communication. Hash functions are used for password storage, message integrity verification, pseudorandom number generation and non-repudiation in digital security. The Whirlpool hash function was developed in 2003 and endorsed by NESSIE, an international organization for selecting cryptographic functions for widespread use. In our research project, we generalized the standard version of Whirlpool and studied its algebraic properties. Knowing the algebraic structure of the function is particularly relevant in the development of future cryptographic systems that will meet the ever-increasing demand for higher security.

Faculty Mentor: Dr. Liam Donohoe, Department of Mathematics and Computer Science



Polite Numbers

Project 54

Nicholas von Hein, Class of 2015, Computer Science and Math

Polite numbers are positive integers that can be written as the sum of two or more consecutive positive integers. We will show that every polite number has at least one odd proper divisor, that is a divisor other than unity, and illustrate how the proper odd divisors of a polite number can be used to generate all the sums of consecutive positive integers associated with the polite number.

Faculty Mentor: Dr. James Tattersall, Department of Mathematics and Computer Science



Generating Transgenic Fruit Flies to Investigate Metabolic Reprogramming in Brain Tumor Cells

Project 55

Michaela Brown, Class of 2016, Biology

Jenna Buccetti, Class of 2016, Biology

This project is focusing on a specific genetic mutation that is thought to cause medium to low grade brain tumors. Through the use of cloning techniques, a fruit fly with the same mutation is created. Once this mutant fly is created the cellular phenotype and metabolism will be studied. Through the use of dissection of the fruit fly brain, observations about the metabolic pathway can be determined. Overall this is done to find therapeutic drug treatments for the IDH1 mutation in brain tumors. This can be related to the human mutation in glioma's as well since the biology of gliomas is conserved between the common fruit fly and humans.

Faculty Mentor: Dr. Marla Tipping, Department of Biology



A Tale of Two Species: Limited Genetic Diversity in Tropical Polistes Wasps

Project 80

Jennifer Cyr, Class of 2015, Biology

It has been observed that tropical species may exhibit lower genetic variation than temperate species of the same genus due to fewer climate restraints on reproduction. Using microsatellite loci and DNA from the tropical wasp species *Polistes erythrocephalus*, we conducted genetic analysis of a population of this organism. We examined twelve nests, focusing on fifteen loci, and observed very low levels of genetic variability in *P. erythrocephalus* when compared to literature values for temperate *Polistes* species. In future experiments, we intend to use next-generation sequencing technology via single nucleotide polymorphism (SNP) analysis to verify the results we achieved using microsatellites.

Faculty Mentor: Dr. Elisabeth Arévalo, Department of Biology

Constraints on the mobility of the avian coracosternal joint

Project 56

Regan Downey, Class of 2015, Biology

Mira Bollman, Class of 2015, Biology

John Ganey, Class of 2016, Biology

The furcula of birds is part of a mechanical system needed to withstand high forces during flight. The ends of the furcula are firmly attached to the coracoid bones which means furcular spreading is caused by coracoid movement. We test which soft tissues limit coracoid movement by applying a force to the shoulder after removing soft tissue components of pigeon carcasses. Neither the furcula nor membrane complex surrounding the joint limits coracosternal movement. Instead, collateral sternocoracoid ligaments located at the base of the coracoid restrict movement and allow resistance of forces up to one-sixteenth of the body weight.

Faculty Mentor: Dr. David Baier, Department of Biology



Alligator shoulder girdle mobility

Project 57

Brigid Garrity, Class of 2015, Biology

Alligators have played a significant role in evolutionary studies of archosaurs. We employ marker-based x-ray reconstruction of moving morphology (XROMM) to measure the shoulder movement of alligators walking on a treadmill. Surgically implanted radio-opaque markers, simultaneous dual x-ray videos, and CT scans were used to reconstruct the movements of the shoulder girdle. Data suggests that both sternal and coracosternal rotations contribute to scapulocoracoid movement. This is particularly interesting because rotations of the sternum, which indicate rib movement, have yet to be demonstrated in any vertebrate.

Faculty Mentor: Dr. David Baier, Department of Biology



Analysis of Hfq function in growth and oxidative stress adaptation in the metal reducing bacterium *Shewanella oneidensis*

Project 79

Meghan Keane, Class of 2014, Biology

Taylor Hunt, Class of 2015, Biology

Shewanella oneidensis is a bacterium that can utilize a wide variety of heavy metals in the place of oxygen when grown under anaerobic conditions. The RNA chaperone Hfq plays a key role in the function of regulatory non-coding small RNAs (sRNAs). To characterize sRNA function, we have deleted the *hfq* gene in *Shewanella*. We have found that Hfq loss results in a severe defect in oxidative stress response. We are currently investigating the mechanism of this defect.

Faculty Mentor: Dr. Brett Pellock, Department of Biology



Analysis of the roles of *Shewanella oneidensis* Hfq in growth and iron homeostasis

Project 78

Jessica Leonard, Class of 2014, Biology

Nicholas Mazzucca, Class of 2015, Biology

Shewanella oneidensis is a bacterium that is capable of reducing metals in the course of its natural metabolism. Our goal is to identify and characterize genes that encode sRNAs, molecules that modulate protein expression, in *S. oneidensis*. Hfq is an RNA chaperone protein broadly implicated in sRNA function in bacteria. Our current work is focused on understanding the mechanisms underlying *hfq* mutant phenotypes and the role of Hfq and sRNAs in *S. oneidensis* iron homeostasis.

Faculty Mentor: Dr. Brett Pellock, Department of Biology



Establishing a novel protocol for measuring the metabolism of fruit fly whole brains and cultured glial cells.

Project 58

John Mills, Class of 2016, Biology

In order to learn more about glial cell derived brain tumor metabolism and how it affects the progression of cancer, quantitative data must be obtained. The goal of this experiment is to establish a protocol that describes how to collect this data using the Seahorse XF Flux Analyzer. This will include the gathering of the specimens, the operation of the machine itself, and the interpretation of that data and how it relates to the research as a whole in better understanding cancer metabolism.

Faculty Mentor: Dr. Marla Tipping, Department of Biology



Alteration of metabolic activities by modulation of PI3K/AKT and mTOR pathways in ovarian cancer cells

Project 70

Daivd Calianese, Class of 2014, Biology

Garrett Cammarata, Class of 2014, Biology

Charles Best, Class of 2014, Biology

Ryan Garrity, Class of 2016, Biology

Brennan Dagle, Class of 2015, Biology and Philosophy

Ovarian cancer accounts for three percent of all cancers that affect women world-wide and it is regarded at the deadliest form of gynecological cancer. Alteration in cellular metabolism is a manifestation of cancer that typically results in a shift from oxidative phosphorylation to aerobic glycolysis. We use culture techniques to investigate the metabolic behavior of an ovarian cancer cell line, CaOV3. We treat the cells with PI3K/AKT and mTOR inhibitors to determine metabolic activity through XF Cell Mito Stress and XF Glycolysis stress tests using a Seahorse Bioscience XFe96 Analyzer. We hope that modulation of PI3K/AKT and mTOR pathways and alteration of metabolic activities may reveal molecular targets for ovarian cancer treatment.

Faculty Mentor: Dr. Yinsheng Wan, Department of Biology and Dr. Marla Tipping, Department of Biology



Characterization of Yeast Bax Inhibitor, BXI1, Function in the Unfolded Protein Response and Calcium Signaling in *S. cerevisiae*

Project 59

James O'Brien, Class of 2015, Biology

Bax inhibitor-1 (BXI1) is an anti-apoptotic gene whose human homolog's expression is upregulated in a wide variety of human cancers. Studies have shown that Bxi1p is localized in the endoplasmic reticulum (ER) and is involved in the unfolded protein response (UPR) that is triggered by ER stress. BXI1 is thought to act via a mechanism involving altered calcium dynamics. In this poster, we provide evidence that suggests the *S. cerevisiae* Bax inhibitor-1 protein facilitates Ire1p clustering in response to ER stress while also altering calcium signaling.

Faculty Mentor: Rev. Nicanor Austriaco, O.P., Department of Biology



Genome Reduction in Tetraploid *Candida albicans* Involves Programmed Cell Death

Project 60

Stephen Rogers, Class of 2015, Biology

Genetic reduction is of great significance in many biological pathways. Cancer cells can sometimes become aneuploid, and may then undergo genetic reduction to restore a diploid state. This process is often accompanied by programmed cell death. Our data suggests that the cell death that accompanies genome reduction in *Candida albicans* is programmed in nature, exhibiting various hallmarks of apoptotic activity. While further studies are necessary to observe this phenomenon at the genetic level, the current data strongly suggests an apoptotic phenotype accompanying genome reduction in *C. albicans*.

Faculty Mentor: Rev. Nicanor Austriaco, O.P., Department of Biology



Feeding behaviors of opossum shrimp

Project 62

Elizabeth Kawa, Class of 2017, Biology

Tracy Yeboah, Class of 2016, Biology

Michael Finnerty, Class of 2016, Biology

We were interested in observing the behavioral patterns of opossum shrimp while they were subjected to different stimuli. They were starved on multiple occasions to determine the length of time they could last without food. Also, various pairs of shrimp, male and female for example, were placed in a dish and were filmed over a ten-minute interval. Their behaviors were monitored and the number of times they were within five millimeters of one another was recorded.

Faculty Mentor: Dr. Maia Bailey, Department of Biology, Dr. Jeffrey Markert, Dr. Elisabeth Arévalo, Department of Biology



The Growth and Development of the Mysid Shrimp *Americamysis bahia*

Project 61

Giovanni Illiano, Class of 2014, Biology

Max Molina, Class of 2014, Biology

The *Americamysis bahia* is a species with a relatively short life cycle that lives on the coast of the Gulf of Mexico and Atlantic Ocean. The purpose of the experiment is to observe and examine the developmental growth of different sexes. The development of mysids would be important for further research that involves temperature, salinity, density, and social interaction. Microscopic pictures were taken of six mysids from birth to a mature adult with the use of a high-definition camera attached to the top of a microscope. Because the mysids are transparent, the organs and reproduction parts can be seen and examined. After five weeks, the males and females had distinctly different morphologies. The males were relatively thin and long with oval testes in the lower portion of the carapace. The females had a relatively wide carapace that contained two columns of small eggs along the body of the carapace. The more matured females push the ready to go eggs into the pouch that is located on the lower half of the body. As a result, the development of growth of males and females were profoundly different, which can be extremely useful when examining further studies dealing with *Americamysis bahia*.

Faculty Mentor: Dr. Jeffrey Markert, Department of Biology, Dr. Maia Bailey, Department of Biology, and Dr. Elisabeth Arévalo, Department of Biology



Synthesis of β -carboline natural products via divergent palladium catalysis

Project 63

Chad Roggero, Class of 2015, Biology

Jennifer Giulietti, Class of 2015, Biology and Biochemistry

Heterocyclic amines known as carbolines have attracted interest within the field of organic chemistry due to their diverse biological activity. Carbolines are indole alkaloids consisting of a three-ring fused system. Our research has focused primarily on substitution at the 1-position of the ring. We describe a 5-step synthesis for the naturally occurring β -carboline eudistomin U. Finally, we will report the activity of eudistomin U against various biological assays.

Faculty Mentor: Dr. Seann Mulcahy, Department of Chemistry and Biochemistry



Convenient synthesis of annulated β -carbolines via transition metal-catalyzed [2+2+2] cyclization

Project 64

Jonathan Varelas, Class of 2015, Chemistry

Michael O'Donnell, Class of 2015, Biology

Satyam Khanal, Class of 2016, Biochemistry

Carbolines are a specific class of heterocyclic amines that contain two nitrogen atoms within a fused, three-ring system. These molecules have been shown to have exquisite biological properties, but their preparation poses a significant challenge to the field of synthetic chemistry. We will describe various cyclization strategies to synthesize a library of chemically unique β -carbolines, and we will report on our initial attempts to study their biological activity.

Faculty Mentor: Dr. Seann Mulcahy, Department of Chemistry and Biochemistry

Solution Dynamics of Osmium Pentacarbonyl in Alcohol Solvents

Project 65

Alexander Devanny, Class of 2015, Chemistry

The equilibrium structure of osmium pentacarbonyl (OPC) in various alcohols has been investigated using FTIR spectroscopy and Density Functional Theory calculations. Like the iron pentacarbonyl (IPC) and ruthenium pentacarbonyl (RPC) analogs, OPC forms a weak complex with a single alcohol molecule under ambient conditions. It has previously been observed that the close proximity of the solvent molecule to the pentacarbonyl in the IPC-ethanol system affects the timescale of photoinduced ligand substitution. Experimental results indicate that OPC complexes to a greater extent than IPC, but to a lesser extent than RPC.

Faculty Mentor: Dr. Christopher Laperle, Department of Chemistry and Biochemistry



Isolation and Characterization of Mycobacteriophage ZoeJ, a K2 Cluster Phage

Project 66

Alicia Jancevski, Class of 2015, Biochemistry

Eric Lebel, Class of 2015, Biochemistry and Music

Sean Goralski, Class of 2017, Biochemistry

Mycobacteriophages are pathogenic viruses that infect and kill mycobacteria, many of which cause diseases including tuberculosis and leprosy. Mycobacteriophage ZoeJ was isolated from a soil sample at Providence College via an enrichment procedure. Plaque morphology and electron microscopy photos suggest that ZoeJ is a siphoviridae temperate phage. DNA sequencing and annotation of the genome indicates ZoeJ contains 57,315 bp and 92 probable genes. Based on homology, ZoeJ has been assigned to the K2 subcluster, a new subcluster consisting of ZoeJ, Mufasa, and TM4. Genomic comparison of the K2 subcluster has revealed a gene sequence containing an integrase which is present in both ZoeJ and Mufasa, yet absent from TM4.

Faculty Mentor: Dr. Kathleen Cornely, Department of Chemistry and Biochemistry



Tool for Tools: Enabling Local Microflush Valve Makers

Project 69

Anish Agrawal, Class of 2015, Engineering

Prototype field testing of the GSAP Microflush toilet has proven to be an effective, sustainable off-grid solution for sanitation. The ongoing research is focused on developing sanitary solutions at a price that is affordable to those earning less than \$3 per day. The locally sourced Microflush toilet valve, an innovative design which flushes on 150 cc of water, can be a daunting task for local toilet makers to fabricate. In addition, the parts required for the valve are not always readily locally available in the developing world and the quality of parts is uneven in many rural communities. This research focuses on developing a tool which is easy to operate and effectively efficient for fabricating parts required for a locally made well-functioning consistent quality valve. The key to the problem is to figure out how to make innovation happen in a low-tech, low-cost market. The concept is innovative and the resulting product will be invaluable in bringing the Microflush technology to scale in the developing world.

Faculty Mentor: Dr. Stephen Mecca, Department of Engineering-Physics-Systems



Educational Literacy Program and Low Power Tablet Station Design for Rural Schools

Project 72

Elizabeth DeGaray, Class of 2015, Applied Physics/Education

Megan Skrypek, Class of 2015, Engineering

Working alongside the Ghana Sustainable Aid Project and select rotary clubs, we have been investigating ways to improve literacy rates in rural areas of Ghana lacking electricity and Internet. Our focus is on educational resources like the GSAP portal, a database that helps children learn effectively. The GSAP portal will run off a compact, low power 6-station tablet design. We will present our progress towards the intended end design for the low power tablet station.

Faculty Mentor: Dr. Stephen Mecca, Department of Engineering-Physics-Systems



Instrumentation supporting lab and field experiments in sanitation studies

Project 74

Thomas Koulopoulis, Class of 2015, Applied Physics

This project focuses on designing virtual instrumentation to measure and control specific parameters in digesters and sanitation facilities connected with sanitation research in the S-Lab. One major effort is an instrumentation package for bench lab scale digesters in which several parameters including temperature, pH, moisture, oxygen and food input are being measured and made individually controllable.

Faculty Mentor: Dr. Stephen Mecca, Department of Engineering-Physics-Systems



S-Lab Developments in the Technology and Design of Components within the GSAP Microflush Toilet

Project 73

Kaitlin Hill, Class of 2015, Engineering

Claire Kleinshmidt, Class of 2017, Engineering

The GSAP Microflush Toilet has proven to be an affordable technology for use in developing countries. To date, most of the efforts of the S-Lab have been focused on the fundamental technology: filter-digester, user interface, the digestion process, and filtrate-processing. This study has several components: 1. studying affordable facility design options, 2. expanding the Microflush technology to function in areas with high water tables, and 3. designing a lab bench facility for observing the digestion process. Regarding the first component, this study offers an array of design options to address multiple functions including: anchor, skeleton, and skin. Regarding expansion of technology, the filtrate bed, which is a concrete chamber, has been redesigned for use in wet areas using an innovative bladder that prevents external intrusion and allows for controlled filtrate release. The challenge in these two efforts is to effect designs that are cost sensitive and sustainable in global markets. Finally, effective renderings of a valve pan and the lab scale digester have and will allow for fabrication and outfitting of these devices, preparing them for eventual integration into the Microflush system. This project documents the progress that has been made in the three aforementioned components of this study.

Faculty Mentor: Dr. Stephen Mecca, Department of Engineering-Physics-Systems



Testing of Microflush valve designs

Project 68

David Nguyen, Class of 2014, Physics

The Microflush valve was developed in the S-Lab at Providence College several years ago and has been used extensively infactory made field prototypes. A recent innovation is a locally sourced version which is part of a version of the Microflush toilet that can be made by a local trained artisan. The valve flushes on just 150 CC (a cup) of water (actually greywater from the previous user's hand wash). However, it has never been tested to failure. David designed a clever elctro-mechanical system to accomplish this testing. It consists of a gear motor and appendage arm that 'flushes' the valve 6 times per minute. To date, the locally sourced -locally fabricated valve has been flushed over 20,000 times without failure

Faculty Mentor: Dr. Stephen Mecca, Department of Engineering-Physics-Systems



Modeling the Movement of Dust

Project 67

Cayla Stifler, Class of 2016, Applied Physics

Dust settling on the GSAP center in Pokuase village, Ghana poses economic losses and health risks. To investigate the effectiveness of a potential barrier to mitigate the dust, the properties of 2- and 3- dimensional dust flow were investigated using Standard Draw and Standard Draw 3D developed at the Princeton Computer Science Department. In one approach, the amount of dust in each cell was proportional to the difference in amounts between adjacent cells with a randomized proportionality constant. Another approach that will be employed is to numerically verify the analytic results of Hassan and Eltayeb's 1991 and 1992 papers on the transport of various particles in wind. Both approaches will then be adapted to the specific conditions of the GSAP center including potential barriers to mitigate the problem.

Faculty Mentor: Dr. Stephen Mecca, Department of Engineering-Physics-Systems



The Potential of Slow Sand Filters for the Disinfection of Black Water from a Microflush Toilet

Project 76

Emily Labattaglia, Class of 2015, Engineering

Slow Sand Filtration is an early method used to eliminate pathogens from contaminated fluids. Its use has been considered in adjunct with the Microflush toilet to improve the quality of black water exiting the digester bed. This experiment involved constructing two low-cost physical models of slow sand filters. *Escherichia coli*, commonly known as *E. coli*, served as a preliminary bacterium to test the biological efficacy of this method. The project also consisted of modeling and designing the prototype using CAD software.

Faculty Mentor: Dr. Stephen Mecca, Department of Engineering-Physics-Systems



A WASH system with emphasis on handwashing for rural schools in the developing world

Project 75

Allison Burg, Class of 2014, Applied Physics

Elizabeth DeGaray, Class of 2015, Applied Physics/Secondary Education

Leah Furney, Class of 2014, Engineering and Math

Kaitlin Hill, Class of 2015, Engineering

Thomas Koulopoulos, Class of 2015, Applied Physics

Emily Labattaglia, Class of 2015, Engineering

Victor Neirinckx, Class of 2014, Health Policy and Management and Psychology

Taylor Motta, Class of 2014, Engineering

David Nguyen, Class of 2014, Applied Physics

Cristina Taylor, Class of 2014, Psychology

Joaquin Romero, Class of 2015, Applied Physics

The condition of water, sanitation and hygiene (WASH) is the focus of millennium goals and rightly so as the impacts are felt not only in mortality and morbidity but in education, community development and in human dignity. Schools are especially significant. In Ghana for example, over 40% of the diarrheal disease transmission happens at schools. Effecting successful WASH programs at schools has been especially problematic. This student team has undertaken a systems approach of school WASH with consideration of technical-physical, economic, cultural and behavioral factors in their analysis.

Faculty Mentor: Dr. Stephen Mecca, Department of Engineering-Physics-Systems



Disinfection of Blackwater Using Urine

Project 77

Justin Iadarola, Class of 2014, Engineering

Gabrielle Mendes, Class of 2017, Undeclared

The aim of our research is to study the efficacy of the disinfection of blackwater through the use of human urine. Initial results aimed at measuring an effective kill rate as a function of percent urine and temperature were puzzling and led to a dynamic model of both kill and growth, which resulted in an understanding that clearly both effects were being observed in the data. Our current approach is a 2-step protocol leading to the production of ammonia that effects the disinfection of blackwater.

Faculty Mentor: Dr. Stephen Mecca, Department of Engineering-Physics-Systems and Dr. Brett Pellock, Department of Biology



SOCIAL SCIENCES



Do School District Bond Credit Enhancement Programs Matter?

Project 39

Michael Cirrotti, Class of 2014, Quantitative Economics

The State of Washington enacted a school district bond credit enhancement program in 1999. Oregon did the same in 1998. I use data from the National Center of Educational Statistics for a representative sample of states in order to examine whether or not these programs increased the likelihood that school districts in Washington and Oregon issued bonds. I isolate the programs' impact in Washington and Oregon through difference-in-differences analysis to control for other variation in the data in ten other representative states during the same time period. The results suggest that state-level school district bond guarantee credit enhancement programs increase the likelihood of school district bond issues.

Faculty Mentor: Dr. Angela Dills, Department of Economics



The Double-Edged Sword: Barriers to Healthcare Access in Rhode Island for Elderly Immigrants From Latin American Countries

Project 40

Genevieve Ilg, Class of 2014, Health Policy Management

There is a lack of literature concerning the identification of specific healthcare services targeted for this population, which is more diverse and expanding through immigration. Yet, there is a well-documented critical need for an adequately trained interdisciplinary workforce from medicine, nursing, social work, and allied health fields that can provide person-centered care to the Latino aging population.

Currently the state of Rhode Island does not have specific healthcare services for elderly immigrants from Latin American countries, a vulnerable group that constitutes an unknown, yet distinct proportion of the state's demography. This project demonstrates that efforts to enhance population surveying efforts, as well as fostering cultural and linguistic competence among healthcare personnel are pressing.

Faculty Mentor: Dr. Nuria Alonso García, Department of Global Studies



If You Don't Snooze You Lose

Project 41

Jeff Copland, Class of 2014, Sociology

College students across America have a potential epidemic on their hands—students are not sleeping. Students at Providence College know that they can eliminate this problem. The first step in this process is the Get More Sleep! Campaign which seeks to raise awareness about the importance of sleep. After months of literature review and organizing, the campaign commenced with Providence College's Sleep Week 2014. This poster describes the process and successes of sleep week.

Faculty Mentor: Dr. Suzanne Bornschein M.D., Student Health Center



Does Distance Make the Heart Grow Fonder?

Project 49

Ashley Berube, Class of 2014, Psychology

In this study, drawn from interviews with college women and men, I investigate how heterosexual men and women experience committed, long-distance relationships in college. How do long-distance relationships potentially inform other aspects of an individual's college life, both in social and academic respects? Special attention is paid to gender roles and dynamics both inside the long-distance relationships themselves, and with regards to how the relationships intersect, inform, and reflect participants' broader behaviors and expectations pertaining to gender.

Faculty Mentor: Dr. Abigail Brooks, Department of Sociology and Women's Studies



A Majority-Minority Group Comparison of College Adjustment and Psychological Well-Being in a Predominantly White, Private Institution

Project 42

Sarah Cote, Class of 2014, Psychology

This study investigated whether students' membership, college adjustment, depressive symptomology and identification to their university differed according to whether they identified as part of the ethnic majority (i.e., Caucasian) or minority group. Minority students reported greater social contact with other ethnic groups, as well as lower levels of private collective self-esteem and higher levels of depression. Also, minority students experiencing lower than average social contact with other groups reported lower levels of membership and identification.

Faculty Mentor: Dr. Eliane Boucher, Department of Psychology



The Effect of Guidelines on the Relationship Between Creativity and Stress in Children

Project 43

Alexandra Cribbin, Class of 2014, Psychology

Children (7-10 years) participated in three tasks to assess the relationship between creativity and stress. The three tasks were used to manipulate stress levels (measured by heart rate). One of the tasks was a math stressor task (to increase heart rate). The other two tasks were drawing tasks. The drawing tasks differed on the given direction about how to create a picture. The directions that the child was given could increase or decrease stress levels in children.

Faculty Mentor: Dr. Jennifer Van Reet, Department of Psychology



The Effect of Inhibitory Control and Abstract Problem Solving in Adolescents

Project 44

Kathryn Graf, Class of 2014, Psychology

Inhibitory control, the ability to control one's thoughts and actions, is very important in young children's developing cognition, but it is not known if it plays a role in adolescent cognition. This project is a psychological study testing if engaging inhibitory control increases adolescents' abstract problem solving.

Faculty Mentor: Dr. Jennifer Van Reet, Department of Psychology



Negative Maternal Parenting Style and Adolescent Stress Response: A Multigenerational Approach

Project 51

Tessa Kehoe, Class of 2014, Psychology and Spanish

Negative parenting has been associated with the development of mood and behavior problems in children and adolescents, and parenting styles are often transmitted across generations. The effect of negative parenting on the biological stress response is not well understood. The purposes of this study were to determine if perceived negative maternal parenting and previous generation maternal parenting are associated with the biological stress response in adolescent girls.

Faculty Mentor: Dr. Thomas Guilmette, Department of Psychology



Effects of juvenile exposure to predator odor on adolescent and adult anxiety and pain nociception

Project 50

Ryan Post, Class of 2014, Biology and Psychology

Lauren O'Loughlin, Class of 2014 Biology and Psychology

Kaitlyn Dahlborg, Class of 2015, Biology and Psychology

Due to the high correlation between early traumatic experiences and later diagnosis of clinical disorders, an animal model was developed to further explore the effects of early-life stress on later-life anxiety and pain tolerance. Rats were exposed to a predator odor during juvenility and then tested in both adolescence and adulthood on measures of anxiety and pain nociception. Animals exposed to the predator odor in juvenility had increased anxiety levels in adolescence and increased pain tolerance in adulthood compared to controls. These findings may offer insight into mental disorders such as non-suicidal self-injury and generalized anxiety disorders.

Faculty Mentor: Dr. Christopher Bloom, Department of Psychology



A History of Homosexuality Through the Eyes of the Three Major World Religions

Project 47

Valerie Chase, Class of 2014, French and Public and Community Service Studies

My thesis is a study of the history of Catholicism, Judaism, and Islam in the context of homosexuality. I researched and compared the viewpoints of religious leaders with young devout members of each religion.

Faculty Mentor: Dr. Rick Battistoni, Department of Public and Community Service Studies



Nutrition Research: Translation and Application

Project 48

Eliza Zalis, Class of 2014, Biology and Public and Community Service Studies

This project examines the avenues by which nutrition science impacts individuals in society. It examines the factors that influence consumer behavior and food choice and the importance of health literacy in guiding nutrition and health. It elucidates the role of the Food and Drug Administration (FDA) in regulating food labeling and the implications that such regulation has on consumer perception and possible health outcomes. Further, this project outlines recently proposed changes to the "Nutrition Facts" panel. In investigating nutrition education and outreach programs, this project includes a case study of Farm Fresh Rhode Island and the organization's nutrition initiatives.

Faculty Mentor: Dr. Rick Battistoni, Department of Public and Community Service Studies



Common Grounds Café

Project 45

Michaela Bolotin, Class of 2016, Global Studies

Kristina Campano, Class of 2016, Health Policy and Management

Samantha Wagner, Class of 2016, Marketing

Amjad Talib, Class of 2016, Management

Students participating in an Alternative Spring Break trip to Nicaragua in 2012 focused their exploration on coffee growing and production; they visited a Fair Trade grower, and became interested in developing a longer-term project. Simultaneously, the College's School of Business began sponsoring an Entrepreneurship Society, while the Feinstein Institute for Public Service and the Smith Hill Community Development Corporation began convening an economic development incubator group as a project of the newly opened Providence College/Smith Hill Annex. These multiple interests coalesced as students, faculty and community came together to open Common Grounds Café at 233 Douglas Avenue.

Faculty Mentor: Dr. Keith Morton, Department of Public & Community Service Studies and Dr. Sylvia Maxfield, School of Business



Visualizing Peace and Justice

Asha Ahmed, Class of 2016 Global Studies and Health Policy and Management

Molly Blake, Class of 2016 Biology and Psychology

Lindsey Ciolfi, Class of 2017 Biology and Psychology

Karissa Diaz, Class of 2016 Global Studies and Political Science

Lauren Domingue, Class of 2015 Psychology

Danielle Fleurant, Class of 2014 Public and Community Service Studies

Giovanna Franciosa, Class of 2017 Art History

Elizabeth Gaitskill, Class of 2015, Health Policy and Management and Public and Community Service Studies

Project 46

Jessica Ho, Class of 2014, Studio Art

Stanford Law, Class of 2015, Public and Community Service Studies

Kiley Leduc, Class of 2014, Global Studies

Katherine Mechem, Class of 2015, Political Science

Gregory Nicolai, Class of 2016, Political Science

Sarah Palmer, Class of 2016, Marketing

Jessica Rodriguez, Class of 2016, Global Studies and Spanish

Katelyn Sudlik, Class of 2016, Political Science

Sierra Wilbar, Class of 2016, Global Studies

In January 2014, our group of students traveled to Ecuador to work with an organization called CEMPROC, co-founded by professor Dr. Jeff Pugh. Through CEMPROC we worked with youth to embody the ideas of peace and justice through art; and then in the rural community of Pijal used photography to capture our own visual embodiments of these ideas. Our work culminated in a final exhibition in Quito, which we have replicated in Providence. This exhibit also displayed the service we have been engaged in out of a desire to extend these concepts of peace and justice to our community here.

Faculty Mentor: Dr. Jeff Pugh Department of Political Science and Professor Eric Sung, Department of Art and Art History



Acknowledgments

Celebration of Student Scholarship and Creativity Planning Committee

Nuria Alonso-García

Christine Baccari

Brian Bartolini

Mark Caprio

Cary Collins

Mark DeFanti

John Garrity

Amy Goggin

Deborah Johnson

Chuck Haberle

Bill Hogan

Kristen Lainsbury

Kathleen McGreal

Seann Mulcahy

Brittany O'Shea

Siobhan Ross

**We graciously thank the following individuals for their important contributions
to this year's Celebration:**

Kathy Ashton

Paul Bienvenue

Michael Desmarais

Rachel Johnson

Chris Judge

Christiane Marie Landry

Danielle Lockhart

Chris Machado

John Smith

PCTV

Funding Opportunities for Student Engagement and Undergraduate Research Projects

Undergraduate Research Grant Program – 2013-2014

Grant funds are available for eligible students who wish to conduct a research project under the direction of a full-time faculty member.

Eligibility/Priority

- Sophomore, junior or senior standing
- Students from all academic disciplines are encouraged to apply
- Preference will be given to students enrolled in a credit earning research course
- Mentor must be a full-time faculty member at Providence College

Funding for Undergraduate Research

Funds are intended to cover costs related to conducting individual research. Most awards are expected to be up to \$500, although funding may be granted up to a maximum of \$1,000 if the student's project warrants greater support and funds are available. Items that may be funded (if not already supported through other sources) include:

- General, lab or media supplies, or other expendable materials related to research;
- Archival copying, photocopying printing, postage, telephone or communication expenses related to research project
or presentation of findings;
- Software, data sets, books, and small equipment, if necessary to conduct research and otherwise unavailable;
- Travel to libraries, archives, museums, field or research sites, laboratories, research centers, or approved educational institutions to conduct research.

Please see <http://www.providence.edu/student-engagement/Pages/engagedundergraduateresearch.aspx> for the grant application, additional information, and deadlines.

Student Name	#	Presentation Title
Anish Agrawal	69	Tool for Tools: Enabling Local...
Asha Ahmed	46	Visualizing Peace and Justice
Emily Babcock	34	Asian Americans in the Classroom
Christopher Baker	15	Promotional Strategy: Society of St....
Grant Bay	SA	Make Them Strange
Meghan Bernier	36	The Application of Prochaska's...
Ashley Berube	49	Does Distance Make the Heart Grow...
Charles Best	70	Alteration of metabolic activities by...
Molly Blake	46	Visualizing Peace and Justice
Mira Bollman	56	Constraints on the mobility of the avian
Michaela Bolotin	45	Common Grounds Café
Patrick Bowler	16	A business process and internal...
James Brodeur	9	The Art of Conducting...
Michaela Brown	55	Generating Transgenic Fruit Flies to...
Jenna Buccetti	55	Generating Transgenic Fruit Flies to...
Allison Burg	75	A WASH system with emphasis on...
David Calienes	71	3D Imaging of Melanoma Cells
Daivd Calianese	70	Alteration of metabolic activities by...
Dominique Calixte	33	Native American Students: Challenges
Garrett Cammarata	70	Alteration of metabolic activities by...
Kristina Campano	45	Common Grounds Café
Ealish Cassidy	22	Sanctuary: Faulkner's Assimilation...
Caitlin Charette	24	Reforming (Native) America...
Valerie Chase	47	A History of Homosexuality Through...
Lindsey Ciolfi	46	Visualizing Peace and Justice
Michael Cirrotti	39	Do School District Bond Credit...
Sean Clark	17	The Physical Plant Work Order...
Matthew Conti	16	A business process and internal...
Jeff Copland	41	If You Don't Snooze You Lose
Kate Corrigan	8	The Creative Process of "The Ring"

Student Name	#	Presentation Title
Sarah Cote	42	A Majority-Minority Group...
Jessica Craig	34	Asian Americans in the Classroom
Alexandra Cribbin	43	The Effect of Guidelines on the...
Jennifer Cyr	80	Metabolic Reprogramming in Brain...
Brennan Dagle	70	Alteration of metabolic activities by...
Kaitlyn Dahlborg	50	Effects of juvenile exposure to...
Matthew D'Ambra	17	The Physical Plant Work Order...
Elizabeth DeGaray	72	Educational Literacy Program....
Elizabeth DeGaray	75	A WASH system with emphasis on...
Samantha DeGross	12	Students' Perceived Brand Image of PC
Kelsey Dermody	14	Promotional Strategy for St. Cecelia...
Alexander Devanny	65	Solution Dynamics of Osmium...
Elizabeth DeVivo	10	AMA Hershey's Take 5 Case...
Elizabeth DeVivo	11	PC Seniors' Attitudes Toward the Job...
Karissa Diaz	46	Visualizing Peace and Justice
Jessica Di Pietro	10	AMA Hershey's Take 5 Case...
Lauren Domingue	46	Visualizing Peace and Justice
Eileen Donovan	1	Prostitution and Prayer:
Regan Downey	56	Constraints on the mobility of the avian
Kristian Fabian	21	Amerindian Shamanism and Iberian...
Kristian Fabian	20	Hispanic Art Online
Michael Finnerty	62	Feeding behaviors of opossum shrimp
Erika Flanagan	11	PC Seniors' Attitudes Toward the Job...
Danielle Fleurant	46	Visualizing Peace and Justice
Alessandra Foresti	15	Promotional Strategy: Society of St....
Giovanna Franciosa	46	Visualizing Peace and Justice
Leah Furney	75	A WASH system with emphasis on...
Elizabeth Gaitskill	46	Visualizing Peace and Justice
Michael Gallucci	SA	A New Visual Vocabulary
John Ganey	56	Constraints on the mobility of the avian

Student Name	#	Presentation Title
Brigid Garrity	57	Alligator shoulder girdle mobility
Ryan Garrity	70	Alteration of metabolic activities by...
Jennifer Giulietti	63	Synthesis of β -carboline natural...
Kathryn Graf	44	The Effect of Inhibitory Control and...
Sean Goralski	66	Isolation and Characterization...
Olivia Haddad	30	Portrayals of Post-Traumatic Stress...
Maria Haidinger	2	Gino Severini's Dancers...
Kelly Hall	3	Impropriety, Informality and....
Katharine Harris	12	Students' Perceived Brand Image of PC
Rory Healy	18	United Way of Southeastern...
Jill Heckenliable	23	Christian Providence: An Exploration...
Kaitlin Hill	73	S-Lab Developments in the Tech...
Kaitlin Hill	75	A WASH system with emphasis on...
Jessica Ho	SA	The Auto Show
Jessica Ho	46	Visualizing Peace and Justice
Taylor Hunt	79	Analysis of Hfq function in growth...
Justin Iadarola	77	Disinfection of Blackwater Using Urine
Genevieve Ilg	40	The Double-Edged Sword: Barriers ...
Giovanni Illiano	61	The Growth and Development...
Alicia Jancevski	66	Isolation and Characterization...
Brian Johnson	33	Native American Students: Challenges
Katherine Kaiser	SA	Kinetic Serenity
Elizabeth Kawa	62	Feeding behaviors of opossum shrimp
Meghan Keane	79	Analysis of Hfq function in growth...
Tessa Kehoe	51	Negative Maternal Parenting Style and..
Katherine Kenny	10	AMA Hershey's Take 5 Case...
Kristen Kern	SA	Arsy-Versy Fairytales
Satyam Khanal	64	Convenient synthesis of annulated β -...
Claire Kleinshmidt	73	S-Lab Developments in the Tech...
Stephen Kogut	14	Promotional Strategy for St. Cecelia...

Student Name	#	Presentation Title
Thomas Koulopoulis	74	Instrumentation supporting lab...
Thomas Koulopoulis	75	A WASH system with emphasis on...
Daniel Kubala	52	Automorphism Groups of Compact...
Laura Kurjanowicz	31	The Side Effects of Direct-to-Consumer
Emily Labattaglia	76	The Potential of Slow Sand Filters...
Emily Labattaglia	75	A WASH system with emphasis on...
Stanford Law	46	Visualizing Peace and Justice
Eric Lebel	9	The Art of Conducting...
Eric Lebel	66	Isolation and Characterization...
Kiley Leduc	46	Visualizing Peace and Justice
Jessica Leonard	78	Analysis of the roles of <i>Shewanella</i> ...
Kyle Lindsay	25	The Legacy of 1940: The Election...
Alexandra Male	32	A Comparative Analysis of Healthy...
Rachel Mano	13	Promotional Strategy: Salt Water Farm
Angelo Marciano	7	Providence Women's Hockey
Ryan Martin	SA	Stacking Paper
Katherine Mechem	46	Visualizing Peace and Justice
Sara Melucci	37	It Takes A Village to Raise a Family:
Gabrielle Mendes	77	Disinfection of Blackwater Using Urine
John Mills	58	Establishing a novel protocol for...
Nicholas Mizera	10	AMA Hershey's Take 5 Case...
Max Molina	61	The Growth and Development...
Taylor Motta	75	A WASH system with emphasis on...
Erin Murphy	12	Providence Women's Hockey
Victor Neirinckx	75	A WASH system with emphasis on...
Gregory Nicolai	46	Visualizing Peace and Justice
David Nguyen	68	Testing of Microflush valve designs
David Nguyen	75	A WASH system with emphasis on...
Maggie North	4	The Significance of Walker Evans'...
James O'Brien	59	Characterization of Yeast Bax...

Student Name	#	Presentation Title
Michael O'Donnell	64	Convenient synthesis of annulated β -...
Erin O'Grady	18	United Way of Southeastern...
Erin O'Grady	19	The Expiration of Tax Deductions...
Lauren O'Loughlin	50	Effects of juvenile exposure to...
Sarah Palmer	46	Visualizing Peace and Justice
Benjamin Phillips	16	A business process and internal...
Kevin Porras	33	Native American Students: Challenges
Ryan Post	50	Effects of juvenile exposure to...
Erik Pottinger	26	Turkish Acculturation into German...
Adrianna Ramirez	33	Native American Students: Challenges
Lucy Reynoso	20	Hispanic Art Online
Matthew Riordan	27	I am willing to serve the public but I...
Jessica Rodriguez	46	Visualizing Peace and Justice
Stephen Rogers	60	Genome Reduction in Tetraploid...
Chad Roggero	63	Synthesis of β -carboline natural
Joaquin Romero	75	A WASH system with emphasis on...
John Ronalter	5	The Places Between Events...
Natalie Sabia	34	Asian Americans in the Classroom
Amanda Schaefer	20	Hispanic Art Online
Melissa Scott	29	Yo, siguiendo el camino de Santa...
Megan Skrypek	72	Educational Literacy Program....
Emily Smith	SA	Subliminal
Mary Elizabeth Smith	28	In Her Shoes™: Victorian Lady...
Alexandra Steadman	6	Imperialism, Economics, and Sacred...
Cayla Stifler	67	Modeling the Movement of Dust
Samantha Stump	12	Students' Perceived Brand Image of PC
Katelyn Sudlik	46	Visualizing Peace and Justice
Amjad Talib	45	Common Grounds Café
Cristina Taylor	75	A WASH system with emphasis on...
Frank Taylor	18	United Way of Southeastern...

Student Name	#	Presentation Title
Taylor Thibault	38	Social Work Practice with Clients...
Chuan Ru (Natasha) Tree	13	Promotional Strategy: Salt Water Farm
Jonathan Varelas	64	Convenient synthesis of annulated β -...
Victoria Virtue	7	Providence Women's Hockey
Nicholas von Hein	54	Polite Numbers
Abby Vorenberg	34	Asian Americans in the Classroom
Samantha Wagner	45	Common Grounds Café
James Walker	33	Native American Students: Challenges
Laura Wells	53	The Whirlpool Hash Function...
Sierra Wilbar	46	Visualizing Peace and Justice
Aaron Wyngowski	35	The 21st Century Social Studies...
Rachael Yeadon	15	Promotional Strategy: Society of St....
Tracy Yeboah	62	Feeding behaviors of opossum shrimp
Eliza Zalis	48	Nutrition Research: Translation and...

Career Services

Studio Art Presentations

Overlook Lounge

Info Desk

Refreshments

STAIRS

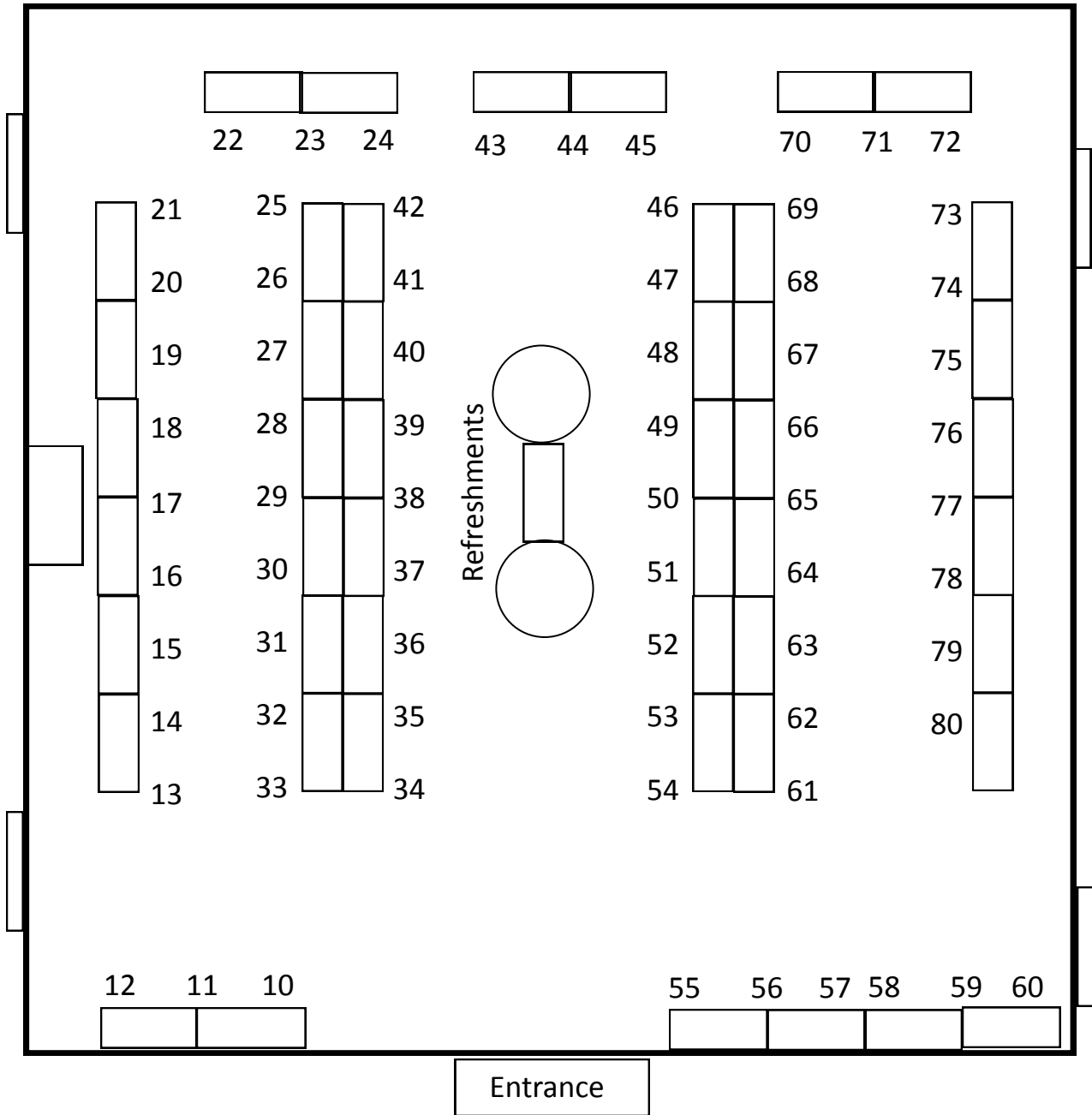
7
8
9

6
5
4
3
2
1

Raffle

Studio Art Presentations

'64 Hall



'64 Hall

PAST CELEBRATIONS



**TALK ABOUT THE ANNUAL CELEBRATION
ON TWITTER USING #PCANNUALCELEB**



PROVIDENCE
COLLEGE