

How Do Gender and Diversity Impact the State of Public Administration Research?

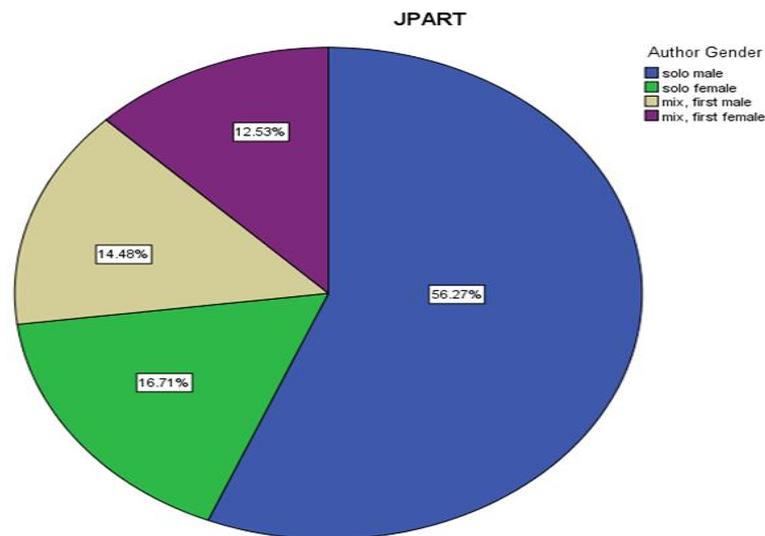
Assessing the Content of Two Key PA Journals

Participants

Gina Scutelnicu, PhD

Hillary Knepper, PhD

Presentation at the American Society for Public Administration's Annual Conference, Seattle, Washington. March 18-21, 2016



Goals

Focus on authorship diversity, topics researched, methodology & issues related to research paradigm.

This study has identified:

- The lack of women writing as lead authors in two key journals.
- The gender gap remains significant.

Research Foci

Idea #1-Given the high percentage of women working in public service, should lead authorship in top journals be more reflective of their contributions?

Idea #2-If scholarship drives curriculum, limited dissemination of women's scholarship in top PA journals may fail to adequately highlight their insights.

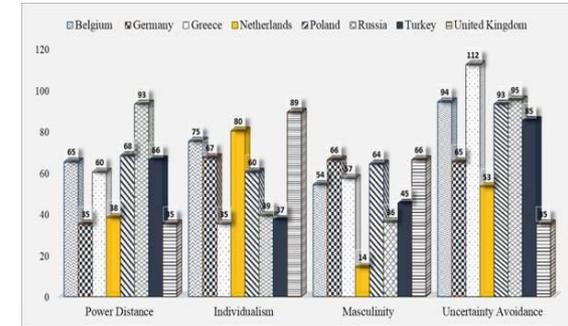
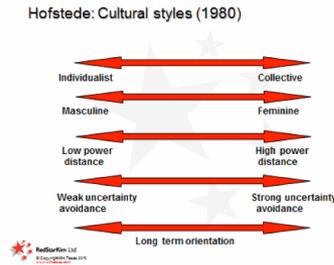
Idea #3- If scholarship = information sharing & knowledge generation, what is the impact of the gender gap?

Cultural and Institutional Antecedents of Country Risk: A Study in 55 Countries

Participants

Dr. A. Shostya, Economics
Department (NYC), Pace University

Dr. M. Banai, Department of
Management, Baruch College



$$CRI_i = \beta_0 - \beta_1 InstC_i + \beta_2 HumO_i - \beta_3 UncA_i + \beta_4 GendE_i - \beta_5 DEM_i - \beta_6 GEM_i + \epsilon_i,$$

$$InstC_i = \beta_0 - \beta_1 Asser_t_i + \beta_2 FutO_i + \beta_3 PerfO_i + \epsilon_i,$$

$$DEM_i = \beta_0 - \beta_1 IGC_i + \epsilon_i$$

Goals

This study explores the effects of cultural and institutional factors on country risk. We use the 2004 GLOBE study's estimations of the nine cultural dimensions, as well as measures of democracy and gender empowerment, in a sample consisting of 55 countries, which include 27 high income, 15 medium income, 12 lower middle income, and one low income nations.

Cultural dimensions: in-group collectivism, institutional collectivism, humane orientation, power distance, uncertainty avoidance, future orientation, assertiveness, gender egalitarianism, and performance orientation.

Research Foci

Idea #1 People in high **Uncertainty Avoidance** countries feel a strong need for consensus, so there is a greater potential for policy makers and ordinary citizens to mitigate political, social, and economic risks.

Idea #2 **Democracy** has the potential to be improved by enhancing Individualism. More Democratic societies would have lower Country Risk

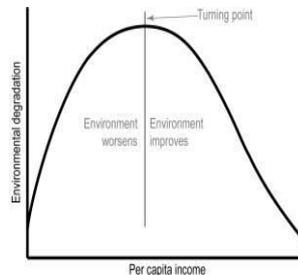
Idea #3 **Women empowerment** has the potential to mitigate a nation's political and business risk. Decision makers should, therefore, employ available legal, educational and financial tools to facilitate women's equality

The Role of Environmentalism and Public Policy in Reducing Air Pollution: A US-China Comparison

Participants

Dr. A. Shostya
Dr. J. Morreale
Economics Department (NYC), Pace University

Funding: Dyson Summer Research grant

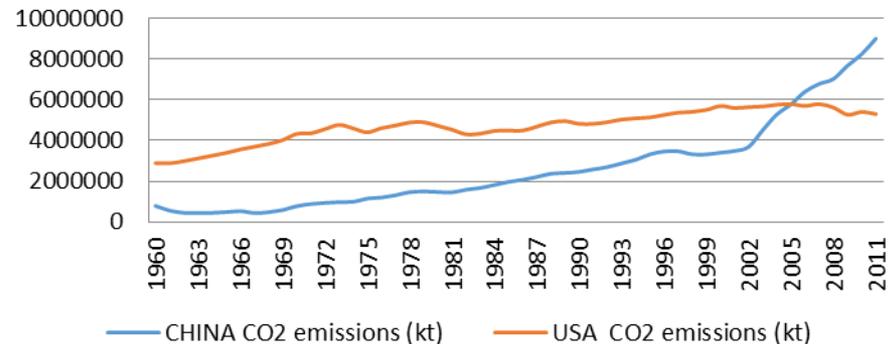


Goals

The objective of this empirical study is to compare the role of environmentalism in reducing air pollution in the United States, in the 1960s-1990s, and in China, during the last 30 years.

We first estimate the Environmental Kuznets Curve for greenhouse effect gases (CO₂) in China and the US. We then expand the traditional EKC model by adding major environmental policies as variables. Finally, we explore the role of environmentalism in shaping the EKC in both countries.

**CO₂ emissions (kt):
China and the US (1960 - 2011)**



Research Foci

Idea #1 China has not yet reached the turning point on its Environmental Kuznets Curve

Idea #2 There is some evidence that the environmental movement is building (The rising middle class), yet, it is not contentious in nature

Idea #3 This is a preliminary step for building a model that would test the effect of an environmental activism on the speed of adoption and implementation of environmental pollution policy in the US and answer a hypothetical question of what would the shape of the EKC curve be in China if it had the same level of environmental awareness and activism as in the US.

Rebecca Tekula, PhD

Assistant Professor, Public Administration,
Executive Director, Helene and Grant Wilson Center
for Social Entrepreneurship



Archana Shah

Associate Director, Helene and Grant Wilson Center



Jordan Jhamb, '15 (Dyson, Economics)

Research Assistant, Helene and Grant Wilson Center



PUBLICATIONS

Tekula, R. and A. Shah. **Impact Investing: Funding Social Innovation and Related Actors.** Lehner, Othmar M. (Ed.), *Routledge Handbook of Social and Sustainable Finance*. Oxford: Routledge. (Accepted Publication, Peer-Reviewed, Forthcoming 2016)

Goals

- Outline the current state of funding for social impact and in particular the growing field of impact investing.
- Establish the background and definition of impact investing, and the challenges and potential of this emerging asset class.
- Examine the measurement metrics utilized, and present a model of the interactions within the impact investing ecosystem.
- Identify how emerging field of impact investing and social finance can offer partnerships that allow a university to serve as resource provider and supporter, while offering opportunities for student and faculty engagement, experiential learning, and access.

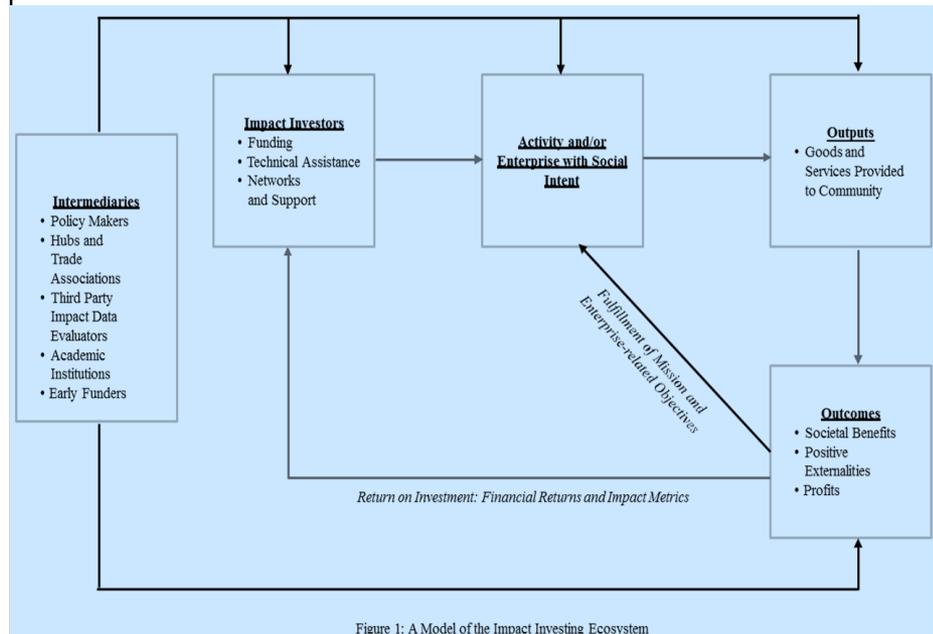


Figure 1: A Model of the Impact Investing Ecosystem

Research Foci

- What is the current state of funding for social impact and, in particular, impact investing?
- How is impact identified and measured?
- What intermediaries and other actors are at play in this field?
- How can a metropolitan university, with limited resources, build upon its strengths and partners to contribute meaningfully to social innovation?

Carriage roads and forest fragmentation

Participants

Dr. Matt Aiello-Lammens

with

Ms. Alex Hettena and
Mr. Dillon Addonizio
- Pace University



Goals

Carriage roads are common in our regional preserves and wild areas. They are maintained for all to enjoy. But do they also contribute to the negative effects of habitat fragmentation?

Research Foci

Idea #1

The impacts of major roads on habitat fragmentation are well studied but little is known about the impacts of carriage roads and other recreational trails.

Idea #2

Understanding impacts of recreational trails is necessary for land managers to best address the environmental challenges they face.

LIPOGEL-ENCAPSULATED ANTICANCER DRUGS

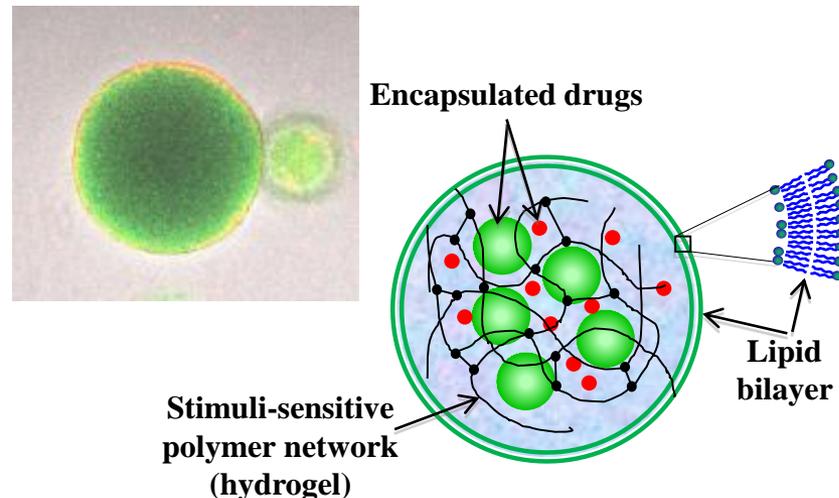
Participants

PI: Dr. Sergey Kazakov – Pace University

Students:

Khushbu Kanani'15
Alfredo Dumalsen'14
Megan Lucchese'15
Marilee Karagolian'15
Larisa Posada'15
Michael Gjuraj'17

Pace University



Goals

The overall goal is to test a new principle of the targeted anticancer chemotherapy with superior tumor response and minimum side effects even at a greater loading concentration by reaching and killing the targeted malignant cells without healthy cells being affected

In 2016/2017 academic year, we aim at preparing the temperature-sensitive and fluorescent lipobeads by two methods and study their stability, permeability, drug loading and release at different temperatures

Research Foci

Idea #1

Lipobeads could demonstrate an efficient encapsulation of a wide variety of drugs, biocompatibility, passive targeting to tumor or inflammation sites, availability of the external surface as a modification site for prolongation of circulation time and active targeting, no adverse reactions at the site of IM or IV injection

Idea #2

Bi-compartmental structure of lipobeads could provide a number of novel and unique options such as a consecutive multistep triggering,, new schemes of drug release, and combined drug delivery

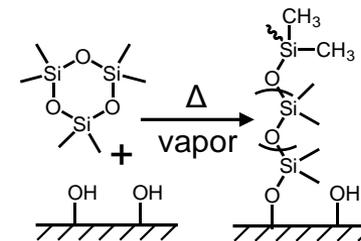
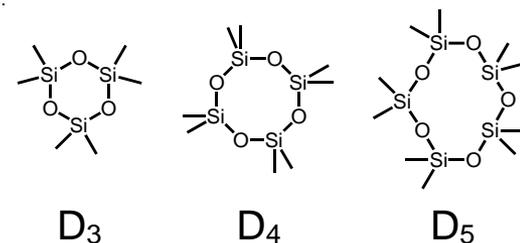
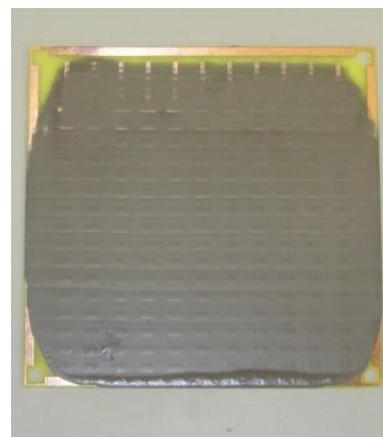
Idea #3

One can expect that additional technological expenses on the increased complexity of lipobeads production will not be a high cost for the discovered advantages of their use



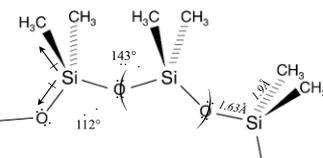
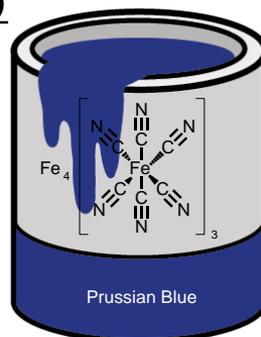
(L to R) Dr. Anna-Katharina Krumpfer, Taylor Longenberger ('17), Dzifa Avalime ('16), Dr. J. Krumpfer, Kaleigh Ryan ('20), William Bender ('20)

Nickel-doped Electrically Conductive Silicone Paint



No solvent, no byproducts

Inorganic particles have been used as additives to materials and coatings to impart special properties, from pigments to UV-protection, for millennia. Silicones, being largely inorganic themselves, offer a unique matrix for inorganic materials. We are particularly interested in the chemical interactions of inorganic compounds and silicone polymers.



Research Foci

- Can we produce silicone-inorganic paints and materials as an artistic media? Gas-permeable Stained Glass Windows?
- What chemistry occurs between silicones and various inorganic substrates
- What properties do silicone-modified surfaces possess, and can we use these as a scaffold for additional chemistry?

Considering disparities: Do nurse practitioner regulatory policies, access to care, and health outcomes vary?

Participants

Hillary Knepper, MPA, PhD, Dyson
 Andréa Sonenberg, PhD, WHNP, CNM-BC, CHP
 Paul Savage, MBA, Iona College

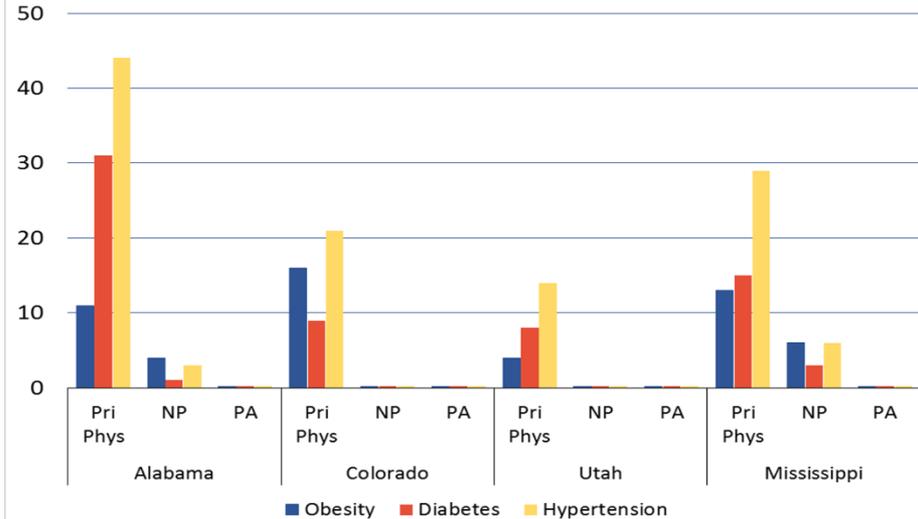
Continuing research-recent pubs:

1) Sonenberg, A., Knepper, H., & Pulcini, J. (2015).
 Implementing the ACA: The Influence of Nurse
 Practitioner Regulatory Policies on Workforce,
 Access to Care, and Primary Care Health
 Outcomes. *Poverty & Public Policy*, 7(4), 336-356.

2) Knepper, H., Sonenberg, A, Levine, H. (2015).
 Cost-savings of nurse practitioner managed
 diabetes primary care: A preliminary study.
*International Journal of Services and Standards:
 Special Issue "Healthcare Management Quality and
 Standards in a Global World."* 10:1/2, p. 17-31.

Next Steps/Goal- Exploring the
 methodological challenges of working with big data
 sets, in particular, Medicaid state level data.

Visit Distribution among Provider Type



Research Foci

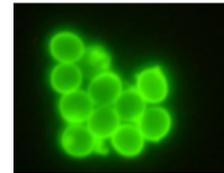
Idea #1- Restrictive and inconsistent NP scope of practice policies may continue to contribute to population health disparities across the country, with particular concern for primary care indicators.

Idea #2- There is under-representation in the data of two of the largest health practitioner categories serving vulnerable populations.

Idea #3- An inability to accurately measure Medicaid cost efficiencies in primary care was identified.

A continuous culture system for evaluation of anti-cryptosporidial drugs

Nigel Yarlett*, Mary Morada, Gabrel Samantha*, Mohini Gobin
Haskins Laboratories
and the *Department of Chemistry & Physical Sciences



C. Parvum oocysts
the infective form
transmitted in
drinking water



Hollow fiber
culture system
functions as an
intestine to grow
the parasite



Invasive form of the
Parasite multiplies
inside the cartridge

Funded by The Bill and Melinda Gates Foundation

Develop a continuous culture system for use in evaluating drugs for the treatment of intestinal infections caused by *Cryptosporidium sp.* With the ultimate aim of identifying a compound for clinical use.

The parasite infects the intestinal epithelial cells. The Intestine has two sources of nutrients (i) the blood supply that feeds the epithelial cells; (ii) the intestinal lumen where the parasite resides. The goal of this study was to use hollow fiber technology to create a gut like environment allowing nutrients to be delivered to the intestinal epithelium from the basal layer up, while permitting a lumen environment for parasite nutrients.

Deviance and Transgression: “Monstrous” Bodies in Nineteenth Century Women’s Fiction

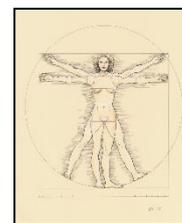
Presenter:

Ying Wang, PhD

Department of Modern Languages and Cultures (NYC)

Goals

In the patriarchic society of the nineteenth century, when the scientific, medical, religious and moral discourses were destined to justify the link between femininity and disability, the representation of corporeal deficiency in women’s fiction has a meaning that is worth exploring in order to understand its cultural, social and literary significance. From a feminist perspective, considering Disability Studies in socio-cultural and literary contexts, I examine four sentimental works of fiction written by French women writers of that period to probe the relation between representation of corporeal difference, gender and women’s writing.



Sophie Gay
(1776-1852)



Claire de Duras
(1777-1828)



Delphine de Girardin
(1804-1855)



Juliette Lamber
(1836-1936)

Research Foci

- 1. Introduction** Thinking of three bodies: “monstrous” body, female body and textual body.
- 2. Corpus** *Anatole* (1815) by Sophie Gay
Olivier ou le secret (1824) by Claire de Duras
Monsieur le Marquis de Pontanges (1856) by Delphine de Girardin
Laide (1878) by Juliette Lamber
- 3. Conclusion** By incorporating in their writing the disabled figure—bearer of corporeal deviance, women writers transfigure the social reality and question the hegemony of the “normate”...

Clive Bell and the Making of Modernism

Mark Hussey, English, NY

(based on research conducted at King's College, Cambridge; Trinity College, Cambridge; Tate Archives; Sussex University; Berg Collection of NYPL; British Library; Humanities Research Center, U of Texas at Austin)



Goal: To write the first biography of Clive Bell: pacifist, outspoken opponent of military conscription in World War I, aesthetic theorist, cultural commentator, poet, friendly with many major figures of European modernism (e.g. Picasso).

Research Foci

I Early life—Cambridge University; time in Paris; marriage to the painter Vanessa Bell; first exhibition of post-impressionists in London, 1910; pacifism and suppression of his writings.

II Interwar period— cultural criticism and writings on literature and liberty. 1930s politics and death of his son in Spanish Civil War.

III Postwar Britain—blueprint for reforms of 1960s.

Big Collars

Participants

Barbara Friedman (in museums and my painting studio)



Goals In various museums I paint on-site from Dutch Master paintings that feature the classic ruff collar; then back home I improvise from these pieces, keeping as it were the concept of the collar but otherwise inventing new variations on that visual theme.

Research Foci

Idea #1 These “Big Collars riff off my museum studies but play aggressively with scale and color, and they bring Dutch Ruff collars into the territory of gender and body issues.

Participants

ACE (AIDS, Counseling, & Education) Program Bedford Hills Correctional Facility

CARE (Counseling, AIDS, Resource & Education) Program Taconic Correctional Facility

- ❑ 24 formerly incarcerated (49%)
- ❑ 25 currently incarcerated (51%)
- ❑ 3 Civilian Staff



Objectives

•What is the importance of attachment in facilitating an investment in conventionality amongst female offenders working as HIV peer educators?

•Can prison provide an opportunity to create prosocial attachments with staff in two HIV prison-based peer programs in New York State to promote reintegrative/rehabilitative processes?

Research Foci

Idea #1: Prison-based programs, which typically promote conventional behavior, can connect civilian staff, who are committed to promoting pro-social behavior and can subsequently serve as role models and a source of support, to inmates who want to invest in a conventional lifestyle and reform their criminal identities.

Idea #2: The importance of relationship building between staff and inmates is often undervalued and overlooked during the implementation and administration of prison programming. These female offenders had strong levels of attachment to the civilian staff and these attachments served to mitigate maladaptive behavior and recidivism.

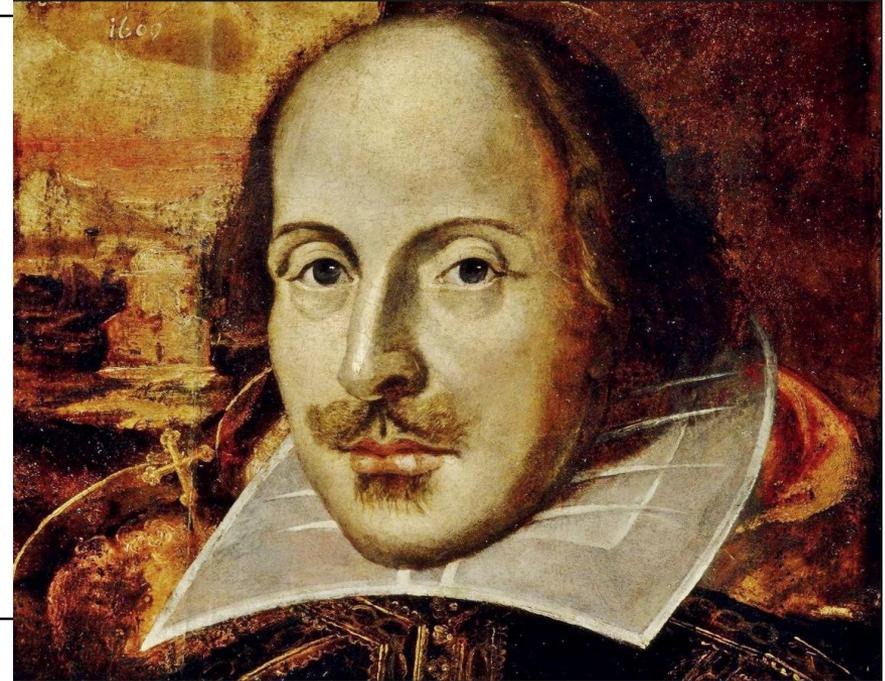
1 hour Shakespeare projects

Participants

Professor Julie Fain Lawrence-Edsell and numerous BFA Acting students starting with the PPA BFA Acting graduating class of 2016.

Goals

Create 1 hour edited version of a dozen plays of William Shakespeare to be used by colleges, universities, amateurs and professional theatres alike. The 1 hour versions can serve cast sizes as small as 4 actors (with doubling of roles) up to full cast productions.



Idea #1

Edits can be used as “in class” projects where students demonstrate their ensemble building skills, application of acting techniques learned throughout their training and ability to mount a “fully realized production” where the focus is on the text.

Idea #2

Edits can be used by amateur and/or professional companies who want to present 2 plays as a “full bill” of theatre for an audience or as part of a Theatre Festival, Shakespeare Festival, etc...

Italy's Renaissance: Art and Architecture 1280-1580

Participants:

**Janetta Rebold Benton, Ph.D.,
Distinguished Professor of Art
History
Author, book, *Italy's Renaissance:
Art and Architecture 1280-1580*,
Oxford University Press
396 pages, c.210 illustrations**

Goals/Objectives/Research Foci:

**To research and write the highest
quality book, illustrated with the
best possible photographs (many
taken by author)
Intended as a university textbook
and for the general public**



Light, A Dark Comedy – a new play

Participants

Adrienne Kapstein – Assistant Professor, Acting and Movement, BA International Performance Ensemble

Where: Triskelion Arts inaugural family programming

Funding: Pace School of Performing Arts (space donation); Brooklyn Arts Council; New Victory Theater LabWorks Program



Goals

The creation of a new work for family audiences with the ultimate goal that theater for an audience of all ages can be of as high an artistic standard and as sophisticated as theater for an adult only audience.

Idea #1

The creation of an original piece of theater

Idea #2

Exploring the creative premise: *What if there was a world without light?*

Idea #3

To create a unique hybrid of the highly visual and dexterously verbal; interdisciplinary physical theater with complex and nuanced characters.

The New Crack Cocaine: How has the Increase in Opioid Abuse affected the Crime Rate in America?

Participants

Amanda Moccia

Business Economics Major 16'
Pace University

James F. Albrecht, Ph.D.

Pace University
Department of Criminal Justice



Goal

To identify the correlation between opioid abuse and its impact on crime rate in America over the last decade (through statistical analysis using a economics-oriented linear regression model).

Prescription Drug Abuse: The increasing abuse of opioid based prescription drugs over the last 10 years has mimicked a similar trend observed during the crack cocaine epidemic of the 1980s, which correlated to a dramatic increase in violence and serious crime across the USA over that decade.

Illegal Heroin Abuse: Four in five new heroin users started out misusing prescription painkillers.

Stagnation in Crime Reduction: Opioid related drug abuse may have contributed to the stagnation of the national crime rate over the last decade.

Negative Spaces: On terrorist designs to erase cultural history and the critical media coverage

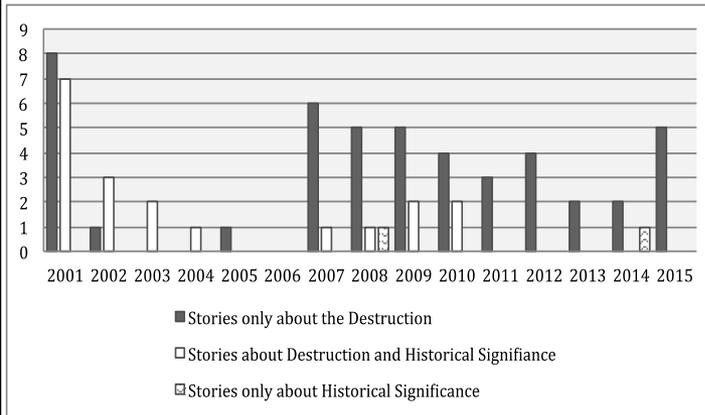
Participants

Dr. Adam Klein
Communication Studies

Presented at the
New York State
Communication
Association
Conference,
Top Paper Award



Method: Content
and Critical Analysis



Goals

To explain how terrorist acts of cultural iconoclasm can create “negative spaces,” the research explores how these hollowed spaces are remembered in the media after their destruction.

This study examines the 15-year news/magazine coverage that followed the Taliban’s 2001 annihilation of the Buddhas of Bamiyan, and then compares those trends to the recent coverage of ISIS’s annihilation of the ancient city of Nimrud.

Research Foci

Idea #1

The dominant coverage of the Buddhas served two journalistic ends: 1) To represent the Taliban’s devastating impact in Afghanistan, and 2) To define other acts of cultural terrorism.

Idea #2

Over time, the Buddhas have been transformed in the collective memory of journalists, replacing their cultural history with an ever-reminding narrative of their destruction.

Idea #3

The news practice of emphasizing the destructive legacy of terrorists over their victims’ story produces an eventual amnesia about the oppressed people and their history.

“SHOT – Statistics Help Officer Training”

Participants

- **PI** - Hasan T. Arslan, PhD – Criminal Justice and Security Dept. (Dyson)
- Daniel Farkas, PhD – Information and Technology Dept. (Seidenberg)
- **Database Development** – Brenden O’Reilly | Geo Artemenko | Matthew Desimini | Peter Gelsomino | Kenny Pescetto

Pace University

- **Data Entry:** Natalie Gellos, University of Edinburgh (Scotland)



The SHOT developed a protocol for collecting data from open sources using only media content analysis. It enables the research community and law enforcement

- the ability to study the dynamics of shooting incidents
- the ability to analyze this information
- Be better prepared to understand trends and patterns in officer-involved shootings.

Shootings per Year (N= 1806)



Reactive Species in Inflammation, Infection & Disease

Participants

PI: Dr. Rita K. Upmacis

Students:

Travis Korosh (2012)

Justine Wu (2015)

Kelsey D. Jordan (2014)

Solmaz Azimi (2016)

Steven J. Miller (2015)

Joy Tugbiyele (2016)

Ivelisse Dyson (2015)
(2016)

Amani Basaeed

Collaborators:

Dr. Nigel Yarlett - Pace University

Dr. D. Athanasopoulos - Pace University

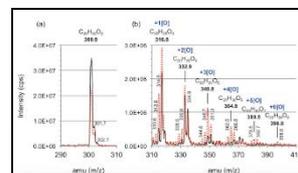
Dr. Josh Palmer - Columbia University

Patrick Quinlivan - Columbia University

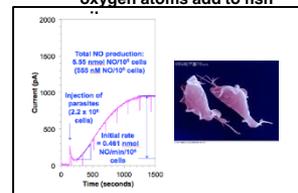
Goals

Objective: To understand the role of fatty acids, reactive oxygen and nitrogen species in inflammation, infection and disease. A better understanding will lead to the development of alternative therapeutic approaches.

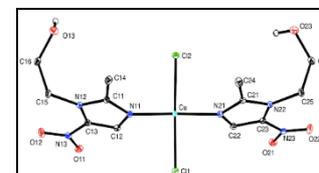
Funding: Start-Up Funds, Undergraduate Research Awards, Dyson College and Provost's Summer Research Funding.



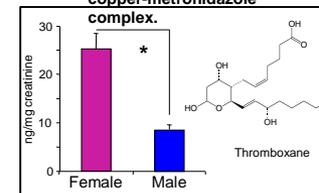
1. Fatty acid oxidation: 6 oxygen atoms add to fish



3. NO production by *T. vaginalis*.



2. X-Ray crystal structure of a copper-metronidazole complex.



4. Female mice produce more urinary thromboxane B₂.

Research Foci

Idea #1: Fatty acids, found in fish oil, readily oxidize in air and modulate parasite activity.

Idea #2: Synthesis of transition metal complexes of the anti-parasitic drug metronidazole may provide potential anti-parasitic drug candidates.

Idea #3: The parasite *Trichomonas vaginalis* produces nitric oxide (NO).

Idea #4: Gender differences in fatty acid (prostaglandin) production may indicate a requirement for different treatment options in males and females during disease.

Signaling Behavior of Treefrogs

Participants

PI:

Dr. Joshua Schwartz – Pace University

Students:

Alena Mazie Sandra Gomes

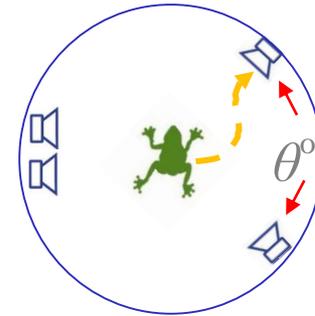
Patrycja Dziuba Alex Saitta

Ridwan Hossain

Jason Herde

Leonora Ulaj Aurora Gjoka

– Pace University



Goals

Objective:

To understand how treefrogs successfully communicate under the extremely noisy and competitive conditions within choruses.

Funding: National Science Foundation,
Scholarly Research & Kenan Awards

Research Foci

Idea #1

Changes in calling improve the ability of males to transmit critical structural features of calls to females.

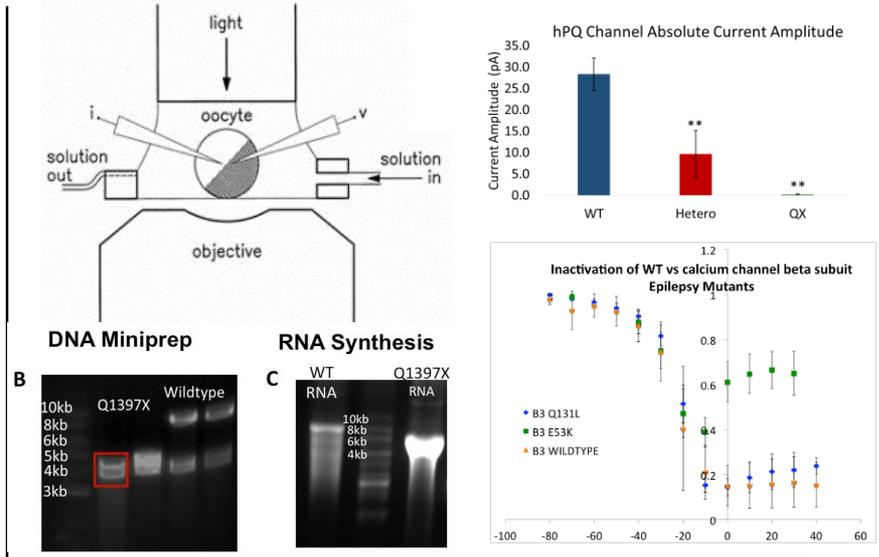
Idea #2

Use of aggressive calls facilitates inter-male spacing and reduced call interference. However, use of aggressive signals may impose costs on males.

Idea #3

Males choose calling sites to help compensate for structural degradation of calls during transmission through the habitat.

Participants

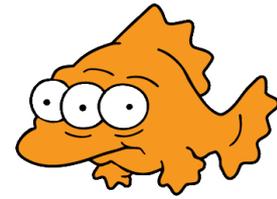


Goals

- 1) Many new mutations have been linked to Neurological Disorders but the molecular mechanism of pathology is not known – our research aims to uncover these molecular mechanisms.
- 2) Provide a highly immersive co-curricular experience for undergraduates in Neuroscience Research, and endow them with competencies essential for the ‘real world.’

Research Foci

- 1) Ca²⁺ channel mutations identified in high throughput sequencing as associated with neurological disorders will impact channel function.
- 2) Alzheimer’s disease in mutations in Presenilin impact Trp channel function
- 3) WT and autism-associated calcium channel mutant are differentially regulated by RGK proteins.



Participants

Principal investigator:

Erika Crispo, Assistant Professor, Biology Department

Pace undergraduate students and recent graduates:

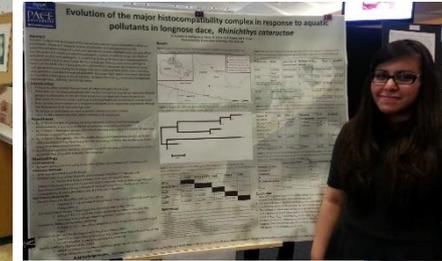
Pamela Suman (Biology '16)

Noreen Hussain (Biology '15)

Silvia Rodriguez (Biology '14)

Celine Hamel (Environmental Science '14)

Edward Cruz (Biology '14)



Goals

My research is at the interface of molecular ecology and ecological genetics. That is, I use molecular tools to understand ecology, and I study how genomes evolve in response to the environment. More specifically, I am interested in how freshwater fish populations adapt to environmental stressors, including hypoxia and pollution. I am most interested in questions revolving around the role of phenotypic plasticity in adaptation, and how phenotypic plasticity evolves, through examination at both the molecular and phenotypic levels.

Research Foci

- 1) **What is the molecular basis of phenotypic plasticity?** In collaboration with Pace senior, Pamela Suman, I am examining how cytosine methylation evolves among populations and whether it can be controlled by altering oxygen conditions in the lab. Cytosine methylation has been shown in previous studies to control gene expression.

- 1) **How does aquatic pollution influence the evolution of the immune system in freshwater fish?** By comparing fish populations in river sites upstream and downstream of wastewater effluent, my former students and I revealed parallel patterns in the evolution of immune response genes among river populations.

The Rock and the True Believers, Valley of the Deer, The Thaw -- Jillian McDonald – Art and Art History

Participants: Jillian McDonald, Newfoundland, Scotland, Manitoba

Exhibitions: Esker Foundation, Calgary, Canada; Squeaky Wheel, Buffalo, NY; Clark Gallery, Montréal, Canada; Air Circulation Gallery, Brooklyn NY; UWAG, Waterloo, Canada; Bret Llewellyn Gallery, Alfred University, NY; Atrium Gallery, Western Michigan University; Art Gallery of Southwestern Manitoba, Canada

Goals: Create video artworks shot in northern locations. Based on characters from local legends, ecology, and the supernatural

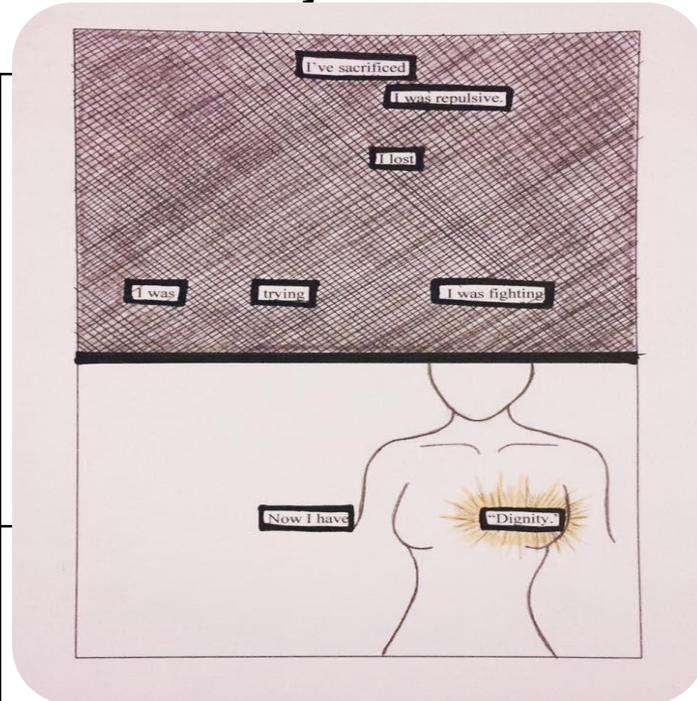
Funding: Scholarly Leave and Scholarly Research, Pace University; Artist Residency and Grant, Glenfiddich; Media Arts Grant, Canada Council for the Arts; New Media Grant, Turbulence.org; Residency, Art Gallery of Southwestern Manitoba



Our “Humument” Project

Dr. Catalina Florescu, English Dept;

Students: Belle Krupcheck & Kristen Resh. My students' goal is to work with an original text, eliminate some of its words, and keep only those significant *in the moment*. The emphasis on the moment, however volatile, is crucial for this project for it reveals its deep emotional and



Once some of the words from the original source have been eliminated, the students add their drawings. The goal is to have a hybrid text, and so a more complex reading. Ultimately, this can be done by anyone thus proving that analyzing a text should be interactive and interdisciplinary.

Participants:

Dr. John Lamb, Mathematics Dept.,
Pleasantville, NY

Where:

Sustainable Development Conference
- SDC 2016

July 7–9, 2016, Kuching, Malaysia

Goals: The goals of this International Conference on Sustainable Development are to explore ways to help sustain the earth's environment and combat global warming.

This research shows how STEM and STEaM students can use green computing projects to significantly reduce energy use and help combat global warming.

Sustainable Development Conference SDC 2016

**Why Green IT is an
Excellent Topic for STEM
and STEaM Projects**

Dr. John Lamb
Pace University - USA



7 – 9 July 2016

SDC 2016 Conference
Kuching, Malaysia

Research Foci

1. Introduction – Why Green IT (Information Technology) is a great topic for STEM (Science, Technology, Engineering, and Mathematics) and STEaM (STEM + arts)
2. The Significance of Green IT and Cloud Computing
3. New Technology for Green IT and Healthcare
4. Managing Green IT and Carbon Footprint at Hospitals and other Organizations
5. Ways to Promote Green IT - Measuring Green IT and a Green Data Center in Montpellier, France
6. Conclusions on STEM and Green IT - and Next Steps to Help Save the Planet!

Exploring Philanthropic Foundation's Motivation and Strategies from Grant-making to Impact Investing

Lijun He, PhD

Assistant Professor, Public Administration

Jessika Graterol, MPA student

Kilian Tep, Undergraduate, Honors college, Economics



PUBLICATIONS

He, Graterol, Tep. 2016(forthcoming). From Grants to Investment: Exploring Philanthropic Foundation's Motivation and Managerial Model of Strategic Change from Grant-making to Impact Investing. In West, L. & Whorthington, A.C. *Emerging business models and managerial strategies in the nonprofit sector*. IGI Global

Grants: The Helene & Grant Wilson Center for Social Entrepreneurship



Goals

- Understand the enabling environment and motivation of organization change
- Identify the “agent” and actors involved for the change process
- Map the strategies adopted for such a change
- Provide roadmap for foundations that are interested in impact investment

Research Foci

- The enabling factor of organization strategic change
- The organizational change strategies and process
- Role of board and leadership in organizational change
- Philanthrocapitalism behaviors



Parent-Child Institute

The members of the Parent-Child Institute (PCI) meet, discuss, and develop research projects related to parents and child development outcomes.



The PCI goals are:

- fostering research on parents and children
- securing grants
- providing students with research experiences
- disseminating findings

Parenting Questionnaires
Parenting and Child
Nutrition
Parenting and Screen Time
Parenting, Grit, and Child
Outcomes

Biomer Skelters, AR Artwork

Participants

- Will Pappenheimer (US)
- Tamiko Thiel (GDR)
- Pace Seidenberg School of Information Science (Verizon Thinkfinity Grant)(US)
- FACT (Foundation for Art and Technology) (UK)
- ArtSense, EU Grant, partners (UK, GDR, SP, FR)
- Liverpool John Moores University, Physiological Computing Department
- World Museum Liverpool (UK) Botanical print collection
- ISEA 2016 Dubai, International Symposium for Electronic Art



Goals + Research Foci

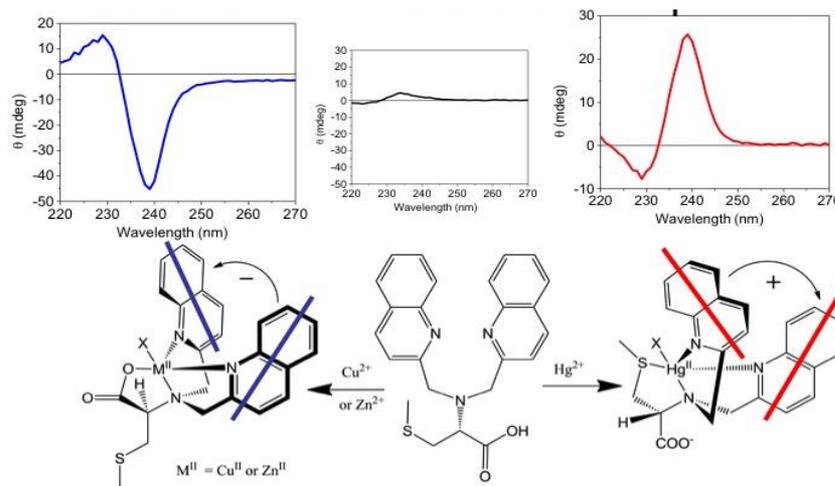
- create a generative artwork connecting the nascent mobile virtual augmented reality to emerging biosensing equipment
- test the possibilities of physiological self regulation as he response to virtual stimuli
- raise awareness of climate change and concepts of native and invasive in biology, culture and history
- explore possible citywide gaming scenarios for combining these areas of interest and information
- explore the is aesthetics of site-based visual propagation



Participants

P.I. Dr. Zhaohua Dai (Pace)
Collaborators: Dr. J. W. Canary (NYU)
Dr. D. Athanasopoulos (Pace)

Pace Students: Amanda Mickley, Patrick Carney, Wenyao Zhang, Lyanne Valdez, David Mendoza, Jonathan Oswald, etc



Goals: To understand the chirality switching mechanism of nitrogen-containing tripodal compounds and develop chiroptical sensors for metal ions and catalysts for asymmetric syntheses.

Funding: Research Corporation,
Petroleum Research Fund.
NSF (pending)

Research Foci

Idea #1

Multimode chiroptical detection and imaging of mercury in biological samples

Idea #2

Asymmetric hydroxylation of hydrocarbon to make chiral alcohols

Idea #3

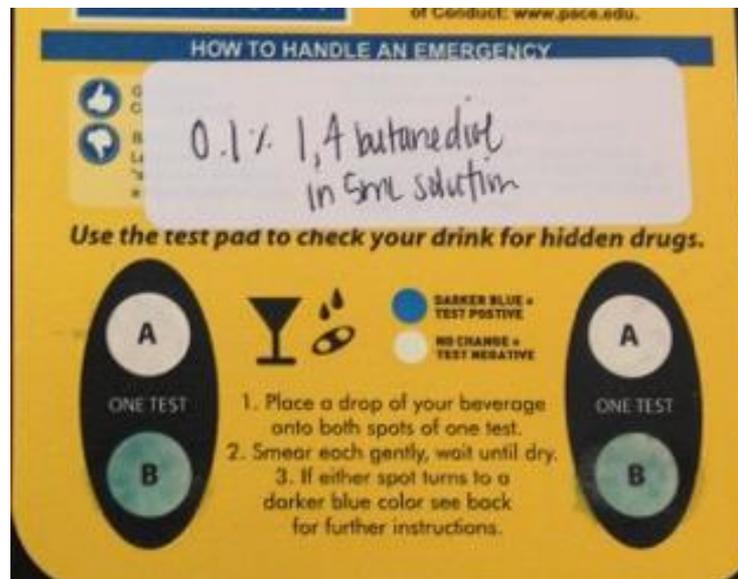
Switchable catalysis of aldol condensation to obtain different product at will using the same ligand with different metal ions

Forensic Analyses

Participants

P.I. Dr. Zhaohua Dai (Pace)

Pace Students: Fenyuan Yu
Maria Nazarouk
John Voila



Goals: To develop better tools for forensic analyses of paint chip, drugs in drinks, and biodiesel

Funding: Scholarly Research Fund (Pace)

Research Foci

Idea #1

Develop analytical tools for paint chips at crime scene using portable instruments.

Idea #2

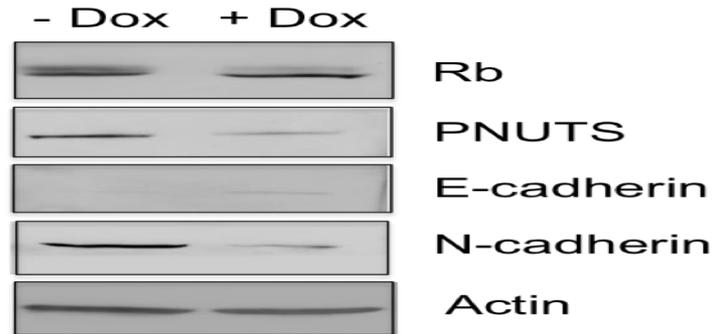
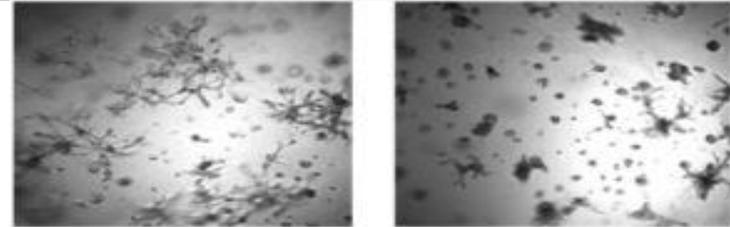
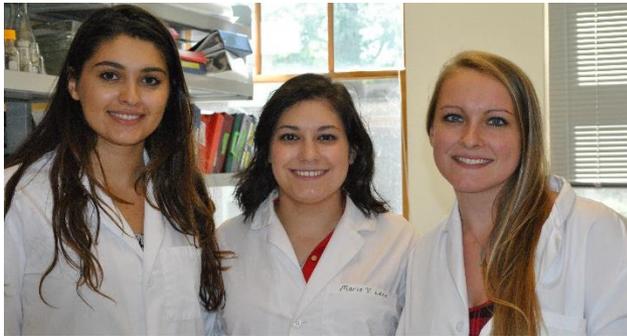
Develop more sensitive and less-intrusive methods for detecting date rape drugs using chemical and radio-frequency tools.

Idea #3

Profile weathering pattern of biodiesel for arson accelerant identification.

Activation of phosphatase toward the Retinoblastoma protein inhibits invasion in MDA-MB-231 breast cancer cells

PI: Nancy Krucher
Students: Jacklynn Egger
Maria Lane
Brixhilda Dedi
Department of Biology, PLV



To be presented at the American Association for Cancer Research meeting: April 18, 2016

Funding: NCI/NIH 2014-2017

Using our previously developed method of siRNA mediated gene knockout to activate a tumor suppressor gene, Rb, in breast cancer cells, we investigated its effect in a 3D model of advanced breast cancer (MDA-MB-231 cells). We found that activation of Rb caused a decrease in invasiveness of the cells, along with decreased expression of the invasion marker N-cadherin and increased expression of (E-cadherin) a marker of non-invasiveness.

Participants

PI: Dr. Kamil Walczak – Pace University

Student – “Topic”

Rita Aghjayan – “Thermal Rectification”

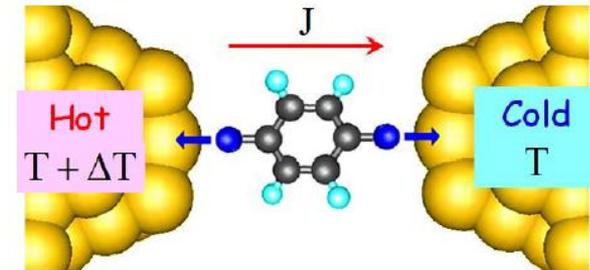
Arthur Luniewski – “Molecular Noise”

David Saroka – “Tunneling of Heat”

Luke Shapiro – “Thermal Memristors”

Joanna Dyrkacz – “Inelastic Heat Flow”

Single-Molecule Junction



$$J = \frac{\hbar^2}{2m} \Re \left\{ \Psi^+ \vec{\nabla} \frac{\partial \Psi}{\partial t} - \frac{\partial \Psi}{\partial t} \vec{\nabla} \Psi^+ \right\}$$

Goals

- To understand mechanisms involved into the processes of energy transfer at molecular level.
- To propose and simulate the behavior of new type of nanoscale devices.
- To develop formalism and algorithms useful in quantum thermodynamics far from equilibrium condition.

Research Foci

Idea #1

Nonlinear corrections to heat fluxes and all associated noises to derive and check new noise-signal relations by numerical simulations.

Idea #2

To apply physical models with appropriate nanoscale phenomena to study energy transfer in molecular and biological complexes.

Participants

PI: Dr. Elmer-Rico E. Mojica

Students:

Kevin Symczak

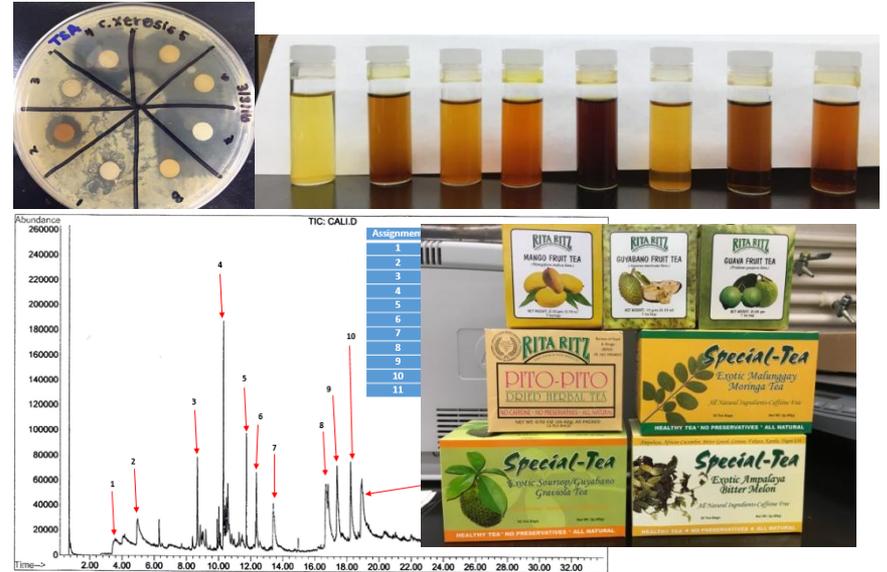
Alexis Javornik

Ashley Kuptsow

Morgan Franke

Santana Martinez

Jahaira Zapata



Goals

Objectives

To characterize nutraceutical products that are commercially available like bee products and tea samples.

To validate claims by companies for extra therapeutic, health and medical benefits of these nutraceutical products

Funding: Start-up Fund, Scholarly

Research Grant

Research Foci

Idea #1

Many of nutraceutical products have become readily available for the consumers with claims of extra health benefits.

Idea #2

Limited scientific studies have been done in most of these products.

Participants

Dr. Marcella Szablewicz
Communication Studies, NYC

Research based in Shanghai,
China, Summer 2015

Funding:

- Pace University Dyson Summer Research Grant
- Association for Asian Studies, China and Inner Asia Small Grant



A young man shows off his t-shirt, bearing the label of “loser”



At ChinaJoy, young people adorn themselves with digital culture

Goals

The goal of this study is to understand the function and significance of playful memes, labels bearing Internet jargon, and masks on display at ChinaJoy 2015, China’s largest digital entertainment expo.

Synopsis

This paper focuses on the affective function of memetic content, employing Dean’s (2010) notion of “affective networks,” and Papacharissi’s (2014) concept of “affective publics” to examine the interesting ways in which digital leisure culture fuses desire, failure and cultural anxiety in communal form.

Research Foci

- Viral “loser” culture in China bears relation to the #fail memes that can be found in Western digital media content
- However, these memes serve the added purpose of allowing youth to express dissatisfaction with the state’s public emphasis on a culture of “civilized” perfection.
- These memes thrive in an environment of semiotic openness, and the floating nature of these signifiers allows young people to invoke phrases that hold the potential to be politically subversive without chaining themselves to terms that may prove socially and politically problematic.

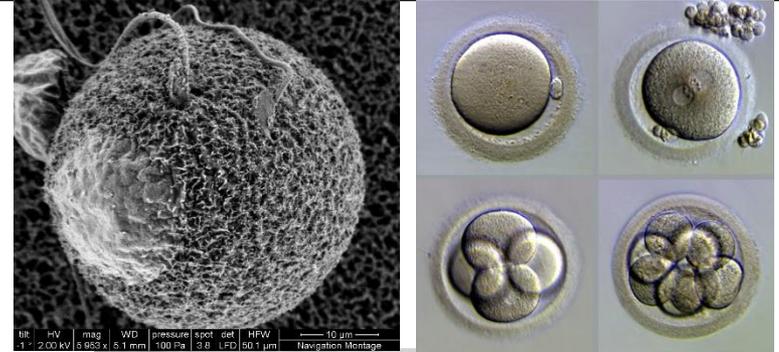
Identifying the Genes Necessary for Sexual Reproduction and Development

Participants

Matthew R. Marcello, Ph.D.

Undergraduate students (2015-2016):

- Francesca Difroschia
- Alissa Catanzarite
- Mohini Gobin
- Jonelle James
- Emily Lopes
- Lane McManus



Goals

Use the nematode *C. elegans* to identify the genes necessary for proper sexual reproduction and embryo development in order to develop new contraceptives, help infertile couples, and identify targets for drugs that inhibit cell division

Research Foci

- 1) Use genomic data from infertile men to determine which genes are necessary for sperm development and function
- 2) Identify genes necessary to mediate sperm-egg fusion
- 3) Determine how cell division is controlled during early embryonic divisions