



2018 Stewardship Report

PREPARED FOR
MS. DONOR NAME
MR. DONOR NAME





Tulane Sailing Endowed Fund

Established in 2018 by donor 1, donor 2, and donor 3, the Tulane Sailing Endowed Fund supports the Tulane Sailing program or its successor.

CURRENT YEAR

MARKET VALUE

AS OF 6/30/2018

\$000,000.00

The market value is calculated with the original gift amount and any additional gifts plus total return (capital appreciation and earned income) net of investment expenses less distributions/payout from the endowment fund.

5-Year Performance

Because this fund was established during fiscal year 2018, there are no historical figures to report at this time.

12/31/12

12/31/13

06/30/15

06/30/16

06/30/17

CURRENT YEAR

EXPECTED INCOME

FOR FISCAL YEAR 2019

Not yet determined

The amount of expected income represents the fund's share of the endowment payout available for use in the coming year. The endowment distribution/payout amount is based on the amount allocated from the endowment for use by the unit/department that benefits from the fund. The amount is calculated based on the endowment spending policy, which presently allows for five percent of the three year moving average of the fund's market value at December 31 of the three preceding years.

5-Year Performance

Expected income calculated on prior fiscal year market value. Fund was established after calculation.

FY14

FY15

FY16

FY17

FY18



Tulane Sailing Endowed Fund

Tulane University is incredibly excited to usher in sailing as a varsity sport starting with the 2018-19 academic year.

As we prepare to welcome Green Wave Sailing, we wish to thank you for your generosity and your forward-thinking commitment to this newest varsity endeavor. As a new endowment, your fund is currently in accrual. It will be our pleasure to update you on activities that your fund supports and details on its financial performance for the lifetime of the fund.

The Green Wave becomes just the 17th Division I school to sponsor sailing as a varsity sport, providing opportunities for more than 30 new student-athletes to get a tremendous education and compete for a national championship.

Leading those student-athletes will be Charles Higgins, Green Wave Sailing's first-ever varsity coach. A native of Texas, Higgins is thrilled to bring varsity sailing to his home region after spending ten years as an assistant coach at his alma mater, Old Dominion University.

"I am very excited and humbled to be the first head coach for Tulane University's varsity sailing program," Higgins said. "Tulane is an incredible institution with a rich history of excellence both academically and in the greater New Orleans sailing community. I look forward to extending those traditions to new heights and building a program that will make everyone proud."

Charles's love for sailing began at a young age. He has a championship pedigree as a competitive sailor and as a coach. Sailing has taken him around the world to regattas in England, Spain, and New Zealand, and he plans to use that experience to bring championships to New Orleans.

As part of the transitioning from a club sport to a varsity sport, Tulane will use a new boathouse on Lake Pontchartrain and a new fleet of boats. Community Sailing of New Orleans, Inc. (CSNOI) will provide both. Currently using the basement of the New Orleans Yacht Club, the team will be in much better shape when the boathouse project is completed in August.

"Right now, we're excited for what August brings in a new facility," Higgins said. "It's going to be great. In the next couple of years, we'll have a new boathouse, offices, and a classroom in addition to what we have here on campus."

Tulane, through the partnership with CSNOI, will use 18 new sailboats called Z420s which are produced by a company called Laser Performance. Additionally, Tulane will also use a smaller number of singlehanded—or one-person—boats called Lasers to compete in the singlehanded national championships.

"The Z420 is really the standard used across the country now," Higgins said. "Since the Z420 is going to be the boat of choice at not only the national championships but most of the regattas we will enter, it was important that we match what equipment was going to be used elsewhere."

A new coach, new facilities, and a new fleet certainly have the student-athletes excited. A large portion of the 2018-19 sailing roster is made up of students from the club team.

"When they told us we were going varsity, our mouths were hanging wide open," said Sophie Ricker, a senior sailor who had been the club program's president. "We've spent so much of our time and effort working toward building the team, and now this is really happening."

CONTINUED...



CONTINUED...

The Green Wave Athletic Department is energized as well. Tulane's marketing and communications teams hold weekly meetings to discuss how to get the student body and local community interested in sailing. With three regattas scheduled on Lake Pontchartrain in the fall alone, there will be plenty of opportunities for everyone to get hooked on Tulane's newest varsity sport.

"This is such a special moment for Tulane Athletics as we embark upon the first season as a varsity sailing program," said Deputy Athletics Director Mónica Lebrón. "We are grateful to have Coach Higgins at the helm, and we are confident he will return the program to national relevance. With our club program's storied history of producing Olympians and other elite sailors, we are poised for great success."

Thank you and see you on the water!

Respectfully submitted,
Troy Dannen
Ben Weiner Director of Athletics Chair
Department of Athletics
Tulane University



Donor Family Scholarship Endowed Fund

Established in 2011 by Mr. and Mrs. Donors, the Donor Family Scholarship Endowed Fund provides scholarship support for undergraduate business students and recognizes those who exemplify academic excellence and a dedication to the values of Tulane University.

CURRENT YEAR

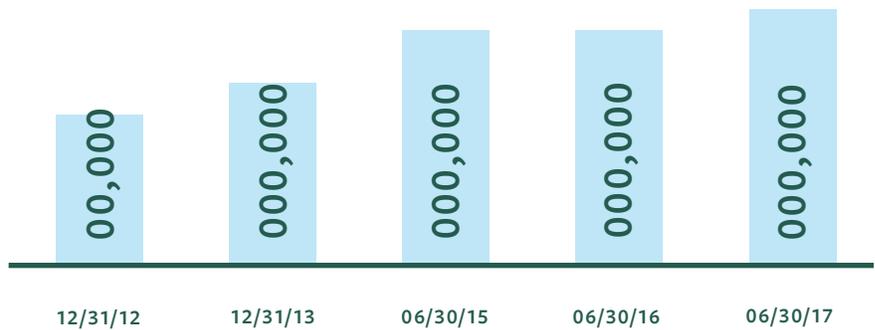
MARKET VALUE

AS OF 6/30/2018

\$000,000.00

The market value is calculated with the original gift amount and any additional gifts plus total return (capital appreciation and earned income) net of investment expenses less distributions/payout from the endowment fund.

5-Year Performance



CURRENT YEAR

EXPECTED INCOME

FOR FISCAL YEAR 2019

\$0,000.00

The amount of expected income represents the fund's share of the endowment payout available for use in the coming year. The endowment distribution/payout amount is based on the amount allocated from the endowment for use by the unit/department that benefits from the fund. The amount is calculated based on the endowment spending policy, which presently allows for five percent of the three year moving average of the fund's market value at December 31 of the three preceding years.

5-Year Performance





Donor Family Scholarship Endowed Fund



STUDENT NAME

CLASS OF XXXX

HOMETOWN

ANYTOWN,
ANYSSTATE

DEGREE

BA, MAJOR

“Thank you. One million times thank you. I love Tulane with everything that I am, but I was starting to have doubts as to whether it would be possible for me to continue here. Your kindness and generosity lifts that burden and helps me to become the greatest possible version of myself. I hope to have the opportunity to interact with you directly, but if I do not, know this: I will work my absolute hardest to respect and honor your scholarship.”

WHAT MAKES YOU TULANE-PROUD?

Multiple things make me Tulane-proud. From the national recognition for its academic prowess to the culture which breeds fantastic moments, memories and friendships, there is a lot to love about Tulane. Another thing that I like is the diversity of opinions that exist at the school. Being from Anytown, Anystate, I've experienced a lot of diverse backgrounds, but everyone tends to sing the same note. At Tulane, I meet people that I can have intelligent discussions with about things that I may disagree with or about which I may be uninformed.

HOW DO YOU MAINTAIN A WORK-LIFE BALANCE WHILE AT TULANE?

I appreciate my ability to maintain my non-academic passion which is fitness. Tulane has great facilities for this, from Reily to its gorgeous campus; it never feels like a bad time to go on a bike ride (unless it's raining torrentially) or go workout and interact with friends.

WHAT DO YOU ENJOY STUDYING AT TULANE?

Business. I did not expect to take the course when I came to Tulane, as I started as an English major. However, after bouncing around majors

and stumbling into Professor Smith's business administration course, I have found my passion. I do everything that I can to involve myself in the field. I am the president of my academic fraternity, Alpha Beta Delta. Last semester, I was a teaching assistant for Intermediate Business I and tutored all the business courses I have taken.

PLANS FOR THE FUTURE

Regarding career goals, I plan to become a business analyst working for a major firm in Anytown. After working at a major firm for at least five years, I will reevaluate my position and move forward from there.

Outside of my career, I want to travel more. There is so much of the world to explore, and at this point in my life, I have not done much. I also want to become a better cook. I think cooking is one of the greatest ways to give to another person.

ACCOMPLISHMENTS

I am the president of Alpha Beta Delta and used to be the treasurer for Beta Beta Alpha. I have also been a teaching assistant. I have been on the Dean's List for the last four semesters and do not intend to leave it for the next four.



Annual Support for the A. B. Freeman School of Business

The A. B. Freeman School of Business at Tulane University wants to thank you for donating to the Annual Fund. Unrestricted gifts provide a vital link between tuition revenue and the cost of running the Freeman School, offering relief to the operating budget, and directly affecting students, faculty and numerous programs throughout the school.

Additionally, you are empowering the world's future business leaders to make a positive impact on their organizations and communities. You are allowing Dean Ira Solomon to respond to the school's most pressing financial concerns and providing the flexibility to seize unique, creative, and important opportunities. These funds help pay for financial aid awards, student research projects, summer internship stipends, maintenance of facilities, and so much more. Every gift adds up to create a one-of-a-kind Tulane experience. And it is all made possible by you.

"Over the past few years, your support has helped to create a secure foundation that has made us one of the fastest growing business schools in the United States with undergraduate and graduate enrollment up by 55 percent in the last five years. When you give to the A. B. Freeman School of Business today, you are supporting the business leaders of tomorrow," says Dean Ira Solomon.

Regardless of the size of your gift, when combined with other gifts from alumni, parents, and friends, great things happen. This year your gift directly helped strengthen financial aid programs, enhanced technology, funded faculty research initiatives, helped underwrite student programs, and provided flexibility to meet the changing needs of the school.

We are grateful to donors like you who help keep Tulane affordable for talented students, no matter their economic circumstances. Your gift supports our mission to attract the world's most promising young innovators and leaders enabling Tulane to compete with our nation's most prestigious business schools.

William Wei is a native of Chalmette, Louisiana who plans to work as an energy investment banker in Houston after he graduates with his BSM in Finance in 2019. He is appreciative of the selfless generosity of donors like you.

"Being from Louisiana, I naturally learned a lot about Tulane University and knew that Tulane would be a top choice when the time came to choose where to go for college. I remember during my first visit I met Professor Peter Ricchiuti. Watching the passion that he had for finance truly made me want to attend Tulane. Tulane would have been an unachievable dream if not for the generosity of the donors who support my scholarship. As a first-generation college student, having a scholarship is everything."

Thank you for supporting the Freeman School and the business leaders of tomorrow!



Annual Support for Tulane University

The Tulane Fund for Undergraduate Education is the university's most significant source of unrestricted support. Every gift directly enriches our student body. Thousands of alumni, parents, and staff give each year, helping to secure a brighter future for those who aspire to be world-changers as Tulane University graduates. We want to thank you for being in that number!

The Tulane Fund, along with the General University Support Fund, helps us to provide scholarships, study abroad opportunities, ensure student health and wellness, maintain our campuses and facilities, and hire faculty who are at the top of their fields. This support helps our students prepare to take on interdisciplinary exploration and groundbreaking research and encourages them to confront the most challenging problems the world can present. Unrestricted giving enables the university to make the most of your generosity by using funds where they're most needed.

Tulane University boasts a growing student body rich in diversity from across the United States and the globe. Fall 2017 saw an undergraduate enrollment of 8,435 students with the graduate ranks swelling to 3,216. Add in the professional students, and you get 13,602 Tulanians, 7,876 females and 5,726 males! A majority of these students call Tulane home thanks to the generosity of donors like you who believe in our university and her students. Last year the university was able to offer financial aid to 79 percent of first-year students. We want to make sure Tulane continues to grow and to provide an outstanding education to tomorrow's leaders, and we want you to know that we appreciate your support.

To show you how much of an impact you're having, you just have to listen to what our students are saying about your contribution.

A Public Health major from Plano, Texas says she's found her "happy place" at Tulane thanks to a caring community of donors. "I can't imagine a life without Tulane in it. However, I have been faced with the reality of potentially walking away on many occasions, trying to shuffle money and figure out how to pay off remaining balances along with student loans that I face after graduation. Receiving this grant is the most incredible thing that could have happened, and it makes me want to work that much harder to prove to myself and to everyone else that I am worthy of Tulane."

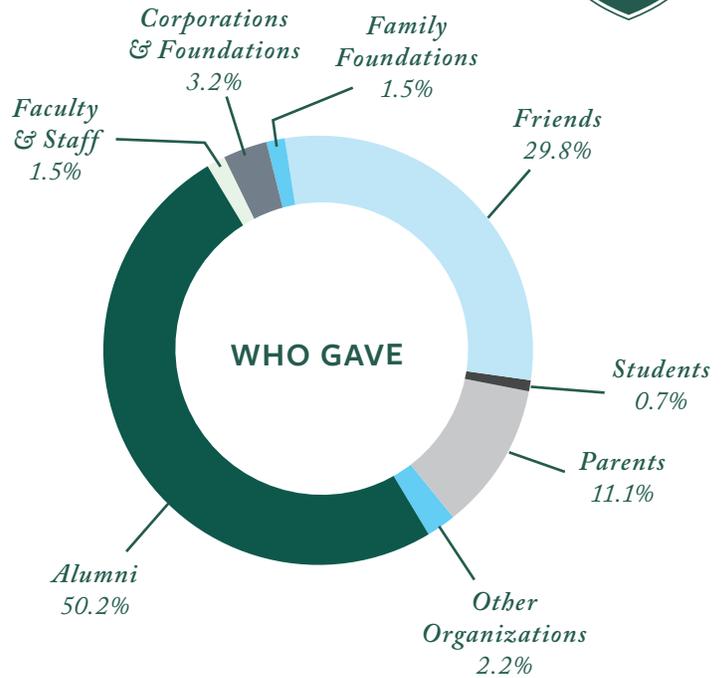
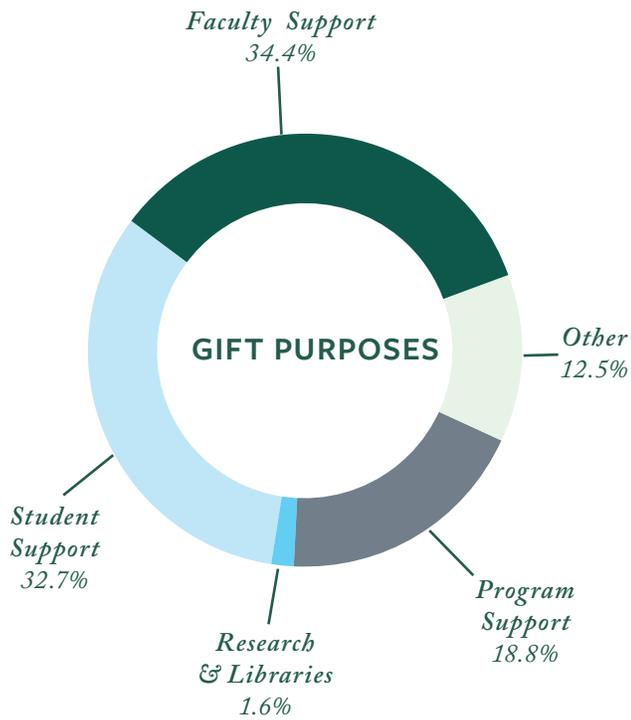
A first-generation college student from a Louisiana mill town (whose family has little formal education) says, "I am incredibly proud to be a part of an academically, nationally, and world-acclaimed institution. To say thank you alone would be an understatement of what you've given me in a Tulane education."

"I would like to become a speech-language pathologist and work to help people living with communication disorders," says an undergrad from Bellingham, Washington. "Your selfless gift has enabled me to get an incredible education that will open doors for my future."

Together we are building an ever-bolder future, and the teachers, doctors, lawyers, and molders of that future thank you for your support.

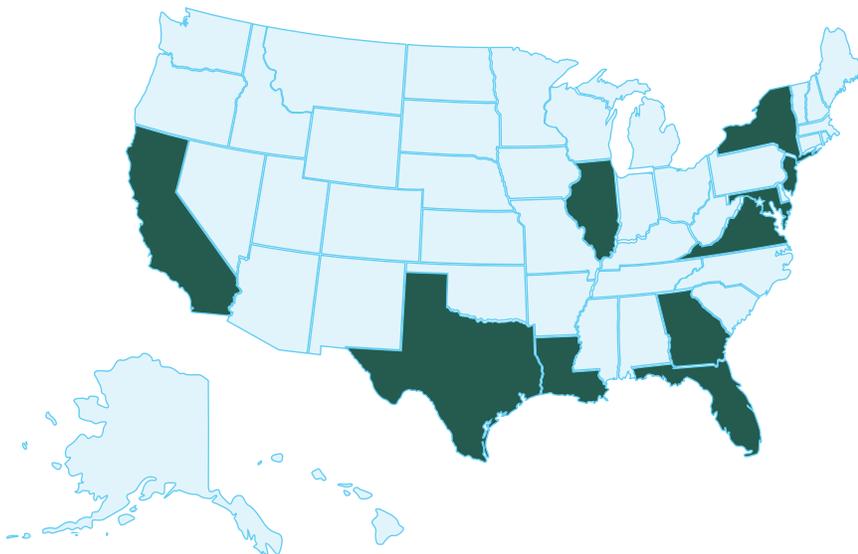
Benefactor Snapshot

REPORTING YEAR 2018



1,639

DONORS TO ENDOWED FUNDS



TOP TEN STATES

Where Donors to Endowed Funds Reside

- 37.2% Louisiana
- 10.9% Texas
- 5.5% New York
- 5.2% Florida
- 5.1% California
- 4.5% Georgia
- 3.3% Illinois
- 2.7% Maryland
- 2.5% Virginia
- 2.4% New Jersey



HOW OFTEN WILL I RECEIVE MY STEWARDSHIP REPORT?

Stewardship reports are mailed annually, usually in the fall, by the Office of Donor Relations. The financial reporting reflects the prior fiscal year performance.

WHAT IS AN ENDOWMENT?

An endowment is a permanent fund in which the principal is invested to ensure that future generations will continue to benefit from gift decisions made today.

HOW DOES AN EXISTING ENDOWMENT GROW?

An endowment grows through investment earnings and additional gifts, which may be made by anyone at any time to increase the significance of the annual awards. Additional contributions ensure that the fund continues to grow.

IS GROWING THE TULANE ENDOWMENT A PRIORITY FOR THE CAMPAIGN?

Yes! The goal is to increase the number of endowed faculty positions across the university to 400, which will keep us in line with peer institutions, and to double the current amount of endowed funding for scholarships.

WILL NEW GIFTS TO EXISTING ENDOWMENTS HELP THE CAMPAIGN GOAL?

Absolutely! Every gift counts and moves us closer to more fully equipping our faculty and students with the tools they need to succeed.

WHERE CAN I SEE A LISTING OF ALL TULANE ENDOWED FUNDS?

Honoring our endowed fund donors is a priority, and we now have a list of endowed funds on our website. You can find it by visiting giving.tulane.edu/honoringdonors and clicking on Recognition.

WHAT IS THE MARKET VALUE?

The market equals the original gift amount, and any additional gifts plus total return (capital appreciation and earned income) net of investment expenses less distributions/payout from the endowment fund.

WHAT IS EXPECTED INCOME?

The amount of expected income represents the fund's share of the endowment payout available for use according to the intent of the fund. The endowment distribution/payout amount is based on the amount allocated from the endowment for use by the unit/department that benefits from the fund. The amount is calculated based on the endowment spending policy, which presently allows for five percent of the three-year moving average of the fund's market value at December 31 of the three preceding years.

WHY DOES THE VALUE OF AN ENDOWED FUND FLUCTUATE?

Gifts to the fund can increase the market value. Endowment distributions can decrease the market value. Investment performance can increase or decrease the value, depending on market returns.

WHAT IS THE TULANE UNIVERSITY ENDOWMENT REPORT?

It is the comprehensive snapshot of the investment performance of the university endowment. It is published annually by the Investment Management Office.



DONOR NAME FACULTY REPORTS
SPRING 2016 AWARDS





Donor Name Faculty Grants

In February 2016, the Donor Name Family Foundation, whose generous support of Tulane University built the iconic and award-winning Donor Name Center for University Life, pledged \$5 million to support Tulane’s faculty.

The gift provides \$1 million annually for five years for department and faculty needs in research, recruitment, development, continuing education, and student engagement with grants to individual full-time faculty members up to \$15,000 per year.

Faculty members can apply for any of the following grants: 360 Degree Courses, Course/Teaching Grants, Interdisciplinary Faculty Workgroups, Research Bridge Grants, Research Conference Travel, Research Support, and Other.

Applications for the 2017-2018 academic year were due March 10, 2017 and awardees were notified starting April 24, 2017. 160 applications were received, totaling approximately \$1.5 million. 120 grants were awarded, totaling \$977,869. The majority of the awards were from the category of Research Support.

Reports for the 2016-2017 Round 1 grants are included in this collection. The deadline for submitting final reports was October 31, 2017. We look forward to reporting on 2016-2017 Round 2 in spring of 2018.

ACADEMIC YEAR	TOTAL APPLICATIONS RECEIVED	TOTAL DOLLARS REQUESTED	TOTAL GRANTS AWARDED	TOTAL DOLLARS AWARDED
2016-17 (Round 1)	202	\$0,000,000	91	\$000,000
2016-17 (Round 2)	94	\$0,000,000	34	\$000,000
2017-18	160	\$0,000,000	120	\$000,000
Total	456	\$0,000,000	245	\$0,000,000

Future Date: We anticipate the 2018-2019 call for applications will be in February 2018.





Table of Contents

- 2 Abdulnour-Nakhoul, Solange -School of Medicine
Department of Medicine, Research Bridge Funding
- 2 Amdeberhan, Tewodros - School of Science and Engineering
Department of Mathematics, Research Conference Travel
- 3 Bayer, Carolyn - School of Science and Engineering
Department of Biomedical Engineering, Research Support
- 5 Beller, Thomas - School of Liberal Arts
Department of English, Course/Teaching Support
- 6 Blake, Diane A.- School of Medicine
Department of Biochemistry and Molecular Biology, Other
- 7 Blum, Michael J. - School of Science and Engineering
Department of Ecology and Evolutionary Biology, Research Support
- 8 Brumfield, William - School of Liberal Arts
Department of German and Slavic Languages, Research Support
- 8 Bunnell, Bruce A. - School of Medicine
Department of Pharmacology, Research Support
- 9 Burin, Alexander L. - School of Science and Engineering
Department of Chemistry, Research Bridge Funding
- 9 Burin, Alexander L. - School of Science and Engineering
Department of Chemistry, Research Conference Travel
- 11 Burnette, Catherine E. - School of Social Work
Department of Social Work, Research Support
- 12 Campanella, Richard - School of Architecture
Department of Architecture, Research Support
- 14 Castro, Arachu - School of Public Health and Tropical Medicine
Department of Global Community Health and Behavioral Sciences,
Interdisciplinary Faculty Workgroup
- 15 Castro, Arachu - School of Public Health and Tropical Medicine
Department of Global Community Health and Behavioral Sciences, Research Support
- 16 Chakraborti, Chayan - School of Medicine
Department of Medicine - General Internal, Research Conference Travel
- 16 Clum, Gretchen A. - School of Public Health and Tropical Medicine
Department of Global Community Health and Behavioral Sciences, Research Support
- 17 Cohen, Michael R. - School of Liberal Arts
Department of Jewish Studies, Research Support

DONOR NAME FACULTY REPORTS

- 18 Cole, Teresa - School of Liberal Arts
Department of Art, Research Support
- 18 Colombo, Paul Joseph - School of Science and Engineering
Department of Psychology, Research Support
- 19 Crawford, Colin - School of Law
Payson Institute, Course/Teaching Support
- 20 Cropley, Lorelei Beleta - School of Public Health and Tropical Medicine
Department of Global Community Health and Behavioral Sciences, Research Support
- 22 Cunningham, Michael - School of Science and Engineering
Department of Psychology, Research Support
- 23 Dancy, Geoffrey T. - School of Liberal Arts
Department of Political Science, Research Support
- 25 Daniele, Elena - School of Liberal Arts
Department of French and Italian, Research Conference Travel
- 25 Dávila, Roxanne - School of Liberal Arts
Department of Spanish and Portuguese, Course/Teaching Support
- 27 Debord, Jessica M. - School of Medicine
Department of Medicine General Internal, Research Conference Travel
- 28 Derryberry, Elizabeth - School of Science and Engineering
Department of Ecology and Evolutionary Biology, Research Support
- 29 Drury, Stacy S. - School of Medicine
Department of Psychiatry - Child Psychiatry, 360 Degree Course
- 32 Feoli, Ludovico - School of Liberal Arts
Stone Center for Latin American Studies, Interdisciplinary Faculty Workgroup
- 33 Ferreira, Regardt J. - School of Social Work
Department of Social Work, Research Support
- 34 Meck, Holly F. - School of Liberal Arts
Department of Art, Research Support
- 35 Frasch, Elmer Thomas III - School of Medicine
Department of Structural and Cellular Biology, Research Conference Travel
- 35 Gasparini, Nicole M. - School of Science and Engineering
Department of Earth and Environmental Sciences, Research Support
- 36 Gilbertson, Lars George - School of Science and Engineering
Department of Biomedical Engineering, Course/Teaching Support
- 37 Goehring, Brent Marshal - School of Science and Engineering
Department of Earth and Environmental Sciences, Research Support
- 38 Gotham, Kevin F.- School of Liberal Arts
Department of Sociology, Research Conference Travel

- 39 Grayson, Scott M. - School of Science and Engineering
Department of Chemistry, Research Bridge Funding
- 40 Hà, Huy Tài - School of Science and Engineering
Department of Mathematics, Research Conference Travel
- 40 Han, Jeffrey - School of Medicine
Department of Biochemistry and Molecular Biology, Research Support
- 40 Herrera, Claudia Patricia - School of Public Health and Tropical Medicine
Department of Tropical Medicine, Research Support
- 42 Holliday, Trenton Webster - School of Liberal Arts
Department of Anthropology, Research Support
- 44 Holman, Mirya; Lay, J. Celeste - School of Liberal Arts
Department of Political Science, Research Support
- 45 Höner zu Bentrup, Kerstin - School of Medicine
Department of Microbiology/Immunology, Research Conference Travel
- 46 Jack, Katharine M. - School of Liberal Arts
Department of Anthropology, Research Support
- 47 Jayawickramarajah, Janarthanan - School of Science and Engineering
Department of Chemistry, Research Support
- 50 Jazwinski, Barbara Maria - School of Liberal Arts
Department of Music, Research Support
- 50 Jones, Frank E. - School of Science and Engineering
Department of Cell and Molecular Biology, Research Bridge Funding
- 51 Kaplan, Lev - School of Science and Engineering
Department of Physics, Research Support
- 52 Kehoe, Dennis P. - School of Liberal Arts
Department of Classical Languages, Research Conference Travel
- 53 Kumar, Nirbhay - School of Public Health and Tropical Medicine
Department of Tropical Medicine, Research Support
- 54 Kurdia, Anastasia - School of Science and Engineering
Department of Computer Science, Course/Teaching Support
- 55 Lee, Jean-Pyo - School of Medicine
Department of Neurology, Research Support
- 57 Lewis, Marva L.; Theall, Katherine - School of Social Work
Department of Social Work, Research Support
- 59 Li, Jian - School of Public Health and Tropical Medicine
Department of Biostatistics, Research Conference Travel
- 60 Li, Jian - School of Public Health and Tropical Medicine
Department of Biostatistics, Research Support

DONOR NAME FACULTY REPORTS

- 61 Lin, Tiffany - School of Architecture
Department of Architecture, Course/Teaching Support
- 66 Masquelier, Adeline M. - School of Liberal Arts
Department of Anthropology, Research Support
- 69 Mayer, Vicki A. - School of Liberal Arts
Department of Communication, Other
- 70 McCarren, Felicia - School of Liberal Arts
Department of French and Italian, Interdisciplinary Faculty Workgroup
- 70 McKinney, Laura A. - School of Liberal Arts
Department of Sociology, Research Conference Travel
- 71 Meadows, Stryder - School of Science and Engineering
Department of Cell and Molecular Biology, Research Support
- 71 Morici, Lisa A.; Sammarco, Mimi - School of Medicine
Department of Microbiology/Immunology, Research Support
- 73 Morris, Gilbert F. - School of Medicine
Department of Pathology, Research Support
- 75 Mostany Ibanez, Ricardo - School of Medicine
Department of Pharmacology, Research Bridge Funding
- 76 Murfee, Walter L. III - School of Science and Engineering
Department of Biomedical Engineering, Research Conference Travel
- 77 Murina, Andrea T. - School of Medicine
Department of Dermatology, Research Conference Travel
- 77 Norton, Elizabeth B. - School of Medicine
Department of Microbiology/Immunology, Research Support
- 78 Oliver, Christopher Scott; Pealer, Casius - School of Liberal Arts
Department of Sociology, Interdisciplinary Faculty Workgroup
- 80 Oliver, Christopher Scott; Ostertag, Stephen F. - School of Liberal Arts
Department of Political Science, Research Support
- 83 Oliveros, Virginia - School of Liberal Arts
Department of Sociology, Research Conference Travel
- 83 Pandey, Kailash N. - School of Medicine
Department of Physiology, Research Bridge Funding
- 84 Park, Hee-Won - School of Medicine
Department of Biochemistry and Molecular Biology, Research Bridge Funding
- 86 Pfrimmer, Amy Elizabeth - School of Liberal Arts
Department of Music, Research Support

- 87 Pursell, Zachary F. - School of Medicine
Department of Biochemistry and Molecular Biology, Research Support
- 88 Reuber, Alexandra Maria - School of Liberal Arts
Department of French and Italian, Research Conference Travel
- 90 Rodning, Christopher Bernard - School of Liberal Arts
Department of Anthropology, Research Support
- 93 Saifudeen, Zubaida R. - School of Medicine
Department of Pediatrics, Research Bridge Funding
- 94 Sherry, Thomas W. - School of Science and Engineering
Department of Ecology and Evolutionary Biology, Research Support
- 95 Smilde, David - School of Liberal Arts
Department of Sociology, Interdisciplinary Faculty Workgroup
- 96 Snow, Richard Searcy - School of Liberal Arts
Department of Music, Course/Teaching Support
- 97 Steflja, Izabela - School of Liberal Arts
Payson Institute, Research Conference Travel
- 97 Taylor, Catherine A. - School of Public Health and Tropical Medicine
Department of Global Community Health and Behavioral Sciences, Research Support
- 99 Weiss, Ashley- School of Medicine
Department of Psychiatry - Child Psychiatry, Research Conference Travel
- 100 Wenk, Carola; Ayyala, Ramesh - School of Science and Engineering
Department of Computer Science, Research Support
- 101 Wikström, Toby Erik - School of Liberal Arts
Department of French and Italian, Research Conference Travel
- 102 Wolfe, Justin - School of Liberal Arts
Department of History, Course/Teaching Support
- 103 You, Zongbing - School of Medicine
Department of Structural and Cellular Biology, Research Conference Travel
- 103 Zender, Marc U. - School of Liberal Arts
Department of Anthropology, Course/Teaching Support
- 105 Zhang, Haitao- School of Medicine
Department of Pathology, Research Support
- 109 Award Tables



Abdulnour-Nakhoul, Solange

School of Medicine
Department of Medicine

RESEARCH BRIDGE FUNDING

The Donor Name Faculty Grant funds I received in June 2016 were instrumental in keeping my lab functional. They allowed me to maintain my transgenic mice colony and paid for histology supplies and invoices. These funds helped us generate data for a presentation entitled “Interaction of the Renal NH₃/NH₄⁺ Transporters Rh Glycoproteins with Cellular Proteins Involved in Acid-Base Homeostasis” at the American Society of Nephrology meeting in Chicago. A paper from this work entitled “Hypercapnia Regulates the Expression of Rh Proteins in the Kidney” is now in preparation for submission to the American Journal of Physiology-Renal. Another paper entitled “Calcium Sensing Receptor Deletion in the Mouse Esophagus Alters the Expression of Junctional Proteins” is currently in preparation for submission to the American Journal of Physiology-Gastrointestinal and Liver.

A grant was submitted to the Veterans Administration in March 2017, and an application for the National Institutes of Health funding is currently in preparation.

I would like to thank our donor, the Donor Name Family Foundation for their support that was fundamental in keeping my research projects going.

Respectfully submitted,
Solange Abdulnour-Nakhoul, PhD
Department of Medicine/Gastroenterology
School of Medicine

Amdeberhan, Tewodros

School of Science and Engineering
Department of Mathematics

RESEARCH CONFERENCE TRAVEL

I went to the University of Miami for a one-week research visit in April 2017 to work with a colleague from Massachusetts Institute of Technology (MIT), Professor Richard Stanley, who was himself at the University of Miami on a sabbatical leave. This visit also benefited me with an opportunity to work with another faculty member there, Professor Michelle Wachs. Below, I shall describe the two focused studies we considered, and we have made some progress on since my return to Tulane. This is work in progress.

With Richard Stanley

F. Bergeron recently proposed an interesting problem, which naturally arose in his studies of the widely-known q -Foulkes conjecture, of whether the coefficients of the symmetric polynomial

$$\sum_{c \geq 0} \binom{b+c}{c} q^c - \sum_{d \geq 0} \binom{a+d}{d} q^d$$

form a non-negative sequence provided the integers satisfy $ad = bc$. As usual,

$$\binom{m+n}{n}_q = \frac{(1-q)(1-q^2) \cdots (1-q^{m+n})}{(1-q)(1-q^2) \cdots (1-q^m) \cdot (1-q)(1-q^2) \cdots (1-q^n)}$$

In this regard, we made some progress in providing a combinatorial proof of the Bergeron’s conjecture for some special values of a, b, c, d .

With Michelle Wachs

The Eulerian polynomials of type A and type B are defined, respectively, by

$$\sum_{k \geq 0} (k+1)^n t^k = \frac{A_n(t)}{(1-t)^{n+1}}, \quad \text{and} \quad \sum_{k \geq 0} (2k+1)^n t^k = \frac{B_n(t)}{(1-t)^{n+2}}$$

Lemma 1.

If $A_n(t) = \sum_{j=0}^n A_{n,j} t^j$ and $B_n(t) = \sum_{j=0}^n B_{n,j} t^j$, then the Eulerian numbers relate by

$$2^n A_{n,k} = \sum_{j=0}^{n+1-2k} \binom{n+1-2k}{j} A_{n,j} \quad \text{and} \quad B_{n,k} = \sum_{j=0}^{n+1-2k} \binom{n+1}{2k-j} A_{n,j}.$$

Lemma 2.

The following relation intertwines type A and type B

If $A_n(t) = \sum_{j=0}^n A_{n,j} t^j$ and $B_n(t) = \sum_{j=0}^n B_{n,j} t^j$, then the Eulerian numbers relate by

$$2^n A_{n,k} = \sum_{j=0}^{n+1-2k} \binom{n+1-2k}{j} A_{n,j} \quad \text{and} \quad B_{n,k} = \sum_{j=0}^{n+1-2k} \binom{n+1}{2k-j} A_{n,j}.$$

Lemma 3.

The following relates Stirling numbers of second kind with Eulerian polynomial by

$$A_k(t) = \sum_{j=1}^k j! S(k, j) t^{j-1} (1-t)^{k-j}.$$

Let us reintroduce the q -exponential function $e(z; q)$ as

$$e(z; q) = \sum_{n=0}^{\infty} \frac{z^n}{(q; q)_n},$$

and define a q -analogue of $B_n(t)$ by the generating function

$$\sum_{n \geq 1} B_n(t, q) \frac{z^n}{(q; q)_n} = \frac{(e(z; q) - e(tz; q))(e(tz; q) + te(z; q))}{e(2tz; q) - te(2z; q)}$$

Moreover, define the q -Eulerian numbers $B_{n,k}(q)$ of type B according to

$$B_n(t, q) = \sum_{k=0}^n B_{n,k}(q) t^k.$$

Lemma 4.

We have the symmetric property

$$B_{n,k}(q) = B_{n,n-k}(q).$$

Proof. Substituting $t \rightarrow t^{-1}$ and $z \rightarrow tz$ implies $t^n B_n(t^{-1}, q) = B_n(t, q)$. The claim follows. \square

The next result reveals symmetry of the q -Eulerians of type B.

Conjecture. Let $a, b \in \mathbb{P}$ and denote $\alpha = a + b + 1$.

We have the symmetric relation

$$a \binom{\alpha}{q} + \binom{\alpha}{q} \cdot k \cdot \binom{\alpha-k}{q} 2^{\alpha-k} B_{k,b}(q) = b \binom{\alpha}{q} + \binom{\alpha}{q} \cdot k \cdot \binom{\alpha-k}{q} 2^{\alpha-k} B_{k,a}(q).$$

We have found some new combinatorial interpretation of these Eulerian-type polynomials which we hope would prove our conjecture.

Respectfully submitted,
Tewodros Amdeberhan, PhD
Senior Professor of Practice
Department of Mathematics
School of Science and Engineering

Bayer, Carolyn

School of Science and Engineering
Department of Biomedical Engineering

RESEARCH SUPPORT

The generous funding from the Donor Name Faculty Grant allowed our laboratory to complete our proposed objective, to obtain preliminary data on placental oxygenation in a preclinical model of preeclampsia using our spectral photoacoustic imaging system. We successfully completed the proposed research goals, have presented the work at conferences, and intend to prepare the work for peer-reviewed publication. This preliminary data will be crucial for upcoming National Institutes of Health funding submissions.

Preeclampsia is a leading cause of maternal and perinatal mortality. Preeclampsia is initiated by placental ischemia — defined as reduced blood flow to the placenta — which may result from inadequate placental development and invasion. Placental ischemia causes the release of factors, leading to the clinical symptoms of preeclampsia — high blood pressure and proteinuria. There are no clinically-approved methods to treat placental

ischemia or preeclampsia; the only “cure” is the premature delivery of the placenta and fetus. Using the reduced uterine perfusion pressure (RUPP) rat model to examine the biomolecular pathways leading to the development of preeclampsia, researchers have identified potential therapeutic targets for clinical translation. In this research, the symptoms of preeclampsia are measured in the maternal system, rather than in the organ originating the disease — the placenta.

Our specific aims were to 1) obtain training in the reduced uterine perfusion pressure (RUPP) rat model of preeclampsia, 2) conduct ultrasound-guided spectral photoacoustic imaging of RUPP rats, and 3) optimize image processing algorithms to quantify placental perfusion and placental hemoglobin oxygenation.

Research Outcomes:

Aim 1: Training

Members of the laboratory traveled to Dr. Joey Granger’s laboratory at the University of Mississippi for two days of hands-on training in the surgical technique in October 2016. We have successfully translated the surgical technique to our laboratory at Tulane.

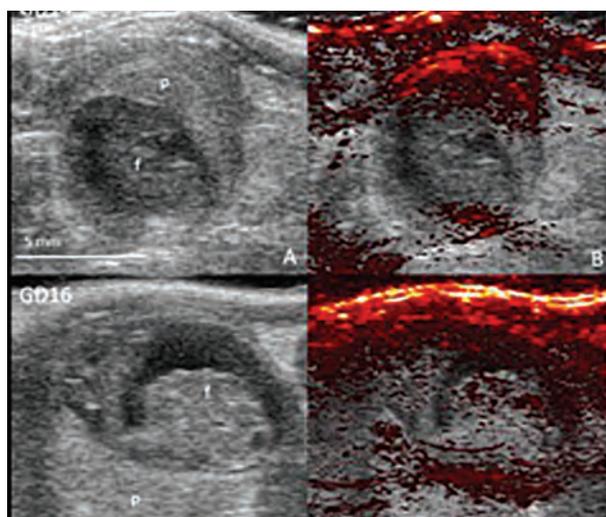


Figure 1: Representative ultrasound (left) and photoacoustic images (right) acquired of rats at gestational day 14 (top) and 16 (bottom).

Aim 2: Pilot Imaging

We have acquired ultrasound and spectral photoacoustic imaging of over 15 animals. The animals were divided into three cohorts – RUPP, sham, and control. The sham animals (surgically treated identically to the RUPP, but without clamping) were added at the suggestion of our collaborator to ensure the surgery without clamping did not affect our placental oxygenation measurements. An example image is shown in Figure 1.

Aim 3: Image processing optimization

We have implemented a 3-wavelength spectral linear regression algorithm to calculate the tissue oxygen saturation from the photoacoustic images. Using this method, we have calculated the average placental oxygenation measured with our spectral photoacoustic imaging methods longitudinally, comparing each cohort, as shown in Figure 2. Though we continue the experiments to obtain statistical validity, this initial data is quite promising. Two days after the surgery, we do measure significantly lower placental oxygenation in the RUPP rats. Additionally, the data indicates that the placental oxygenation normalizes by developmental day 18. This could be indicating placental remodeling and is an exciting area of future study.

Publications and Presentations:

The work has been presented at two international conferences, with an additional abstract accepted for presentation in the fall of 2017, and an invited talk in spring 2018.

***Bayer, C.L.** “Photoacoustic imaging of placental function,” American Institute of Ultrasound in Medicine, Orlando, Florida, 2018.

Lawrence, D., **Bayer, C.L.** “Ultrasound-guided photoacoustic imaging to estimate in vivo placental ischemia as an early indicator of preeclampsia,” World Molecular Imaging Congress, Philadelphia, 2017.

Lawrence, D., Emelianov, S.Y., **Bayer, C.L.** “Ultrasound-guided spectral photoacoustic imaging

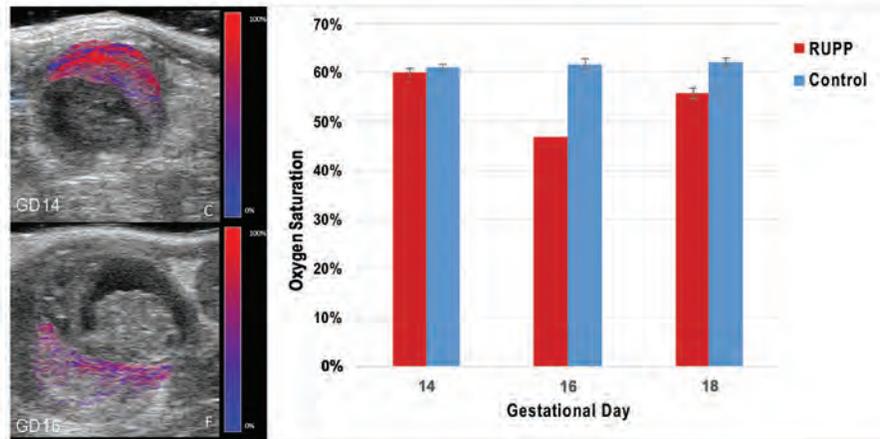


Figure 2

of placental oxygenation,” SPIE Photonics West, San Francisco, January 30, 2017.

**indicates invited presentation*

Funding Proposals:

Pilot data was used to support two R21 submissions in February and March of 2017. An NIH R01 proposal is in preparation, which will combine photoacoustic imaging of placental ischemia, reactive oxygen species, and placental vascularization. The preliminary data will be essential for demonstrating our hypothesis in specific aim 1 of this proposal, which seeks to demonstrate changes in placental ischemia longitudinally in the RUPP rat.

Respectfully submitted,
 Carolyn Bayer, PhD
 Assistant Professor of Biomedical Engineering
 Department of Biomedical Engineering

School of Science and Engineering

Beller, Thomas

School of Liberal Arts

Department of English

COURSE/TEACHING SUPPORT

Narrating the Environment: Lead

The Donor Name Grant I received in support of course development work for my class, Narrating the Environment: Lead, has provided major benefits to me as both a teacher and writer.

The grant provided me with a momentum to develop communications with the top figures in the field I was researching. These include Gerald Markowitz at John Jay College of Criminal Justice, David Rosner at the Mailman School for Public Health at Columbia University, Bill Kovarik at Radford University and Marc Edwards at Virginia Tech.

The grant afforded me time and resources to work on developing a class that took me far outside my comfort zone as a writer and a teacher. It endorsed my exploration of these new connections and resonances between my field of creative nonfiction and the worlds of science, medicine, and epidemiology.

I am deeply grateful for the support, both individually, and as a member of the Tulane faculty.

My work in developing the course was paralleled by work on a proposal for a far-reaching and lengthy piece about lead in New Orleans which has now been commissioned by the prestigious Places Journal, that builds on my earlier article on the same subject in the New York Times.

The course was offered in the spring of 2017. Seven students enrolled in the class, six English majors and one environmental studies major. I took them on numerous field trips to visit local scholars such as Adrienne Katner and Howard Mielke, and I hosted a speaker series in connection with the course, with the help of a Duren Professorship, and that brought in Nathaniel Rich (*Odds Against Tomorrow*) and Donovan Hohn, (*Moby Duck*).

The students were highly engaged and seemed to get a lot out of the course, to judge from the evaluations which rated the course at the highest level in nearly every category across the board.

I plan on offering the course again.

Respectfully submitted,
Thomas Beller
Associate Professor
Department of English
School of Liberal Arts

Blake, Diane A.

School of Medicine
Department of Biochemistry
and Molecular Biology

OTHER

Traveling Trunks for STEM Outreach to the New Orleans K-12 Community

Project Justification:

In a thriving community, every child should have

access to a quality education, which is key to finding meaningful work that pays a living wage. Careers in STEM disciplines have the potential to provide fulfilling and well-paid jobs. Unfortunately, many schools in New Orleans and elsewhere in Louisiana still lack adequate resources to educate their students for the hundreds of STEM positions that remain vacant in the New Orleans area. The Traveling Trunk project will engage and excite young students (grades 2-6) about science and technology. The project will also enhance existing Tulane STEM outreach programs designed for older students (grades 5-12) by increasing the number of students in the STEM pipeline.

Progress to Date:

Reagents and disposable supplies (beakers, stirrers, tips, etc.,) were ordered. I assembled a prototype Traveling Trunk (minus the video) that was tested by a group of graduate students from the Biomedical Sciences Student Association (BMSSA, a student organization at the School of Medicine). The BMSSA students presented the slime demonstration at Pauline Elementary at the school's Family Involvement Night "Winter Fest" on Tuesday, December 20, 2016, for ~ 40 students. According to the BMSSA, their demonstration was a great success; they ran out of reagents before they ran out of kids who wanted to participate.

I contacted Dr. Liz Abboud, a Professor of Practice in the Department of Cell and Molecular Biology on the uptown campus. Dr. Abboud agreed to assist me in identifying a small laboratory space on the uptown campus where student volunteers could make the slime reagents necessary to replenish the Traveling Trunks, under Dr. Abboud's supervision. She also agreed to advertise this outreach opportunity to the undergraduate students in the Cell and Molecular Biology curriculum. Dr. Abboud and I are discussing the equipment she will need, and it will be purchased and installed uptown during the next six months.

I met with Gary Rucker, Senior Professor of Practice, Department of Theater and Dance, on August 22, 2016, to discuss the video production. After

a brief meeting with his videographer, he asked me to develop a script for a female actress (who would explain the presentation) and a group of children (who would ask/answer questions) as a mechanism for moving the presentation forward. Script development was more challenging than I anticipated, and it is still in progress. I intend to have the video completed by the end of 2017.

Respectfully submitted,
Diane Blake, PhD
Professor of Biochemistry, Principal Investigator
Department of Biochemistry and Molecular Biology
School of Medicine

Blum, Michael J.

School of Science and Engineering
Department of Ecology
and Evolutionary Biology

RESEARCH SUPPORT

Eco-evolutionary dynamics of coastal marsh responses to climate change

I proposed to undertake exploratory studies of heritable growth responses of the brackish marsh sedge *Schoenoplectus americanus* to climate stressors (salinity, inundation, and carbon availability) and to examine the evolution of stressor responses by “resurrecting” seeds from a century-long soil seed bank. Funding from the Donor Name faculty enhancement program has enabled me to make substantive progress towards achieving these goals over the past year.

I used Donor Name funding to collect soil cores spanning inundation and salinity gradients (and a temporal atmospheric CO₂ gradient) to recover seeds for germination and stressor-response experiments. In March 2016, I worked with my doctoral student and collaborators to sample 10 soil cores from

Kirkpatrick Marsh in Edgewater, Maryland. All of the cores have subsequently been processed and sieved for seeds. Additionally, in May 2017 another 20 soil cores were collected at Blackwater National Wildlife Refuge on the eastern shore of the Chesapeake Bay for comparison to the western shore Kirkpatrick cores. Work is now underway to process the Blackwater cores for seeds.

I am working with my doctoral student to build experimental cohorts of “resurrected” plants by cloning all plants that were germinated from buried (and modern) seeds. This involved conducting over 17 germination assays in environmental chambers, which resulted in germination of over 200 seeds estimated to be 10 – 80 years old. Cohorts encompassing nearly 30 “resurrected” plants are now being grown in a greenhouse, which is a key first step towards clonal propagation and experimentation.

Having successfully completed all initial preparatory stages, my research team is now poised to begin common garden experiments that will focus on assessing responses of depth cohorts to contrasting salinity and inundation conditions. We are also ready to genotype resurrected cohorts to reconstruct independent records of genetic shifts over time.

Finally, I was able to leverage the Donor Name grant to secure funding from the National Science Foundation (NSF) in January 2017. Combined NSF and Donor Name support will enable my team to undertake more comprehensive experiments and genomic analysis of evolutionary adaptation to climate change since the industrial revolution.

Respectfully submitted,
Michael J. Blum, PhD
Director, The ByWater Institute
Eugenie Schwartz Professor of River
and Coastal Studies
Associate Professor
Department of Ecology and Evolutionary Biology
School of Science and Engineering

Brumfield, William

School of Liberal Arts
Department of German
and Slavic Languages

RESEARCH SUPPORT

Greetings from deepest Russia. My Donor Name Grant project on architecture in Siberia is most certainly underway and even flourishing. I have not yet spent the grant money because of the changing conditions and my photographic needs. These questions need to be resolved carefully before the funds are spent.

In the meantime, I have two important items to report:

1. I have signed a contract with Oxford University Press for a book on the architecture of Siberia and have already submitted over half of the manuscript to the senior editor.
2. Here is the link to my extensive article (in English) devoted to an aspect of Siberian architecture and published in a prestigious Siberian scholarly journal (the link might take several seconds to download): http://elib.sfu-kras.ru/bitstream/handle/2311/32507/01_Brumfield.pdf. This article is a preliminary version of one of the book's chapters.

Respectfully submitted,
William Brumfield, PhD
Professor of Slavic Studies
Department of Germanic and Slavic Studies
School of Liberal Arts

Bunnell, Bruce A.

School of Medicine
Department of Pharmacology

RESEARCH SUPPORT

Research Progress:

As a result of the Donor Name funding, our team has been able to generate a total of three new patient-derived xenograft (PDX) tumors from African American and Caucasian patients treated at Tulane and/or University Medical Center. Our goal was to generate a minimum of 5-6 clinical primary BC breast tumor samples for adequate power significance in future NIH grant applications and we have accomplished that goal.

Currently, we are assessing the impact of ASCs on the PDX tumors by direct implantation into cleared mammary fat pads of female NOD/SCID mice in a Matrigel® plug. Controls for this assay are Matrigel® plugs coated with InASCs (3 donors; BMI ≤ 25), and Matrigel® plugs alone implanted in conjunction with the primary tumor samples. Analysis of both tumor volume and metastatic burden indicate that the cells from obese donors result in significant increases in both tumorigenesis and metastasis in vivo. The tumor growth curves measured over time revealed significant differences between InASC and obASC donors.

We are in the process of assessing the expression of EMT markers in the tumors by PCR and in situ hybridization.

Funding Progress:

This Donor Name Grant is funding both research and the acquisition of research materials, which has permitted us to generate essential preliminary data with primary human BC samples (patient-derived xenograft samples). It is our goal to submit an NIH/NCI R01 grant application in the Fall of 2017 or Spring of 2018. This grant will focus on the interplay between obese ASCs and the tumorigenicity of breast cancer. Each of the grant applications resulting from these Pilot studies will be submitted

as Multi-PI grants with Drs. Collins-Burow and Bunnell serving as the PIs.

Respectfully submitted,
Bruce Bunnell, PhD
Professor
Director of the Tulane Center for Gene Therapy
Department of Pharmacology
School of Medicine

Burin, Alexander L.

School of Science and Engineering
Department of Chemistry

RESEARCH BRIDGE FUNDING

With this report, I wish to deeply acknowledge you for supporting the research of my graduate student, Andrii Maksymov, during summer 2016. These funds were used to pay him summer research support.

During the summer he worked very hard on a project dedicated to the analytical and numerical investigation of a many-body localization in intersecting spin systems. He discovered the number of universal behaviors in the spin-spin time-dependent correlation function in a fully chaotic case. He interpreted his own numerical foundations using the Wigner Dyson theory of random matrix. This theory predicts the universal correlation functions of the density of states which he used to explain the observations.

This work will be used to submit the paper for consideration to one of the popular peer-reviewed journals like the Physical Review or the Journal of Chemical Physics. Also partially based on his results, I submitted the preliminary application (white paper) to the Army Research Office for the Quantum Computing Program. This application is presently under consideration.

Maksymov keeps working on the project and hopefully will dedicate his PhD thesis to the many-body localization and continue his career in science.

It is hard to overestimate the giant positive impact of the support from the Donor Name Fund. Thank you again for supporting my group's research during this period.

Respectfully submitted,
Alex Burin, PhD
Department of Chemistry
School of Science and Engineering

Burin, Alexander L.

School of Science and Engineering
Department of Chemistry

RESEARCH CONFERENCE TRAVEL

With this report, I wish to deeply acknowledge the support of my travel to attend the international workshop "Tunneling Two-Level Systems and Superconducting Qubits" which took place in Sde Boker, Israel, from September 7th to 13th. In this workshop, I served as the invited speaker and the member of the scientific committee. The support was used to cover the travel expenses to Israel.

The purpose of this workshop was to bring together experts in the field of superconducting qubits and in the field of tunneling two-level systems in amorphous solids at this time of synergy between the two fields, and to exchange knowledge and ideas towards the advance of fundamental understanding and in view of possible future applications in quantum computation and material science. The world-leading scientists in the area of superconducting qubits were there including John Martinis (University of California in Santa Barbara and Google), Robert McDermott (University of Wisconsin, Madison), Nadav Katz (Hebrew University of Israel, Jerusalem), Alexei Ustinov (Karlsruhe



Institute of Technology, Karlsruhe, Germany) and many others.

The topics considered in the workshop are very significant both fundamentally and practically. Indeed small superconducting devices have provided a promising direction towards the building of a quantum computer. A crucial ingredient of superconducting qubit quality is their relaxation and decoherence times. Tunneling atomic size defects residing in both the aluminum oxide amorphous layer constituting the barrier in the Josephson junction and within other interfaces are responsible for a significant part in superconducting qubit noise, relaxation, and decoherence - which is the area of my strong expertise.

During the workshop, I got the chance to present my own results and communicate and exchange ideas with world-leading specialists in my areas of expertise. This should help me to receive external funding (an application for related funding has been recently submitted to the Army Research Office Program Manager) establish new collaborations with the scientist in Livermore National Laboratory (Sergei Pereverzev), and strengthen existing collaborations (with Yaniv Rozen, Nadav Katz, Moshe Shechter, Christian Enss). All this should remarkably increase the competitiveness of my group when we seek external funding.

Thank you again for supporting my travel.

Respectfully submitted,

Alex Burin, PhD

Department of Chemistry

School of Science and Engineering

Burnette, Catherine E.

School of Social Work
Department of Social Work

RESEARCH SUPPORT

Building Community-Based Infrastructures to Promote Resilience and Prevent Alcohol Abuse and Family Violence among Indigenous Peoples

My Donor Name Faculty research grant supported the integral research (a) to develop sustainable community-based infrastructures to promote resilience and prevent alcohol abuse and violence through the use of community-based participatory research (CBPR) and (b) to train Indigenous (i.e. Native American or American Indian) community health representatives (CHR) to facilitate a prevention intervention for substance abuse and family violence adapted for Indigenous peoples of the Southeast: the Mississippi Band of Choctaw Indians (MBCI) and the United Houma Nation (UHN) of Louisiana.

Donor Name funding enabled me to exceed the funding goals by applying for an R01 grant from the National Institutes of Health (PAR-14-260, Interventions for Health Promotion and Disease Prevention in Native American Populations), entitled, "The efficacy of a culturally-specific family prevention program for alcohol abuse/violence (RO1AA025599)." This grant for a total of \$1,250,000 was first submitted in May of 2016, happily, received an impact score of 40 and made the 31st percentile. I recently completed the resubmission of this grant on May 12, 2017, in the amount of \$3,119,293, given it is a resubmission of a strong application. Funding from this grant looks promising. With the support of the Donor Name research grant, I have been able to rise toward the next promising level of federal funding. Along with the application for federal grants and the mentorship award, since receiving the award, I have presented at seven peer-reviewed national and international conferences and published eight peer-reviewed manuscripts in the year 2016 (I am at a total of 28

peer-reviewed publications (published or in press).

The central hypothesis of this research program was determining whether an Indigenous cultural adaptation of an efficacious, family-focused, “Celebrating Families!” prevention program, which is facilitated by Indigenous Community Health Representatives (CHR), will create sustainable decreases in alcohol abuse and violence/conflict in families while promoting resilience. To enable cultural adaptation in these communities, this funding provided the critical support to build critical, community-based infrastructure. This included recruiting potential community advisory board members (CAB) and trained CHRs. The funding was critical in proposing the RO1 grant to support cultural adaptation and evaluation, creating culturally relevant and efficacious prevention programs for tribes of the Southeast. This research funding facilitated the critical intermediary step between preliminary ethnographic research and a large scale intervention adaptation.

Consistent with the purpose of the funding, the research team was both multidisciplinary, drawing colleagues from psychology, social work, and public health as well as student research assistants.

The focus of the current research was to create CABs and train CHRs who will later adapt and facilitate the prevention intervention. CABs will include key MBCI persons, including professionals, elders, community members, and key insiders, who, in partnership with the academic research team, will adapt the prevention program in future research. From preliminary research, an extensive list of partners who can be members of the CABs or serve as CHRs was compiled. Moreover, during dissemination of results from preliminary research (e.g., presentations at tribal community meetings, providing education and training for professional and community members, and speaking directly with participants of the preliminary research), potential partners were identified to assess their willingness and interest in serving in the roles of CAB members or as CHRs. A list of interested participants has been

created. Because professionals, adults, elders, and youth were all included in the preliminary research, and they indicated whether they would like to be involved in future research activities, this built upon, solidified, and formalized these existing partnerships.

This funding support also enabled me to participate in training from the reputable program, White Bison, which has culturally adapted the evidenced-based, Celebrating Families! program, which is a family-focused alcohol abuse and family violence prevention for Indigenous populations. I participated in the formalized, three-day training for the CHRs who will facilitate the intervention in future research. This foundational work will be the springboard for federally funded cultural adaptation. In closing, and in accordance with the proposed budget, the funding provided the instrumental support needed to apply for the R01 grant, participate in the training, and travel to the MBCI and UHN communities to disseminate findings and compile lists of the CAB and CHRs. All of the budget went toward these three activities, with salary support to support the application of the grants and dissemination of research.

Respectfully submitted
Catherine Burnette, PhD, LMSW
Assistant Professor
Department of Social Work
School of Social Work

Campanella, Richard

School of Architecture

Department of Architecture

RESEARCH SUPPORT

Digitizing Rare Mid-Century New Orleans Photographs

This final report describes progress on my project, “Digitizing Rare Mid-Century New Orleans

Photographs,” resulting from generous funding provided by the Donor Name Faculty Grant in June 2016. It also provides budgetary details and explains upcoming work.

In the spring of 2016, I proposed to the Donor Name Faculty Grant Program to professionally scan a collection of original negatives of New Orleans scenes dating from the 1920s through 1960s. The photographs had been captured by New Orleans Public Service Inc. (NOPSI, the predecessor of Entergy) to document the public utility’s work around the city, and had been stored away for decades and scheduled for disposal.



Magazine Street, circa 1950.

Entergy donated them to me in 2014, after which I proceeded to inspect every one of the tens of thousands of images, sorting them by content and value. The photographs depict the removal of streetcar lines, street improvements, downtown transformation and suburbanization, the construction of now-iconic buildings, Mardi Gras parades, and dramatic aerial vistas, not to mention Jim Crow segregation on streetcars. Among the most striking scenes were taken in the dead of night, to showcase NOPSI’s streetlamps.

During the summer of 2016, I “downselected” the collection to the very best thousand (1,111 to be precise, including 5x7 negatives, 4x5 negatives, 6cmx7cm negatives, and diapositive slides) and worked with Moldaner’s Digital Imaging and Archiving Service, 3801 Canal Street in New Orleans, to determine the best method and resolution of digital scanning. I negotiated a much lower cost per photo than originally expected. The final digital

scans are extremely high in quality. Particularly, the ethereal beauty of the nocturnal scenes led me to consider a larger and more permanent project to bring them to public attention.

The idea I devised was to publish a book of nocturnal street scenes of New Orleans, along with essays contemplating the cultural significance of night and nightfall in New Orleans. These would not be ordinary night shots of famous buildings and reveling crowds, but rather of empty streetscapes in obscure areas. Recognizing that the sixty or so nighttime scenes of the NOPSI collection were probably not enough for a book, I decided to supplement them with an equal number of modern nocturnal scenes taken under the same conditions. I contacted a colleague of mine, photographer and Propeller program manager Virginia (Ginny) Hanusik, to gauge her interest. Ginny and I had previously co-authored a photo essay in *Places Journal*, and I had been impressed with her photographic acumen. She too found the nighttime scenes compelling and agreed on the value of a book featuring them. After many discussions, we decided to co-author such a book, and over the course of 2017, she will capture 50 nighttime scenes throughout the city. Ginny is wrapping up this effort, and I am very pleased with the results to date. Once all photographs are in my possession, I will write the book’s essays and captions and submit the draft manuscript to LSU Press. I should note I am the author of ten books on New Orleans, as well as nearly 200 articles, and have a long-standing relationship with LSU Press; I am reasonably confident they will accept it. Other funds will be used to acquire additional archival nighttime photographs of New Orleans, and cover other expenses in completing the research and finalizing the book.

The book, as yet untitled, will be a priority project of mine throughout 2017 and 2018 and, if all goes smoothly as I expect it will, I envision a release in 2019. Needless to say, the Donor Name Faculty Grant will be acknowledged and effusively thanked in the introduction, as this project would have been impossible without it.



Photograph by Ginny Hanusik



I would also like to thank Robin Stead, financial manager of the Tulane School of Architecture, for her support in managing the account.

I conclude by sincerely thanking Donor Name and family for their

incredible generosity, as well as the Tulane evaluators and administrators who awarded my proposal and stewarded the grant.

Respectfully submitted,
Richard Campanella, MS
Senior Professor of Practice
Department of Architecture
School of Architecture

Castro, Arachu

School of Public Health
and Tropical Medicine
Department of Global Community
Health and Behavioral Sciences

INTERDISCIPLINARY FACULTY WORKGROUP

Health Equity and the Environment in Latin America and the Caribbean Interdisciplinary Working Group

Thanks to the Donor Name Faculty Grant, I was able to create a faculty working group, which includes: Colin Crawford (Law School), Ludovico Feoli (Center for Interamerican Policy and Research), Amalia Leguizamón (Department of Sociology), Maureen Lichtveld (Department of Environmental Health), and Sunshine Van Bael (Department of Ecology and Evolutionary Biology). It also includes two doctoral students: Cecilia Alcalá (Department of Environmental Health) and Miranda Stramel

(Stone Center for Latin American Studies). We have discussed the central themes of our upcoming book on “Health Equity and the Environment in Latin America,” and authors are currently working on their own drafts. We will be hiring research assistants to work on the project in the fall.

Respectfully submitted,
Arachu Castro, PhD, MPH
Samuel Z. Stone Endowed Chair
of Public Health in Latin America
Director of the Collaborative Group for Health
Equity in Latin America (CHELA)
Department of Global Community Health
and Behavioral Sciences
School of Public Health and Tropical Medicine

Castro, Arachu

School of Public Health
and Tropical Medicine
Department of Global Community
Health and Behavioral Sciences

RESEARCH SUPPORT

Examining nutrition, toxic stress, and cognitive development among children and adolescents in the Dominican Republic

In July 2016, thanks to the Donor Name Faculty Grant, I started a new research project on the impact of toxic stress on cognitive development among children in the Dominican Republic. I traveled to Santo Domingo, the capital city, and met with Laura Sánchez, a neuroscientist and assistant professor at the Universidad Iberoamericana (UNIBE) in Santo Domingo, whom I invited to serve as co-investigator. I also met with representatives from two community-based organizations—Centro Bonó and Pastoral Materno Infantil—and from the governmental National Institute for Early Childhood Development, to establish alliances in support of

the project. Soon after, one of my Tulane graduate students, Paul Schaettle, moved to Santo Domingo to help set up the project.

We first tested an instrument to assess cognitive development in 46 children under the age of 2, described in “Adaptation and validation of the Malawi Development Assessment Tool to assess cognitive development in the Dominican Republic” (manuscript for publication in progress). We also conducted a thorough quantitative analysis of the two most recent household surveys in the country, described in “Childrearing and socioeconomic factors associated with cognitive delay among children in the Dominican Republic: Quantitative analysis of household surveys” (manuscript for publication in progress). In both manuscripts, we will acknowledge the Donor Name Faculty Grant as a source of support.

The research project—now named “1,000 Days Dominican Republic (1000 DRD)”—is now a formal collaboration between Tulane University and UNIBE, in association with the other three institutions. I have assembled a multidisciplinary team of collaborators that include experts in neuroscience, toxic stress, medicine, and biostatistics, which add to my own expertise. We are currently drafting a large research proposal that I plan to submit to the National Institutes of Health. Both the results from the instrument we tested and the quantitative analysis of the household surveys have been instrumental in allowing us to prepare such a large grant proposal.

I spent all the funding for the stipend for Paul Schaettle and paid the additional costs with the income from my endowed chair.

Respectfully submitted,
Arachu Castro, PhD, MPH
Samuel Z. Stone Endowed Chair
of Public Health in Latin America
Director of the Collaborative Group for Health
Equity in Latin America (CHELA)
Department of Global Community Health
and Behavioral Sciences
School of Public Health and Tropical Medicine

Chakraborti, Chayan

School of Medicine
Department of Medicine
General Internal

RESEARCH CONFERENCE TRAVEL

Our project involved creating a novel system for tracking student professionalism. Most existing professionalism tracking systems focus on cataloging instances of unprofessional behaviors, which, while important, oversimplifies the challenge. Under this kind of system, the presumption is that most learners are professional until proven otherwise through a documented lapse. Medical schools and other professional training schools (business, law, etc.) instruct a profession of which a code of ethics is an inherent part. Thus this approach is insufficient.

We concede that most learners in higher education are generally professional, but they have yet to grasp the tenets of the profession. This is the value-added learning of entering a professional school. Thus, what is crucially important is less the documentation of individual lapses, and more the growth from “professionalism” as a layperson to the code of conduct implicit to within entering the profession. It is precisely this progression that this tracking system strives to capture.

The results of this project had been accepted to the annual meeting of the International Association of Medical Science Educators (IAMSE). The generosity of the Donor Name Faculty Grants allowed one of the study authors to present the results at the IAMSE annual conference in Amsterdam, the Netherlands (June 2016). We received very positive feedback from our European colleagues, and the project ultimately led to a publication in the journal *Medical Science Educator*:

Weissbecker, K., Gibson, J., Chakraborti, C. (2016). Tracking Medical Professionalism Across the Educational Continuum. *Medical Science Educator*, 26(4), 733-736.
DOI: 10.1007/s40670-016-0285-0

We would like to thank the Donor Name Family Foundation for their generous support of our academic and scholarly endeavors.

Respectfully submitted,
Chayan Chakraborti, MD
Assistant Professor of Medicine
Director, Foundation in Medicine
Department of General Internal Medicine
and Geriatrics
School of Medicine

Clum, Gretchen A.

School of Public Health
and Tropical Medicine
Department of Global Community
Health and Behavioral Sciences

RESEARCH SUPPORT

CALM: Cultivating Mindfulness and Life Skills in College Women

The goal of CALM was to recruit female undergraduate students with a history of sexual assault and provide programming to increase coping strategies and resilience and prevent new incidents of sexual assault. We have recruited in two waves over the fall and spring semesters. We recruited a total of 54 female undergraduates into the CALM study. Everyone was offered either the intervention or control as determined by random assignment to study group. The intervention included four sessions of mindfulness training, a bystander training, and a holistic sexuality session. The first wave of participants completed the study, with 25 out of 30 in wave 1 completing the final 4-month follow-up assessment. The second wave was completed in July and August. We expect analyses to be conducted over the fall semester, with at least one publication to result from the study. If results are promising and we can demonstrate an impact on coping skills and

prevent sexual assault in this vulnerable population, we will apply for additional grant funding to test the intervention on a wider scale.

Funds were used to support two doctoral students in the Department of Global Community Health and Behavioral Sciences as research assistants, and the majority of funds went to gift cards to incentivize completion of baseline and follow up questionnaires for participants.

Respectfully submitted,
Gretchen Clum, PhD
Associate Professor
Department of Global Community Health
and Behavioral Sciences
School of Public Health and Tropical Medicine

Cohen, Michael R.

School of Liberal Arts
Department of Jewish Studies

RESEARCH SUPPORT

Michael R. Cohen is most appreciative of the generous funding that you have provided, which has allowed him to complete his manuscript, *Cotton Capitalists: American Jewish Entrepreneurship in the Reconstruction Era*. The book will be published in late 2017 by New York University Press.

Cotton Capitalists argues that Jews arrived in significant numbers to the Gulf South during the reconstruction era and that their success was predicated on credit. But extending credit was risky business in an era before scientific credit reporting. To mitigate risk, entrepreneurs relied on trust; indeed, John Pierpont “J. P.” Morgan considered trust “the fundamental basis of business.” Credit reporters, however, did not trust Jews. They were suspicious of Jewish immigrants and often advised against extending credit to them. In need of the trust necessary to acquire credit and conduct business,

Jewish merchants turned to each other. For them, trust generally boiled down to shared ethnicity. Jews, much like other ethnic minorities, trusted one another more than they trusted strangers with whom they had no connections. Such was the case for the prominent Jewish banking house of Lehman Brothers, which relied on ethnic trust networks to conduct business, bringing European investment to the scores of Jewish merchants who fanned out across the cotton-producing regions of the Gulf South. Leveraging these ethnic networks, Jewish merchants created a niche economy in the nation’s most important industry—cotton. In so doing, they positioned themselves at the forefront of global capitalist expansion for much of the second half of the nineteenth century.

Cotton Capitalists argues that exploring the Jewish niche in the cotton industry reveals the myriad ways in which economic forces defined the contours of the American Jewish experience. The golden age for American Jewry that grew out of the cotton industry dictated the ways in which Jews shaped, and were shaped by, the communities in which they lived. But *Cotton Capitalists* is more than a book about Jews. The story of these American Jewish entrepreneurs also acts as a case study to explore the role of ethnicity in the development of global capitalism more broadly. Ethnic minorities frequently stood at the forefront of entrepreneurship, clustering in narrow sectors of the economy. Yet despite the universality of these minority economic niches, very little scholarship has asked how they emerge and function. Cohen’s book, at its core, asks how such niche economies come to be.

Cohen’s book would not have been possible without generous research support, which permitted him to travel to archives across the country to discover and collect the materials that undergird his book. In addition to Harvard Business School’s Baker Library, Cohen also conducted research at the California Historical Society in San Francisco, the American Jewish Archives in Cincinnati, the New York Historical Society and the Columbia University Rare Book and Manuscript Library in New York, and

at the Library of Congress and National Archives in Washington. Generous funding has also allowed Cohen to include historic photographs and GIS maps in his book. It also allowed Cohen to travel to conferences across the globe, where he received the valuable feedback from his colleagues that shaped the book. He presented his research at conferences in Cape Town, South Africa; Sydney, Australia; and Natchez, Mississippi.

Cohen's research has now helped him to assume a leading role in the field of Jewish Studies. He now serves as chair of the Association for Jewish Studies' director's group, as a board member and conference co-chair for the Southern Jewish Historical Society, as a judge for a major book award, and he also serves on two national fellowship committees. At Tulane, he chaired the Tulane School of Liberal Arts' Committee on Undergraduate Academic Requirements, and beginning with the upcoming academic year, he will serve as chair of the Jewish Studies department as well as a member of the school of liberal arts' nominating committee. Cohen was also a 2016-17 recipient of a prestigious Award to Louisiana Artists and Scholars (ATLAS) grant from the Louisiana Board of Regents.

Cohen sincerely thanks you for your support.

Respectfully submitted,
 Brian Horowitz, PhD
 Sizeler Family Chair of Judaic Studies
 Department of Jewish Studies
 School of Liberal Arts

Cole, Teresa

School of Liberal Arts
 Department of Art

RESEARCH SUPPORT

Last June I was awarded a Donor Name Faculty Grant to conduct research in Moorish Spain at the Victoria and Albert Museum in London.

Unfortunately, due to an illness in my immediate family, I have been unable to travel over the past 12 months. I had hoped that I could fit this research trip in once the semester ended in May and therefore be able to fulfill the conditions of this award by the June 30, 2017, deadline.

However, now it looks as if my partner will not be finished with his chemotherapy until late August 2017. I am therefore requesting an extension on the conditions of this grant for an additional year.

Thank you for your consideration during this difficult time in my life.

Respectfully submitted,
 Teresa Cole, MFA
 Ellsworth Woodward Professor in Art
 Newcomb Art Department
 School of Liberal Arts

Colombo, Paul Joseph

School of Science and Engineering
 Department of Psychology

RESEARCH SUPPORT

Effects of Music-based Mentoring on Cognitive and Emotional Development in Children

In the uniquely musical city of New Orleans, members of our laboratory study how music-based mentoring shapes the brain, and how these brain changes impact cognitive and social development

among children from low-income households. I am pleased to report that the Donor Name Faculty Grant provided the resources to successfully initiate a longitudinal research project in collaboration with community partners Make Music NOLA and the Roots of Music.

We hypothesized that music-based mentoring enhances self-efficacy and executive functions, including inhibitory control, and decreases neurobiological markers of stress reactivity. With funds from the grant, we were able to purchase access to computer-generated tests of executive function with nationally validated norms. We also purchased assay kits for analyzing biological markers of stress reactivity and immune function, as chronic stress is known to suppress the immune system.

Our preliminary results of executive functions suggest that two or more years of musical training enhances inhibitory control and higher cognitive functions, such as problem-solving, but may not enhance specific domains of executive function, such as working memory. A larger sample size will be necessary before these preliminary results can be considered reliable. As this is a longitudinal study, we have collected and stored, but not analyzed, the first biomarker samples. Samples collected from multiple time points will be analyzed at the same time to prevent confounds of multiple analyses. Overall, we have made significant progress on a longitudinal research project that we believe will have an important impact on children in New Orleans and nationwide. We have collected sufficient pilot and preliminary data to apply for federal funding, and we are currently preparing a proposal for submission to the National Institute on Minority Health and Health Disparities.

It is difficult to find support for new projects, particularly to study interventions with children in the community, but as Fredrick Douglass said: "It is easier to build strong children than to repair broken adults." With this in mind, I would like to express my gratitude to Donor Name for your support.

For more information on this research project, please see the following: <https://www.youtube.com/watch?v=Agcy2eNhATw&feature=youtu.be>

Respectfully submitted,
Paul Colombo, PhD
Associate Professor
Department of Psychology and Brain Institute
School of Science and Engineering

Crawford, Colin

School of Law
Payson Institute

COURSE/TEACHING SUPPORT

The award of a Donor Name Grant has been career-changing for me. I cannot thank Tulane and Donor Name enough for the extraordinary opportunity it produced.

First, in November 2016, I hosted at Tulane a workshop of international experts on the history and policy of urbanization and democracy with the funding. Attendees included experts from leading US universities (including people from the University of Chicago and Georgetown University, for example) and experts from leading international institutions (for instance, UN-Habitat). The participants also had international experience and included an expert on democracy theory from Bogotá, Colombia and a leading Brazilian urbanist.

The workshop attracted widespread interest from across the Tulane faculty. As a result of that experience, I am preparing a book proposal on the history and policy of the "right to the city" concept. It should be completed this summer and sent to the workshop participants for their input and indication of how they wish to be involved (i.e., what their chapter contribution will be). Thus, the LBC grant should result in a book publication within a year or two.

The work also jump-started the principal focus of my work while on sabbatical in Madrid, Spain in the spring 2017 semester. On the basis of the workshop results, I have produced an article in manuscript entitled “Access to Justice for the Four Billion: Urban and Environmental Concerns.” I expect to submit it for publication in the August 2017 law review cycle. In addition, I have had the chance to refine my ideas in invited presentations at multiple venues, including a conference on access to justice at the University of the Andes in Bogotá in February, 2017, at the University of Barcelona Faculty of Law in April 2017, at the Universidad Carlos III de Madrid, at the Universidad de A Coruña (Galicia, Spain), and at an urbanism conference sponsored by Sciences Po (Paris) and Georgia State University in Marseille, France, all in June 2017.

Finally, an offshoot of this work is that I have been asked to contribute a chapter on the possible basis of collective and diffuse rights claims (how urban and environmental “rights” are often asserted) in classical liberal theory, for a book project edited by two leading legal theory scholars. I am currently researching that article and hope to have a draft during this academic year.

In short, the Donor Name grant has been, as I said at the outset, career-changing for me, both enhancing my productivity and opening new doors for research in cutting-edge areas. Let me conclude by repeating my very deep gratitude for the generous grant.

Respectfully submitted,
Colin Crawford, JD
Robert C. Cudd Professor of Law
Tulane Law School

Cropley, Lorelei Beleta

School of Public Health
and Tropical Medicine
Department of Global Community
Health and Behavioral Sciences

RESEARCH SUPPORT

I received travel funds to cover airfare and accommodations for travel to Latin America to investigate sites for summer internships in public health for Tulane School of Public Health Undergraduate program (SPHU) students. This is the report from those sites.

Background

The Tulane University School of Public Health “brand” at the graduate level has always been “global.” And while Tulane has an excellent study abroad program, undergraduate students in my freshman classes often inquire about the availability of short-term (less than a semester-long) international experiences. Since my arrival at Tulane, I started to seek out sites in less developed countries that offer experiences that result in both service hours and an independent public health research project. I developed an independent public health research course for short-term internships and worked with the Tulane Center for Public Service (CPS) to get approval for service hours.

Travel using initial one-time funding in the summer of 2013 resulted in opportunities for students in Merida, Mexico and Honduras and subsequent summer travel, funded entirely by myself, resulted in additional sites in Nicaragua, and Guatemala.

The outcomes have been impressive. For example, over the past three years, eight students applied for and received travel grants for a Chagas research internship in Merida, Mexico where they worked with the Autonomous University of Yucatan on the Chagas’ disease research and prevention initiatives. Several continued their work with Chagas in New Orleans, working both in the lab and in the community. This work resulted in conference

presentations and co-authorship of an article in a research publication.

Because of this initial success, these sites are at capacity, and there is a need to continue investigating additional sites for a summer internship, I requested travel funds to visit prospective sites and to visit students who are placed at these sites.

Travel to sites and programs

Ciudad Viejo and Chocóla, Guatemala:

Manos Abiertas, and Institute of Nutrition.

Centro de Parto Natural (Natural Birth Center) at Manos Abiertas uses interns who have the opportunity to participate in the full scope of clinical practice according to the North American midwifery model.



Pictured left to right: Daisy Furlong, SPHU student, Elizabeth Gleckler, SPHU faculty, myself, Sohini Deva, SPHU student, and Erica Fuller, SPHU student, in front of Manos Abiertas clinic, Ciudad Viejo.

Interns sit in at appointments and are asked to do routine tasks such as taking weight, blood pressure, and patient histories. They attend births under supervision. All interns propose a project that will benefit the clinic, such as grant writing or an educational project. During the summer of 2016, three undergraduate students completed internships at Manos Abiertas. Two students completed an Independent Study, and one completed her thesis based on their work at Manos Abiertas. The student who completed the thesis, Daisy Furlong, received a

Tulane 34 award, presented to graduates who have distinguished themselves throughout their collegiate life. A requirement for international independent studies is that students present their research in a colloquium, to a class, or in a thesis defense. This leads to additional recruitment of students; one student interned at Manos Abiertas during summer 2017. The experience also served as a reference for a student who applied to and successfully gained entry to an advanced maternal health program.

While in Guatemala, I also visited Chocóla, a site where an SPHU student had received MHIRT (Minority Health International Research) funding through another university to conduct research for ten weeks with Guatemala's Institute of Nutrition in Chocóla, Guatemala. While the project is an excellent research opportunity, the site is very remote, and the student became ill and had to return earlier than planned. The experience did assist the student getting accepted to Yale University for graduate school.

San Ignacio, Belize:

Center for Engaged Learning Abroad (CELA)

CELA delivers two-week field courses in health science using the country of Belize as a classroom, during May and June, and over the winter break. The field courses give students powerful field method experiences and expose them to areas of science they may want to pursue further. Students gain confidence in their capabilities. These courses carry three hours of credit, transferable back to home institutions with prior academic approval. They also create internships and support faculty-led group trips.

After my visit to CELA, five SPHU students have attended the two-week courses, one over the 2016 winter break and four in May 2017. The reports they created for the course will be used to meet their writing intensive. Two students went on to complete internships with health centers, and two plan to return to intern with the Vector Control lab in the Orange Walk District of Belize.



Pictured: (Left) Kayla Joi Callahan, SPHU student, in front of a chicken coop, part of the Institute of Nutrition project in Chocolá, Guatemala. (Right) Abby Mathews, SPHU student, Haley McKee, Clemson University student, and Alex Podell and Erin Goucher, SPHU students with Mayan Healer in Maya Centre to explore ethnomedicine and traditional healing practices and beliefs.

Summary

The sites investigated have great potential for SPHU students to experience public health in less developed countries. Students can earn service hours and complete independent public health research projects over the summer and winter breaks. These sites are an excellent option for students who want to go abroad but are unable to do so for an entire semester. This, in turn, expands the Tulane University School of Public Health's "global brand" to undergraduate students.

Respectfully submitted,
Lorelei Cropley, DrPH
Clinical Associate Professor
Department of Global Community Health
and Behavioral Sciences
School of Public Health and Tropical Medicine

Cunningham, Michael

School of Science and Engineering
Department of Psychology

RESEARCH SUPPORT

Teen Experiences Project: African American adolescents and resilience

Funds from the Donor Name Grant were used to complete data collection for my Teen Experiences Project. We have a final sample size of 365 high school students. We also did follow up interviews and focus groups with a subset of students. The funds also were used for summer salary support for two graduate students during the summer of 2017 and travel to two professional conferences. Several products were produced and are planned from the data.

Presentations

White, A., Bondy, Z., and Cunningham, M. (2017, October). Religious support as a buffer between negative youth experiences and challenging attitudes in African American adolescent males. Poster presentation at the Annual meeting of the Society for the Study of Human Development, Providence, RI.

Cunningham, M., and White, A. (2017, October). Religiosity, prosocial Values, and future expectations in high-achieving urban African American adolescents. Poster presentation at the Annual meeting of the Society for the Study of Human Development, Providence, RI.

Cunningham, M., and Gertler, D. (2017, August). The Association between Extracurricular activities and hypermasculine attitudes in Black males. Poster presentation at the American Psychological Association annual convention, Washington, DC.

Yates, A., Cunningham, M., and Seidman, M. (2017, August). Academic social support, prosocial behaviors and hypermasculine attitudes in African American males. Poster presentation at the American Psychological Association annual convention, Washington, DC.

Publications

Rious, J. B., and Cunningham, M. (in press). "Altruism as a buffer for antisocial behavior for African American adolescents exposed to community violence." *Journal of Community Psychology*.

Lee, X., W., and Cunningham, M. (2017). "Perceived teacher encouragement as buffer to substance use in urban African American adolescents: Implications for disconnected youth." *Education and Urban Society*, 1-26, doi: 10.1177/0013124517714848

Lindsey, M. A., Brown, D. R., and Cunningham, M. (2017). "Boys do(n't) cry: Addressing the Unmet mental health needs of African American boys." *Journal of Orthopsychiatry*, 87, 377-383. doi: 10.1037/ort0000198.

Cunningham, M., and White, A. (under review). "Young Adulthood and Health Disparities in African American males."

Cunningham, M., and White, A. (under review). "Religiosity, prosocial Values, and future expectations in high-achieving urban African American adolescents."

Cunningham, M., and Francois, S. (in progress). "Resilience and coping in adolescence. Research in Human Development."

Cunningham, M., Yates, A., and Mulser, R. (in progress). "African American Adolescents Speak: The Meaning of Racial Identity in the Relation between Individual Race-Related Stress and Depressive Symptoms." In Fitzgerald, H., Johnson, D. J., Qin, D. B., and Francisco A. Villarruel, F. A. (Eds.), *Handbook of Children and prejudice: Integrating research, practice and policy*. Springer Press: New York.

Student projects

PhD dissertations

Kristin Scott (2017). Racial identity as a buffer for African American adolescents.

Jennifer B. Rious (in progress). Altruistic prosocial behaviors and African American adolescents.

Xzania White Lee (in progress). Race-related stress and African American adolescents.

MS projects

Ashlee Yates (in progress). Social media as contributor development of racial identity

Undergraduate Honors Thesis

Gabriel Rodriquez (2017) Gender differences in racial identity as a buffer between exposure to race-related stressors and aggressive attitudes in African American adolescents

Dancy, Geoffrey T.

School of Liberal Arts
Department of Political Science

RESEARCH SUPPORT

The grant I was awarded through the Donor Name Faculty Grant in the spring of 2016 was

immensely valuable. I accomplished three tasks with this financial support. The first was to employ undergraduate researchers to assist in my research on the International Criminal Court. The second was to update a data project I manage, called the Transitional Justice Research Collaborative (TJRC). This project, which has a public website, is a clearinghouse for global data on human rights policies known as transitional justice: this includes prosecutions of human rights violators, truth commissions, reparations policies for victims of violence, and other justice sector reforms that follow periods of violent conflict. The third task I accomplished was to migrate the TJRC website to Tulane University.

Last summer, I used my Donor Name Grant to employ two undergraduate researchers, who helped me update data on human rights prosecutions for the continent of Africa. My previous data ended in the year 2010, making it of limited use. With the help of the paid undergraduates, I extended the data through the year 2015. Following this update, I was able to add evidence to an article called “Unintended Positive Complementarity: How ICC Investigations Increase Domestic Human Rights Prosecutions.” In this article, my co-author Florencia Montal and I argue that local rights activists in African countries are emboldened by International Criminal Court (ICC) investigations. The paper demonstrates that three times as many municipal criminal court cases for human rights violators take place in the wake of ICC investigations into a country’s practices, and the reason is that local activists put more pressure on the judiciary when the ICC is present.

With the support of my grant, I was able to travel to PluriCourts in Oslo, Norway to present this research. The keynote speaker, a former judge at the International Criminal Tribunal for Rwanda, made frequent reference to our work as evidence that global efforts to hold human rights criminals accountable have long-term impacts. Two journal articles have resulted from this work: one has been accepted for publication in April in *The American Journal of International Law*, the highest-ranked

peer-reviewed international law journal in the world. The other article, about the potential deterrent effects of the International Criminal Court, I wrote upon invitation from scholars at PluriCourts in Oslo. It will appear in the *International Criminal Law Review* later this year. I was also invited by the law school at UCLA to write an expert opinion on the use of data in assessing the work of the International Criminal Court. This note, which will soon be posted on a website called ICC Forum, will be read by practitioners, including the ICC’s head prosecutor Fatou Bensouda.

The second use for the grant money was to do conduct a global update of the Transitional Justice Research Collaborative data on human rights prosecutions. Last summer, we only studied countries in Africa. Two of my undergraduate researchers, Tess Martin and Elli Goldberg, also continued to work on updated data on all countries of the world from 2010 to 2015. These data are immensely useful. Though my research demonstrates that criminal prosecutions and truth commissions are associated with improved human rights protections over time, critical scholars already question the findings, arguing that the political will to hold human rights violators accountable is now subsiding. In other words, they question whether transitional justice is still under pursuit after 2010. To address this criticism, it is crucial that we examine the most recent information. While my researchers and I have been working diligently on this update, we are still not finished. I intend to use my own research funds to continue supporting their work until the job is done. I expect the update to be finished by the end of this year.

The third and final purpose of the grant money was website migration. The TJRC web-based dataset, available at www.transitionaljusticedata.com, was housed on servers at the University of Minnesota, my former university, and it needed to migrate to a new institution because no members of the project remain at UMN. I oversaw migration to Tulane servers, which will allow me to more easily maintain the website. I have also applied for a technology

intern from the Newcomb College Institute to improve the site's development and function. This will greatly assist my research in general to be in control of the TJRC website at my home institution, and I also think it will bring attention to Tulane. The United Nations, the US State Department, and many global human rights NGOs care about this data. Visitors to the website from all over the world will be made aware of Tulane and its research community.

I am very grateful to have received a Donor Name Faculty Grant. This support was instrumental in assisting me to complete two scholarly publications and continue work on three more in production. Furthermore, I think that the grant helped increase my scholarly profile. For an assistant professor, this kind of support is invaluable. Thank you.

Respectfully submitted,
Geoff Dancy, PhD
Assistant Professor
Department of Political Science
School of Liberal Arts

Daniele, Elena

School of Liberal Arts
Department of French and Italian

RESEARCH CONFERENCE TRAVEL

The Donor Name Faculty Grant was used to fund my attendance at the RSA (Renaissance Society of America) Annual Convention (March 30-April 1, 2017 - Chicago) where I presented my paper "Representations of Caribbean Flora and Fauna in the Italian Mercantile Correspondence on the Americas."

Paper Abstract:

Christopher Columbus's widely publicized descriptions of the wondrous qualities of Caribbean flora and fauna largely contributed to the creation of an enduring stereotype about a paradisiacal New

World. It is well known that a rich, pre-existent corpus of medieval literature about the "marvelous East" colored his writing; yet we tend to forget that Columbus was also writing in the Italian mercantile tradition – one concerned with the careful assessment of the objective qualities of goods for their commercial value on European markets. My contribution explored the co-existence of these seemingly contradictory elements in Columbus's writings and those of contemporary Italian observers of his first two trans-oceanic expeditions. Written firmly within a tradition that valued details and matter-of-fact information, Italian circular newsletters served as the basis for the creation of a conspicuous body of knowledge on exotic new lands, providing a fundamental counterpoint to the widespread rhetoric of the Edenic Paradise.

The research conducted to present this paper is directly connected to my teaching. In fall 2017, Pamela Segall, a student who is completing her coursework towards her minor in Italian, took an independent study with me on the same subject.

I thank you very much for the opportunity to participate in this conference.

Respectfully submitted,
Elena Daniele, PhD
Professor of Practice
Department of French and Italian
School of Liberal Arts

Dávila, Roxanne

School of Liberal Arts
Department of Spanish and Portuguese

COURSE/TEACHING SUPPORT

The funds granted to me by the Donor Name Faculty Grant program completely transformed Span 6010, a graduate-level teaching methodology course in the department of Spanish and Portuguese at Tulane.



The course prepares graduate students and adjunct instructors for teaching in the Basic Language Program in Spanish at Tulane. As stated in my initial proposal, there is tremendous responsibility placed on basic language instructors, as they often provide the first direct contact that incoming undergraduates have with faculty.

Funds were used to invite guest speakers to the Span 6010 class to discuss different approaches to teaching speaking, listening, reading, and writing at various levels.

Additionally, the guest speakers provided information giving corrective feedback, incorporating culture into the language classroom, and working with special-needs students. Not only did this provide valuable information to the enrolled graduate students and instructors, it also directly influenced my understanding of varied pedagogical approaches to teaching language in a growing global community where language embodies much more than just speaking. These guest lectures also influenced the pedagogical orientation program that I now run every fall semester for incoming instructors. In sum, the ideas put forth by the guest speakers in the Span 6010 shaped my vision for the Spanish Language Program at Tulane, and have informed my approach to training future language pedagogues.

The Donor Name funds also allowed me to develop a pedagogical mentorship collaboration for the Spanish Language Program. Each new graduate student or instructor is now paired with an experienced mentor when they start teaching in the Spanish Language Program. In addition to training mentors, I purchased three Ipads for the mentorship program to improve and facilitate pedagogical feedback for the new instructors. This was done through filming, data recording (for example, percentage of time the target language was used in the classroom), and by providing detailed written observations in PDF format (with the Apple Pencil). The iPads provided a sustainable way to keep the mentorship program active, as opposed to merely

having mentorship program be active while the Donor Name funds were available. The mentorship program and detailed observation feedback has dramatically improved the quality of language teaching in the Spanish Language Program.

Finally, the grant allowed me to devote the necessary time to completely revise the Span 6010 course.

The course now presents the students with an updated approach to language teaching, as well as a formal introduction to the praxis of communicative language teaching in varied contexts, targeting various skills.

Finally, I should mention that as a result of the work accomplished with the Donor Name Grant, I was promoted to the position of Director of the Basic Language Program. Being in this position now ensures that I will be able to continue to implement and sustain the pedagogical and program-changes made during the tenure of the grant.

Roxanne Dávila, PhD
Professor of Practice
Department of Spanish and Portuguese
School of Liberal Arts

Debord, Jessica M.

School of Medicine
Department of
Medicine General Internal

RESEARCH CONFERENCE TRAVEL

I received a Donor Name grant, which supported my participation in the Association of Pediatric Program Directors (APPD) Leadership in Education and Academic Development (LEAD) program. I successfully completed the program in April and presented my project comparing scores on board-style questions of our pediatric residents participating in our program's weekly interactive

learning half-day conferences with those of residents at different institutions participating in a traditional noon conference at the APPD Spring Meeting in Anaheim, California. We demonstrated that our residents performed better one month after the conferences than residents at the other institutions, and are currently looking at whether they retain that knowledge at a three-month follow-up. We hope to submit our results for publication in the fall.

Thanks for the opportunity!

Respectfully submitted,
 Jessica DeBord, MD, MPH
 Assistant Professor of Clinical Internal Medicine
 Pediatrics Director,
 Foundations in Medicine Program
 Associate Program Director,
 Tulane/Ochsner Pediatric Residency Program
 School of Medicine

Derryberry, Elizabeth

School of Science and Engineering
 Department of Ecology
 and Evolutionary Biology

RESEARCH SUPPORT

I am writing this report of my research activities made possible with your generous donation through the Donor Name Faculty Grant program.

I received a Donor Name award to collect gut microbial samples from white-crowned sparrows (*Zonotrichia leucophrys*) in wild populations of urban and rural birds in the San Francisco area. We aimed to characterize the gut microbiome of free-living birds along a night light gradient. Characterizing the natural variation in the gut microbiome across an urban-rural night light gradient provides a necessary foundation for our future captive studies on the effects of pollution on avian behavior. Further,

this research project was a collaboration between myself, first year PhD student Mae Berlow, and undergraduate Leanne Nordon. Under this project, Mae and Leanne were meant to gain experience in field methods as well as in preparing, sequencing, and analyzing microbial sequence data. We were able to make progress on both objectives.

1. We achieved our goal of collecting gut microbial samples from more than 120 individual birds across urban and rural locations with low and high light levels. In the process, we were also able to collect data on noise pollution levels in the field. Preliminary analyses of the data suggest that noise may be more important than light pollution in describing variation in gut microbial communities. Because of this, Mae designed and is implementing a captive experiment (ongoing as I write!) in which she is manipulating noise levels to measure effects on feeding behavior, stress hormone levels, and the gut microbial community. With this experiment, we are venturing into a new research area at the interface of gut microbiomes, behavior, and urban ecology. We're excited to see the outcomes of this experiment, which would not have been possible without funding from the Donor Name award program.
2. Regarding our second objective, Mae and Leanne gained experience catching, banding, handling, and swabbing birds as well as collecting data on levels of light and noise pollution on birds' territories. On returning from the field, Mae (with assistance from Leanne) extracted and sequenced microbial samples using next-generation sequencing techniques. We have high-quality sequence data in hand and are in the process of analyzing those data. Analyzing these data is taking longer than originally planned, so we have not yet submitted a manuscript, but we are making good progress. Further, Mae attended a workshop this summer that focused specifically on analyzing and interpreting these types of data.

We want to thank you again for this award.

Respectfully submitted,
Elizabeth P. Derryberry, PhD Assistant Professor
Department of Ecology and Evolutionary Biology
School of Science and Engineering

Drury, Stacy S.

School of Medicine
Department of Psychiatry
Child Psychiatry

360 DEGREE COURSE

360 Course entitled “A 360-Degree Perspective on Child Maltreatment: Exploring Pathways from Communities, to Families, to Children to Neurons that Inform Prevention”

This faculty award was provided to support the development and implementation of an innovative 360-degree course focused on adverse childhood experiences. For the first six months, the faculty met monthly to develop the innovative curriculum, recruit outside speakers, and ensure the appropriate administrative aspects of the course. The course curriculum integrated perspectives from developmental cognitive neuroscience, psychiatry, psychology, public health, social work, law, literature, history, and religion. In addition, the course included a range of community and lab-based experiential learning designed to directly complement the in-class learning experiences. The course also integrated small groups led by graduate students in neuroscience and public health. These groups were specifically created to balance students from different disciplines providing a unique interactive experience where exposure to the concepts and the language of

public health, neuroscience, and related disciplines were regularly reinforced. Targeting the training of the next generation of professionals across fields will enable them to learn to communicate effectively to solve the problem of violence and early adversity. Both the students and the TA's were extremely positive about these opportunities which they reflected in their course evaluations.

The course was met with significant enthusiasm with a wait list for enrollment within the first 36 hours. The course was capped at 100 students due to the interactive learning experiences and more than a dozen students who were not able to enroll communicated with the course director (Dr. Drury) and are already expecting to take the course in the spring of 2018.

Several of the experiential learning events were required. Students attended Darkness to Light training on how to support victims of sexual assault; Trees for Life, an annual event recognizing the range of different professionals and individuals who serve and support children in child protective services; visits to the coroner's office; and “Movie Nights.” At the movie nights, students watched movies (Spotlight, Resilience) directly related to the course topic and a discussion hour was held after the movies.

Interestingly many students brought a non-enrolled peer to the movie nights, and while only one movie night was required a significant number of students attended both. Several students who took the course approached the faculty to be Teaching Assistants (TA) for future years and two of the TA's from the first year are participating as TA's for this coming Spring. Over a dozen of the students from the course subsequently became interns at the New Orleans Child Advocacy Center as a result of their elevated interest in child adversity.

Future Steps:

Due to the success of the first course we have submitted, and been approved, to offer this course annually in the spring. For 2018 we have decreased the enrollment to 60 due to concerns about not enough direct faculty to student time and adjustments to the community events that were requested in the student evaluations. Specifically, all students will be able to attend a visit to the coroner's office or pathology lab to observe an autopsy. The laboratory visits have been restructured to include retinal imaging, simultaneous measurement of the physiologic reactivity of two peers to better understand social interactions, both positive and negative, influence health and behavior, and enhanced neurocognitive and affective tasks to better integrate neuroscience findings to practical experiences for the students. We have enhanced and revised our use of writing and social media and expect to create a series of video blogs that will be linked on the newly created Violence Prevention Institute website. In response to student feedback, we are also integrating more reflective writing exercises related to the community events and experiential learning to better re-enforce the classroom to community aspects of the core goals of the course.

Budget Report:

Funds were allocated to support faculty time (Drury, Taylor, Theall, and LeBlanc). In addition funds were utilized to support a total of seven TA's, three from the School of Public Health and three from neuroscience. An additional TA from neuroscience was supported to coordinate the experiential laboratory visits where students participated in a psychosocial peer evaluative stress task and learned how to measure heart rate variability, extract DNA and perform neurocognitive testing. Additional funds were used to support bus transportation to the New Orleans

Child Advocacy Center where students learned how forensic child interviewing occurred and also created their own social media post related to the use of corporal punishment and its direct links to child physical abuse. Funds were also used to support the budget and the travel support for several world-renowned speakers, including Stacy Patton, Neal Halfon, Elizabeth Shirtcliff, and James Garbarino, that were additionally supplemented from the Mary Amelia Whitehead Institute. In addition to these speakers presenting to the class additional evening community events were scheduled enhancing the presence of the academic mission of Tulane into the community. Funds were used to support pizza during movie nights and also during laboratory visits that lasted 4 hours and occurred during the evening. Funds were also used to purchase the reagents and supplies for DNA extraction as well as the electrodes needed for the physiologic measurements during the peer social evaluative tasks.

Conclusion:

In conclusion, we believe that this course was highly successful with exceptional ratings from students on content, faculty knowledge, and engagement. We have carefully integrated concerns related to the grading system and have now increased the amount of reflective experiences as some students noted that the exams did not adequately capture the goals of the course. In addition, in response to student feedback we have streamlined the experiential learning events, made alterations to the laboratory visit and created additional opportunities for students to observe an optional autopsy. All outside speakers received exceptionally positive rankings from the students, and we will be having several of the highest ranked external speakers return (Stacy Patton, James Garbarino, and Elizabeth Shirtcliff).



Respectfully submitted,
 Stacy S Drury, MD, PhD
 Remigio Gonzalez, MD Professor
 of Child Psychiatry
 Associate Director, Tulane Brain Institute
 Vice Chair of Research, Department of Pediatrics
 School of Medicine

Feoli, Ludovico

School of Liberal Arts
 Stone Center for Latin American Studies

INTERDISCIPLINARY FACULTY WORKGROUP

Confronting the Challenges of Poverty and Inequality

Thanks to the generous support of a Donor Name Faculty Grant, we were able to hold a highly successful faculty workshop on poverty and inequality during the 2016-17 academic year. The workshop accomplished three specific goals. First, it familiarized participants with each other's research and teaching related to poverty and inequality. Second, it exposed participants to the work of leading scholars from three distinct disciplinary perspectives. Third, it set the stage for continued collaboration among the participants, including through a commitment to extend the workshop into the 2017-18 academic year and to consider the crafting of an interdisciplinary course on the subject for 2018-19.

The workshop was broadly divided into two parts. In the first part, during the fall semester, an interdisciplinary group of faculty at Tulane met four times to discuss conceptual, theoretical, and methodological approaches to the study of inequality. The core participants included faculty and post-docs in law, political science, sociology, economics, and public health. During those meetings, in addition to discussing each discipline's

major contributions to the debate on inequality, we also discussed the possibility of integrating insights from different disciplines into an eventual 360-degree course on this subject. Finally, we defined criteria for the selection of external guest speakers. To enrich our discussion, we agreed to invite a range of leading scholars in their fields based on their theoretical sophistication, empirical contributions to the study of inequality, and ability to build bridges across disciplines.

In the second part of the workshop, during the spring semester, we invited three external speakers who met the criteria mentioned above. We asked each speaker to discuss the frontiers of knowledge on inequality based on their field of specialization and to sketch directions for further inquiry. Robert Kaufman, professor of political science at Rutgers University, came to our workshop on March 13 and presented an encompassing overview of the connections between inequality and political regimes, discussed what political scientists know and do not know about how inequality affects political life, and laid out several research hypotheses. On April 3, James Foster, professor of economics and international affairs at the George Washington University, discussed the logic behind his original and widely used multidimensional approach to measuring poverty. Although he did not address inequality directly, he defined poverty as "an extreme manifestation of inequality," and therefore used poverty as a proxy. Pablo Mella, professor of philosophy at the Instituto Superior Bonó (Dominican Republic), came to Tulane on April 10. He criticized existing approaches for measuring poverty and the scholarly obsession with what he called "counting the poor." He discussed the limitations of dominant approaches, including Foster's, as well as their implications for public policies that intend to redress poverty. These sessions also produced selected bibliographies on the subject from the vantage point of each presenter's discipline.

At the end of the spring semester, the core participants of the faculty workshop presented

“lessons learned” in a workshop at the annual meeting of the Latin American Studies Association, which was held in Lima, Peru. The presenters included Ludovico Feoli and Santiago Anría (Political Science/CIPR), Arachu Castro (Public Health), Eduardo Silva (Political Science), Amalia Leguizamón (Sociology), David Smilde (Sociology), and Jessica Price (Political Science/CIPR). The discussion centered on the questions currently framing the study of poverty and inequality: what can we say about these phenomena? Are they connatural to our civilizational structures and hence a matter of degrees of tolerance? Is the debate about ends or means, opportunities or outcomes? What can be done about poverty and inequality? How can we reconcile a political project premised on equality (democracy) with an economic system premised on difference (capitalism)? Can a common standard of well-being be postulated and provided as a kind of elemental public good? The discussion also focused on elements hitherto absent from the debate on poverty and inequality: the need for a greater focus on “horizontal” inequality and its effects, particularly in light of the increasing heterogeneity of social actors demanding social and economic incorporation; a more complete accounting of the cultural dimensions of poverty and inequality, particularly the way images and rhetoric create inclusive identities and make people feel valued; and a focus on the relationships between poverty, the environment, and inequality.

As set out in the original grant proposal, workshop participants discussed the potential for developing the concept for a 360-degree course on the subject of inequality and poverty. However, it became clear that accomplishing a truly encompassing treatment of the subject would require inputs from scholars in other disciplines that could not be included in the first year of the workshop, due to limitations of time and resources. The fields of anthropology, evolutionary biology, psychology, and material culture were singled out as areas of particular interest. Participants agreed to continue convening the workshop throughout the 2017-18 academic year

to identify key exponents in these areas and invite them to present to the workshop if funding can be secured through a second Donor Name Faculty grant or alternative sources. The concept for a 360-degree course would be considered again at the end of this process.

The collaborations enabled by this Donor Name grant, both within the workshop and with external experts, have been highly valuable and will provide enduring benefits to the participants.

Respectfully submitted,
Ludovico Feoli, PhD
Center for Inter-American Policy and Research

Ferreira, Regardt J.

School of Social Work
Department of Social Work

RESEARCH SUPPORT

The Gorkha, Nepal Earthquake: A Multilevel Approach to Disaster Resilience Measurement

In the spring of 2016, Dr. Reggie Ferreira received a Donor Name Faculty Grant award titled The Gorkha, Nepal Earthquake: A Multilevel Approach to Disaster Resilience Measurement. The goal of the proposed research is to improve disaster resilience prediction, preparedness, and recovery, to aid and assist the humanitarian sector and the Nepali government through more targeted and thus effective, investment in collective disaster resilience.

Funding from the Donor Name Faculty grant program has been used by Dr. Ferreira to execute activities proposed in the original project proposal. The funding has allowed Dr. Ferreira since to undergo specialized research training in Group Concept Mapping at Cornell University, Ithaca, New York. The training has broadened his skill set in mixed methods and has helped conceptualize the

project. Funding has also allowed him to purchase software for the project.

In June of 2017, Dr. Ferreira traveled and hosted one of the proposed resilience workshops in Kathmandu, Nepal with a total of 45 attendees participating in a Disaster Resilience Leadership Workshop. The workshop was very successful and was attended by several different role players involved with resilience and recovery work in Kathmandu, Nepal as it relates to the devastating earthquake from 2015. Funds from the grant was used to host the local workshop.

Upon return from the trip to Nepal in June 2017, Dr. Ferreira crafted a concept note to several donors as promised and he recently submitted a concept note related to disaster resilience to the American Red Cross, Nepal Delegation to the value of \$700,000 for a two-year project in Nepal. Dr. Ferreira is working on another concept note that will be submitted to USAID in the region of \$300,000 for a one year project.

The funding from the grant has also allowed for several linkages from the project with roles with IASSW and CSWE's council on global issues being solidified for Dr. Ferreira, where he has other projects.

Remaining funds from the grant will be used to travel to Nepal for one more workshop on disaster resilience in early 2018.

Thank you again for this wonderful opportunity to receive funding to continue this important work in Nepal.

Respectfully submitted on behalf of,
 Reggie J Ferreira, PhD
 Director, Disaster Resilience Leadership Academy
 Assistant Professor
 Co-Chair CSWE Disaster and Traumatic Stress Track
 Department of Social Work
 School of Social Work

Meck, Holly F.

School of Liberal Arts
 Department of Art

RESEARCH SUPPORT

Cimabue, the Franciscans, and Artistic Change at the Dawn of the Renaissance Project

Description:

Since the age of Dante, Cenni di Pepo (c. 1240-1302), known as Cimabue, has been considered a founder of Renaissance art. Art historians traditionally credited "genius" artists such as Giotto and Cimabue with the revolutionary advances in optical realism seen in the art of this era, but my book project re-orient this thinking, considering Cimabue's innovations as products of his close collaboration with Franciscan patrons. The goal is a more nuanced vision of this pivotal period in history, with implications for scholars in history, religious studies, and literature, as well as art history.

Research Grant Report:

My Donor Name Faculty Grant covered travel expenses for primary source research in Italy in the summer of 2016. The funds enabled the timely completion of this project at the end of my sabbatical year, 2016-17. While in Italy last summer, I traveled to several different cities to read documents and view manuscripts and art firsthand. In Rome, I studied the commissions of Pope Nicholas III (1277-80), in Bologna, I examined Cimabue's Santa Maria dei Servi Madonna in the restoration studio of Cammillo Bolognesi. I also traveled to Venice and Pisa to study mosaics that inspired Cimabue and those he executed himself.

Results:

As a result of this primary source research, my 400-page book manuscript is now complete, and I have submitted it to my publisher, Brepols, for the first round of peer review. Without the support of the Donor Name grant, the tremendous progress I made on this project would not have been possible.

Respectfully submitted,
Holly Flora, PhD
Newcomb Art Department
School of Liberal Arts

Frasch, Elmer Thomas III

School of Medicine
Department of Structural
and Cellular Biology

RESEARCH CONFERENCE TRAVEL

I would first and foremost like to express my appreciation to Ms. Donor Name for her generous contribution to Tulane, and the Academic Affairs office for selecting my proposal for funding during 2016-17 (Round I).

My application requested funding to support Research Conference Travel. This grant, along with some matching funds from my Department, enabled me to attend the Experimental Biology 2017 and American Association of Anatomists Meeting held concurrently in Chicago, IL from April 22-26, 2017. Two of my abstracts, "Radiology Touchscreen Kiosks as a Multi-modal Replacement for the Viewbox" and "Pilot Project: Delivering Ultra-low Cost Digitally Guided Dissection," both of which I was the first author, were accepted for poster presentations at the meeting.

In addition to the opportunity to present the abstracts listed above, the oral presentation sessions at the meeting geared toward anatomical teaching methods were extremely beneficial and have, through collaborations strengthened at the meeting, improved the educational offerings in the Gross Anatomy course. While at the meeting, I also developed a new pilot project (funded through a mini-grant that I received from Tulane) investigating the utility of using "plastinated" anatomical specimens for study in the Gross Anatomy course.

Respectfully submitted,
Elmer Thomas Frasch III (Tripp)
Lecturer
Department of Structural and Cellular Biology
School of Medicine

Gasparini, Nicole M.

School of Science and Engineering
Department of Earth
and Environmental Sciences

RESEARCH SUPPORT

Quantifying the controls of rock properties on topography and surface processes in the Guadalupe Mountains

This project is exploring how rock properties influence erosion rates, landscape form, and the dominant processes that control landscape evolution. The field site is the Guadalupe Mountains, which span from New Mexico to Texas. The Guadalupe Mountains are made up of layered, sedimentary rock. In other words, a mountain peak might be one type of rock (usually a harder, stronger rock), but moving downslope and into the river channels the rock type often changes. In the past year, with the support of a Donor Name Faculty Grant, three major activities took place: field work, digital map analysis, and proposal writing.

The field trip included a team from Tulane (myself and graduate student Jordan Adams) and the University of Texas (assistant professor Joel Johnson and two students). A major success of the trip was identifying future sites for both monitoring and collecting samples for estimating erosion rates. We also determined scientific questions of interest that we think we can answer in this field site. These include: (1) As fracture spacing changes with rock type, does this impact vegetation density and the dominant processes controlling weathering and

erosion on hillslopes? (2) Does rock ordering impact the morphology of fluvial channels? In other words, if a river is in weaker rock, does it erode at the same rate and have the same form if it is below hard rock or if it is above hard rock? (3) Similarly, does rock ordering impact the morphology of hillslopes? Analyses of digital maps in the past year illustrated that channel form in weak rocks varies if the channel is above or below hard rock. This result is highlighted in a proposal that Johnson and I are currently working on to be submitted to the Geomorphology and Landuse Dynamics Program at the National Science Foundation. Over the last year, a proposal was awarded to gain permits to deploy monitoring equipment and remove samples in the Guadalupe Mountains National Park and the Carlsbad Caverns National Park. (No funding was awarded, just the ability to deploy equipment and sample. This proposal was led by Johnson.) I have an MS student starting who will work on this project during 2017-18.

The funds from the award were spent on the field trip, a Schmidt hammer (a device used to collect rock strength data in the field), and a networked external hard drive for storage of large datasets (e.g., digital maps of the Guadalupe Mountains).

Respectfully submitted,
Nicole M. Gasparini, PhD
Associate Professor
Department of Earth and Environmental Sciences
School of Science and Engineering

Gilbertson, Lars George

School of Science and Engineering
Department of Biomedical Engineering

COURSE/TEACHING SUPPORT

Technology Invention and Commercialization

I'm writing to convey my sincere and deep appreciation for the generous

Donor Name Faculty Grant supporting my new course, Technology Invention and Commercialization (SCEN/BMEN 6080), successfully co-taught in Fall 2016 by Sherif Ebrahim of the A. B. Freeman School of Business and me. Twenty-six students enrolled -- forming ten teams centered around students' original inventions. A central feature of this course is that teams enter into regional and national design and innovation competitions, thereby earning academic credit while pursuing an extracurricular innovation and entrepreneurship activity (that in turn becomes a part of a formal *co-curriculum* by virtue of its connection to classroom learning). Two of our teams won awards in Tulane's Novel Tech Challenge: second prize in the novice category was awarded to a team that created the Integrated Wrap Percutaneous Electrical Nerve Stimulation process, which alleviates chronic lumbar pain through a combination of deep tissue modality and nerve stimulation; the prize for audience favorite went to CMDX Biopsy, an integrated biopsy punch device for the removal of potentially cancerous skin lesions in a clinical setting.

The generous support of this grant enabled me to secure the co-teaching involvement of Sherif Ebrahim, Director, Entrepreneurship and Innovation Education, A. B. Freeman School of Business. Ebrahim played an equal role with me in the design and delivery of the educational content of this course. To our knowledge, this was the first course at Tulane co-taught by professors from the School of Science and Engineering and the A. B. Freeman School of Business. Additionally, the grant enabled us to support the participation of our student teams in Innovation Louisiana 2016, where they served as student judges in the University Technology Showcase and BioInnovation Challenge. As student judges, they gained valuable insight from the "other side of the judging table" in preparation for their own participation as entrants in design and innovation competitions. The grant also supported the involvement of CMDX Biopsy in the International Business Model Competition -- successfully prototyping the full cycle of student involvement

“from classroom to competition” that our course was designed to achieve.

An unexpected positive outcome of our Donor Name Faculty Grant-supported course: encouraged by the results and seeing an opportunity for programmatic building, Ebrahim created a new course in the A. B. Freeman School of Business for Spring 2017, Innovation and Technology Commercialization (MGMT 7180), co-taught by Ebrahim and me with an enrollment of 15 MBA students which was the limit set at the Business School. There was a waiting list for this course, illustrating the demand for this type of course. Significantly, a number of the SSE students from our fall course teamed with the MBA students. Their projects were advanced further towards commercialization with the addition of advanced market research and business model development by the MBA students, an exciting interdisciplinary collaborative model.

We plan to continue the work supported by this grant. We again are offering Technology Invention and Commercialization, in Fall 2017. We anticipate an enrollment of over 20 students, similar to last year. Additionally, we've expanded the concept to include a technology invention and commercialization *laboratory*, an additional component that is the subject of a new Donor Name Faculty Grant.

In summary, the Donor Name Faculty Grant is playing a major role in supporting what is becoming a cohesive and coordinated suite of courses supporting interdisciplinary innovation and entrepreneurship at Tulane University

Respectfully submitted,
Lars G. Gilbertson, PhD
Director of Undergraduate Studies,
Biomedical Engineering Department
NewDay Professor of Social Entrepreneurship and
Carnegie Fellow, Phyllis M. Taylor Center for Social
Innovation and Design Thinking
Director, Tulane I-Corps Site
for a Resurgent New Orleans
Department of Biomedical Engineering
School of Science and Engineering

Goehring, Brent Marshal

School of Science and Engineering
Department of Earth
and Environmental Sciences

RESEARCH SUPPORT

Research Completed to Date

During the summer of 2016, I and one of my PhD students, Rachel Sortor, completed approximately two weeks of field work in central Alaska, collecting samples for geochemical analysis and completed preliminary work on the mapping of geologic deposits central to understanding the broader evolution of the Alaska Range. The fieldwork was funded by the generous support of the Donor Name Faculty Grant. An unexpected outcome of the fieldwork is enhanced collaboration with the United States Geological Survey (USGS), whose primary focus is infrastructure and population safety, and the National Parks Service (NPS), whose primary mission is to enhance access by the general public to the wilds of Alaska. Rachel will be key in these collaborations and now has received additional funding for her PhD work as an outcome of these meetings.

Following completion of fieldwork, Rachel rapidly processed collected samples and presented early results at the Geological Society of America National Meeting in September 2016. Much of the analyses were supported via Donor Name funds. Results obtained to date, and those resulting from further analyses of samples collected during 2016, will be a crucial dataset in her dissertation.

Future Research

As a direct result of the Donor Name support, I am preparing a full proposal for submission to the National Science Foundation to more broadly fund our research program in Alaska. Rachel will be completing a longer field season this coming summer, with a focus on mapping in details portions of the Alaska Range. She will be joined by geologists from the USGS and NPS. Our future research

would not be as far along without support from the Donor Name Grant.

Respectfully submitted,
Brent Goehring, PhD
Department of Earth and Environmental Sciences
School of Science and Engineering

Gotham, Kevin F.

School of Liberal Arts
Department of Sociology

RESEARCH CONFERENCE TRAVEL

I am writing to thank you for the generous travel support from the Donor Name Faculty Grant Program. I was very happy and appreciative to learn that I was selected as a recipient of these funds. I used the funds to support airfare, hotel, and lodging expenses associated with travel to present two papers at the American Sociological Association (ASA) meeting in Seattle in August of 2016. Below are the titles and abstracts of the two papers.

Title: “Antinomies of Risk Reduction: Climate Change, Uneven Development, and the Contradictions of Coastal Restoration.” Presentation at the Annual Meeting of the American Sociological Association (ASA). Session: Risk. Organized by Alissa Cordner. Seattle. August 20, 2016.

Abstract: This paper engages sociological research on the political economy of the environment to decipher the contradictions and crisis tendencies associated with coastal restoration, using a case study of southern Louisiana. The paper explores the antinomies or contradictions of risk reduction measures (e.g., coastal restoration) in an extractive economy dominated by oil and gas production. Drawing on long-term ethnographic field observations and content analysis of the planning documents and government reports, the paper highlights the socially constructed dimensions

of risk ‘reduction’ and hurricane ‘protection,’ the political-economic dynamics of climate change risk, and the challenges of risk governance. My basic finding is that the coastal restoration process is intensifying rather than alleviating risks associated with coastal erosion and climate change-driven sea level rise. As I point out, coastal restoration takes place on an aggressively contested institutional and ecological landscape in which newly emergent risk reduction measures are interacting in a conflicting way with inherited regulatory arrangements and social-ecological patterns to increasingly expose communities to climate change risks.

Title: “Risk and Recovery: Understanding Flood Risk Perceptions in a Post-Disaster City, the Case of New Orleans.” Co-authored with Katie Lauve-Moon and Bradford Powers. Presentation at the Annual Meeting of the American Sociological Association (ASA). Session: Urban Crises and Recovery. Organized by Meredith Grief. Seattle. August 21, 2016.

Abstract: This paper investigates the determinants of flood risk perceptions in New Orleans, a deltaic coastal city highly vulnerable to seasonal nuisance flooding and hurricane-induced deluges and storm surges. Few studies have investigated the influence of hazard experience, geophysical vulnerability (hazard proximity), and risk perceptions in cities undergoing post-disaster recovery and rebuilding. We use ordinal logistic regression techniques to analyze experiential, geophysical, and sociodemographic variables derived from a survey of 384 residents in seven neighborhoods. We find that residents living in neighborhoods that flooded during Hurricane Katrina exhibit higher levels of perceived risk than those residents living in neighborhoods that did not flood. In addition, findings suggest that flood risk perception is positively associated with female gender, lower income, and direct flood experiences. In conclusion, we discuss the implications of these findings for theoretical and empirical research on environmental risk, flood risk communication strategies, and flood hazards planning.

Progress Report and Accomplishments

In addition to using the funds to support travel to present these two papers at the ASA meeting, the funds were also beneficial in helping to mentor two graduate students in the skill of research (data collection and analysis), writing, and publication. The graduate students are listed as co-authors on the second paper (Bradford Powers and Katie Lauve-Moon), and each student assisted me with data collection, data analysis, and write up of results for the paper. I am also happy to report that both papers were submitted for review and have been published in peer-reviewed academic journals. Below are the full citations:

“Antinomies of Risk Reduction: Climate Change and the Contradictions of Coastal Restoration.” *Environmental Sociology*. 2016. 2(2): 208-219.

“Hazard Experience, Geophysical Vulnerability, and Flood Risk Perceptions in a Post-Disaster City, the Case of New Orleans.” Co-authored with Richard Campanella, Bradford Powers, and Katie Moon. *Risk Analysis: An International Journal*. June 2017.

In short, the funds from the Donor Name Faculty Grant Program have created new opportunities for research and publication, graduate student training, and presentation of research results at a professional meeting.

I wish to thank Donor Name and the Faculty Grant Program for supporting my work and the professional development of two graduate students.

Respectfully submitted,
Kevin Fox Gotham, PhD
Professor
Department of Sociology
School of Liberal Arts

Grayson, Scott M.

School of Science and Engineering
Department of Chemistry

RESEARCH BRIDGE FUNDING

It is my pleasure to share the results of our Donor Name Faculty Grant bridge research grant that was awarded for the 2016-2017 school year. The funds requested were utilized to support the salary of a senior PhD student, Joseph Giesen, from my research group. Joe synthesized a novel mass calibration standard which is labeled in such a way as to aid the characterization of peptides and proteins by mass spectrometry. Such proteomic analysis is rapidly being developed to screen patient samples so as to increase the speed and accuracy of diagnostics for ailments such as cancer and bacterial infections.

Highlights of his efforts were recently submitted as a manuscript to the *Journal of the American Society for Mass Spectrometry* (presently under review), and additional manuscripts will be submitted over this summer. Related work was the subject of a National Science Foundation grant which was originally submitted last November. Although it scored very well, it was not funded; however, the program manager strongly encouraged resubmission this fall. A further development of this project is expected to be the basis of a new grant proposal will initially be targeted to the Army Research Office on the subject of sequence defined polymers for applications including nano-encoding.

I want to convey my sincere appreciation to you, as these avenues of support are an invaluable way to leverage the ongoing research efforts at Tulane University,

Respectfully submitted,
Scott M. Grayson, PhD
Joseph H. Boyer Professor of Chemistry
Department of Chemistry
School of Science and Engineering

Hà, Huy Tài

School of Science and Engineering
Department of Mathematics

RESEARCH CONFERENCE TRAVEL

The Donor Name Faculty Grant Program funds were used to partially reimburse for my trip to the American Mathematical Society meeting, held at Hunter College, City University of New York, New York, during May 6-7, 2017. I was invited to give a presentation in the “Special Session on Commutative Algebra” at the meeting. Funds were used to partially cover my airplane ticket from New Orleans to New York, two nights of hotel accommodation in New York City, and per diem for the duration of the conference.

Attending conferences and delivering presentations form an important part of my research curriculum. This opportunity allowed me to communicate my research to the wider mathematical society, to exchange research ideas, and to promote excellence in research. I will continue to do so on a regular basis.

Respectfully submitted,
Huy Tài Hà, PhD
Associate Professor of Mathematics
Department of Mathematics
School of Science and Engineering

Han, Jeffrey

School of Medicine
Department of Biochemistry and
Molecular Biology

RESEARCH SUPPORT

Thank you for supporting my laboratory with a Donor Name Faculty Grant in 2016. Below is a synopsis in how this funding helped my lab.

1. Progress - The Donor Name grant was used as seed money to generate preliminary data needed to make this project, “The role of L1 retrotransposition in mammalian infertility,” competitive for a federal (R01/R21) grant. Donor Name funds helped us successfully setup a CRISPR/Cas9 system in our laboratory for knocking our genes in mouse cells, which will be critical for our federal proposal.
2. The Donor Name funds were used to pay for mouse cage costs, tissue culture reagents, plasticware, chemicals, and enzymes.
3. Future plans - We will continue to learn how to culture and genetically modify spermatogonial stem cells (SSCs). Once we are able to demonstrate our ability to modify and transplant these cells into recipient mice, we believe we will be able to obtain R21 support. Thus far we have submitted two scored R21 proposals that were outside the National Institutes of Health pay line. The major reviewer complaint is that we do not have experience with mice and growing SSCs, and thus support from these smaller grants are critical to generate the data to make us competitive.

Once again, thank you for supporting this project.

Respectfully submitted,
Jeff Han, MD, PhD
Department of Biochemistry and Molecular Biology
School of Medicine

Herrera, Claudia Patricia

School of Public Health
and Tropical Medicine
Department of Tropical Medicine

RESEARCH SUPPORT

With our project, “Ecology of *Trypanosoma cruzi* and risk for human infection in rural New Orleans,”



we are doing a very good job. We finished our sample collections and have the main part of the results. We used part of them as preliminary results in R01 and R21 proposals submitted to the National Institutes of Health, but because we are analyzing our samples by Next Generation Sequencing, it has taken more time than we were expecting. We should be able to complete this project during the 2017-2018 school year and submit a complete report then.

Thank you for your support.

Respectfully submitted,

Claudia Patricia Herrera MSc, PhD

Research Assistant Professor

Department of Tropical Medicine

School of Public Health and Tropical Medicine

Holliday, Trenton Webster

School of Liberal Arts

Department of Anthropology

RESEARCH SUPPORT

Augmenting the Tulane Anthropology Fossil Hominin Cast Collection

As a paleoanthropologist, I discover and analyze the fossilized remains of ancient hominins (i.e., members of the Tribe Hominini, or those animals more closely related to us than to chimpanzees). Fossil hominins are extremely rare and invaluable resources for study. They are curated in museums across Africa, Asia, Europe, and Australia (and very rarely here in the USA – evolutionarily speaking, humans were late arrivals in the Americas). What this means is that access to these fossils is by definition limited, in the sense that if one has a hypothesis about an aspect of hominin anatomy, one that requires measurement and/or careful study of a fossil specimen, it is unlikely that one can just board a plane headed for Dar-es-Salaam, Johannesburg, Beijing, London or Sydney. Rather, we paleoanthropologists rely on

high-resolution casts and/or 3-D printouts of the fossils in question. These high-quality renderings of fossil remains are so accurate that one can take measurements from them and remain confident that the measurements taken are within measurement error of measurements taken on the actual fossilized remains themselves. The ability to study casts therefore greatly facilitates research on these rare items.

In this regard, the fossil cast collection in the Department of Anthropology at Tulane University is decent and includes some pretty rare casts such as one of the entire 3.2 Ma (3.2 million-year-old) “Lucy” (*Australopithecus afarensis*) skeleton. When I arrived at Tulane in 1998, I was able to use start-up funds to augment Tulane’s collection. I have been slowly augmenting it ever since, acquiring one or two casts at a time (fossil casts are expensive, and thus this is a slow process, to say the least). However, generous funding from the Donor Name Faculty Grant Fund has recently added numerous important casts of fossil hominins to the Tulane collection. My PhD advisor, Erik Trinkaus of Washington University-St. Louis, will retire in a year and a half. Over 40+ years, he amassed a large collection of research-quality fossil hominin casts, and rather than sell them to his home department, he offered to sell them to me and another of his former PhD students (Robert Franciscus at the University of Iowa). Franciscus and I went through his list of fossil casts and chose those specimens each of us wanted for our collections.

With funds from the Donor Name Faculty Grant Fund, I was able to acquire high-quality casts of 86 fossil hominin bones. Note that many of these casts are no longer available for purchase. For example, the casts of the very important ca. 100 ka (100,000-year-old) Qafzeh 6 and 9 early anatomically modern humans (from northern Israel, and almost certainly the oldest *Homo sapiens* specimens found outside of Africa), and the 60 ka Israeli Neandertal skeleton from Kebara were all made by renowned master fossil cast maker, the late Mario Chech, who retired from the Musée de

l'Homme in Paris ca. 20 years ago (and was never replaced). Other casts are equally rare – the 1.6 Ma Sangiran 17 cranium is one of the few *Homo erectus* crania that preserves its facial skeleton and is currently unavailable for sale. The casts of the Vindija (Croatia) and Zafarraya (Spain) Neandertal specimens are hard to acquire, and represent remains of the latest-surviving *Homo neanderthalensis*, a species that disappeared (albeit with some genetic admixture with modern humans) ca. 30,000 years ago. Similarly, the 31,000-year-old Mladeč material represents among the earliest modern humans (*Homo sapiens*) in Europe. Within the last month, newspapers ran with a story about the recent redating at the site of Jebel Irhoud in Morocco that has provided the earliest fossil evidence of *Homo sapiens* at ca. 300,000 years ago. Tulane now has a high-quality cast of one of these important fossils!

In terms of research, the casts are already proving valuable. One of my doctoral students, Whitney Karriger, is beginning to work on her dissertation that examines facial growth in different species of macaques and comparing it to facial growth in fossil *Homo sapiens* and *Homo neanderthalensis*. She intends to use photogrammetric techniques to capture the 3D morphology of both the monkey skulls and those of fossil hominins. She is currently learning how to do this using some of the fossil casts bought with Donor Name funds – in particular, the crania of La Ferrassie 1 (Neandertal), Qafzeh 6 and 9, Jebel Irhoud 1, and Mladeč 1 (*Homo sapiens*). Once she has created virtual 3D models of these crania, she will be able to take measurements off of them – these data will be in her dissertation!

A second of my doctoral students, Boryana Kasabova, is engaged in dissertation research that examines the growth and development of humeral retroversion – a measure of the “twisting” of the humerus along its long axis, which has been argued to be indicative of climbing morphology. While most of the newly-acquired casts are too late in time to be critical to her analysis (its focus is on Australopithecus and early species of *Homo* such

as *Homo erectus*), the inclusion of later Pleistocene fossil hominins such as Neandertals and early modern humans to a sample of humans from recent times will strengthen the findings of her dissertation. For this reason, she is measuring the humeri from Kebara 2 and La Quina 5 (Neandertal), and Qafzeh 9 (modern human).

The value of Tulane owning these casts also extends to teaching. Whenever I teach courses on human evolution, whether it is the 1000-level “Introduction to Biological Anthropology,” or my more advanced classes, such as “Human Evolution,” “Fossil Hominin Taxonomy and Systematics,” or “The Neandertal Enigma,” I always bring fossil casts into the classroom. Having my students (both graduate and undergraduate) see the specimens, in actual size and in three dimensions (often painted to look like the original fossils), truly brings the human fossil record to life for them in a way that photographs in a book simply cannot. Now having specimens that few of our peer institutions have, such as the Zafarraya Neandertal, or all of the ribs from the Kebara 2 specimen has really been a boon for me, especially since I taught my “Neandertal Enigma” class this past spring, and brought in a Donor Name-acquired cast nearly every single class period.

I am extremely grateful for the generous support of the Donor Name Faculty Grant Fund for giving me the once-in-a-lifetime opportunity to acquire rare, high-quality casts of some truly important fossil hominins. My doctoral students are perhaps even more grateful than I am (if that is possible), and even my undergraduate students are benefiting from the presence of these new casts in the classroom. The utility of these new casts, purchased via Donor Name funds, is truly multifaceted and will continue to be used for many years to come.

Respectfully submitted,
Trenton Holliday, PhD
Professor and Chair
Department of Anthropology
School of Liberal Arts

Holman, Mirya

Lay, J. Celeste

School of Liberal Arts

Department of Political Science

RESEARCH SUPPORT

Thank you very much for the Donor Name Faculty Grant award to support our purchase of Cooperative Congressional Elections Study (CCES) data during the 2016 election. We spent all of the money via a single invoice to YouGov, the polling company responsible for implementing the CCES study. Purchasing a “buy-in” to this survey gave us an opportunity to place a large block of questions on two panels of this survey – one fielded prior to the election, and one fielded post-election. As you may know, this was a *very interesting* presidential election, and we are thrilled that the Donor Name Grant funded our request to buy into the CCES. It will provide data for both of us for projects well into the future! We only received this data in March, but from it have already used this data in an article under review, and both individual grantees are incorporating the data in our projects.

The first project to emerge from the CCES data is a co-authored paper by us entitled “They See Dead People (Voting): Correcting Misperceptions about Voter Fraud in the 2016 U.S. Presidential Election,” which is under review at the *Journal of Political Marketing*. We used the CCES data as a template to inform an experiment that we fielded during the election. We examine whether correcting information can overcome misperceptions about election fraud. We find that providing counter information is generally ineffective at remedying misperceptions and can, depending on the source, increase endorsements of misperceptions among Republicans. Although information from a fact-checking source is generally unconvincing, when provided with evidence from an unlikely source – in our experiment, Breitbart News – both Republicans and Democrats decrease beliefs in voter fraud.

Mirya Holman incorporated the CCES data into a conference paper for the International Society for Political Psychology’s annual meeting in June 2017. The paper, entitled “Emotions Trump Experience: Terrorism, Gender, and the 2016 Presidential Election,” examines the effect of terrorist crises on a willingness to support women in political office, with specific attention paid to whether Hillary Clinton’s experience as Secretary of State shaped attitudes about her among those most worried about terrorism. A second working paper, which Holman plans to submit for review during 2017, uses a question-wording experiment that she placed on the CCES to evaluate the degree to which individuals hide their true attitudes about women in politics because of social desirability biases.

J. Celeste Lay used the CCES data for a conference paper to examine partisan and gender differences in attitudes about education policies. In recent years, a movement has emerged among parents to opt their children out of standardized testing. Lay looks at support for high-stakes testing in her paper, “Pencils Down! Women’s Opposition to High-Stakes Testing,” presented at the American Political Science Association meeting in August 2017. Using the CCES data from 2016 and another survey from 2013, Lay shows that women are more opposed

than men to high-stakes uses of tests. Their lack of support is largely a function of their knowledge about test scores and the salience of the issue of education. Although the political parties and the 2016 presidential candidates did not signal clear, divergent positions on testing, Democratic women are more opposed to high-stakes testing than Republican women. Lay plans to use the information from this paper to design experiments about how the framing of standardized testing influences support and opposition, particularly among women.

As you can see, the fruits of the funding from the Donor Name grant will result in several publications in the coming years that will help us understand important gender differences in public opinion and how these attitudes influence voting and elections.

Respectfully submitted,
Mirya Holman, PhD
Associate Professor
Department of Political Science
School of Liberal Arts

J. Celeste Lay, PhD
Associate Professor, Associate Chair
Department of Political Science
School of Liberal Arts

Höner zu Bentrup, Kerstin

School of Medicine
Department of
Microbiology/Immunology

RESEARCH CONFERENCE TRAVEL

As a teacher and course director for several courses at the School of Medicine, my goal is to create a learning environment that is conducive to active, engaged learning. I strive to create a safe space for learning (by using audience response systems) and to make the educational experience fun (by helping students discover the “bigger picture” using visual aids like Concept maps). This is true whether teaching formally or informally, and whether my audience consists of medical students, graduate students like PhD or Master of Science candidates, or colleagues and staff.

In order to improve my teaching, I regularly participate in a variety of faculty development activities like workshops for instructors on managing the classroom, leading a discussion, creating learning objectives and assessments, preparing a teaching portfolio, and engaging students via active learning strategies. I have been a member of IAMSE (International Association of Medical and Science Educators) since 2000 and have regularly participated in the yearly meetings. In addition to the workshops mentioned, I was selected as a

fellow for the prestigious “Harvard-Macy Program for Educators in Health Professions” in 2011 and successfully completed this as well as the ESME (Essential Skills in Medical Education) program, in 2013.

These programs focused not only on how to enhance my teaching skills but also how to maximize my impact as an educator through curriculum development and educational research. I applied for funds from the Donor Name Faculty Grants to travel to Leiden, The Netherlands on June 3rd, 2016, to participate in the annual IAMSE meeting. This meeting is the premier meeting for educators in the medical field. My participation benefited my professional development in numerous ways: I learned new techniques and strategies for teaching, improved the ways I teach medical and graduate students, made valuable connections with other educators at national and international medical schools, and presented my work to the attendants of this meeting by participating in a poster session. For the meeting in Leiden, I presented a poster on using concept maps as a tool for active learning (“*Finding the best way to introduce concept mapping to students – a cautionary tale*”). The poster was very well received and the feedback I gathered helped in writing a manuscript on “The use of concept maps as a study and review tool for pre-clinical medical students.” The manuscript was submitted to *Medical Science Educator* during the summer of 2017.

The knowledge and skills I acquired from meetings like the IAMSE meeting mentioned above have also led to other accomplishments during the last year. In the past academic year I was the recipient of several Owl club awards (“*T2 Professor of the Year*,” “*T2 Course of the Year*,” “*T2 Excellence in Teaching Award*”); the *Gloria P. Walsh Award for Teaching Excellence* (an award chosen by the medical student body annually), and the *School of Medicine’s 2017 Teaching Scholar Award*. Teaching is a high priority for me. It is also a source of great job satisfaction. And while I consider myself very lucky to have found something I am so passionate about, it also comes

with a considerable responsibility to share the subject matter I love with others. I am truly grateful for the opportunity to have received supporting funds to participate in an international IAMSE meeting, and I trust that the knowledge gained in this and all future meetings will continue to help me being of service to all of my students.

Respectfully submitted,
Kerstin Honer zu Bentrup, PhD
Assistant Professor
Department of Microbiology and Immunology
School of Medicine

Jack, Katharine M.

School of Liberal Arts
Department of Anthropology

RESEARCH SUPPORT

Primate Health Responses to Extreme Drought in Northwestern Costa Rica

Progress Report:

In June 2016, my team and I spent three weeks at my field site in Santa Rosa National Park, Costa Rica collecting urine samples from wild capuchin monkeys to assess their health in response to the ongoing drought that the region was experiencing. We compared the samples collected during the 2016 drought period with those collected during a non-drought period in June 2010. These analyses resulted in a poster presented at the 2017 annual meeting of the American Association of Physical Anthropologists earlier this year (see poster abstract below). Our results clearly indicate that the health of our study animals was declining in response to the drought and we anticipate submitting this manuscript for publication this fall (2017).

Poster abstract:

Primate Health Responses to Extreme Drought in Northwestern Costa Rica

Katharine M. Jack¹, Stephen Cortese², Gillian King-Bailey², and Mackenzie Bergstrom³

1. Tulane University, Department of Anthropology
2. Tulane University, Department of Ecology and Evolutionary Biology
3. University of Calgary, Department of Anthropology and Archaeology

Documenting the responses of wildlife can be helpful in predicting and understanding human responses to environmental degradation caused by climate change. However, surprisingly little has been documented in relation to climate change and the health of wildlife. In this study, we investigate the health effects of extreme drought on a species of wild Neotropical primate, *Cebus capucinus imitator*, in the Santa Rosa Sector of the Área de Conservación Guanacaste, Costa Rica. Average yearly rainfall from 1979-2015 was 1800mm, but 2015 was a record drought year with only 660mm. We non-invasively caught urine from habituated individuals residing in three long-term study groups and conducted in-field urinalysis using urine dipsticks. We compared results for samples collected pre-drought (June 2010, n=87) to those collected post-drought (June 2016, n=32). Of the ten health markers investigated, six differed between years: the presence of leukocytes and ketones were more common in the 2010 samples, while protein (38% in 2016 vs. 20% in 2010), blood (above trace levels; 50% in 2016 vs. 9% in 2010), and bilirubin (22% in 2016 vs. 0% in 2010) were more common in the 2016 samples. With a mean specific gravity of 1.015 in the 2016 samples (1.022 in 2010), the increased proportion of samples with the presence of blood, proteins, and bilirubin are not due to increased urine concentration. Rather, these results indicate that the health of our study population declined between the pre- and post-drought sampling periods.

The funds received, in part, from this Donor Name Faculty Grant also enabled my team to spend two months (April and May 2017) conducting our biennial census of the howler and capuchin

populations throughout Santa Rosa National Park, Costa Rica. We have been conducting these park-wide censuses since 1983, which have enabled us to track the impacts of forest protection and regeneration on these primate populations. Given the 2015-2016 drought, gathering the 2017 population estimates was very important in demonstrating that these effects were felt throughout the park and across species rather than being restricted to our study groups and species. These data will be used to strengthen our broader analyses detailed below.

Description of remaining work to be done and plans for the future:

Our analyses of the microbiome (in collaboration with Amanda Melin at the University of Calgary) and fecal cortisol levels (stress hormones, with Stacey Tecot, University of Arizona) are ongoing, with the completion of the laboratory portion of the study slated for March 2018. These data will be used in combination with our phenology data (tracking forest productivity), demographic data (tracking fertility and survival in our study groups), and climate data (tracking rainfall and temperature in the park), to examine the impact of climate change on forest productivity and primate health in our study population from 2007 through 2017. It is anticipated that this larger project will result in several significant publications during 2018.

Respectfully submitted,
Katharine Jack, PhD
Professor, Department of Anthropology
School of Liberal Arts

Jayawickramarajah, Janarthanan

School of Science and Engineering
Department of Chemistry

RESEARCH SUPPORT

Initial Goal: The initial goal of this grant was to identify pesticides/herbicides that can be sequestered by a synthetic host termed cucurbituril 7, CB[7]. Once the pesticides/herbicides that are bound by CB[7] are identified, this information could be used to develop extraction platforms attached with CB[7] hosts to facilitate pesticide/herbicide remediation. The manner in which we were going to screen for pesticide/herbicide-CB7 binding was using a recently developed fluorescent sensor based on a naphthalene monoimide (NMI) scaffold (see sensor 1 in Figure 1A) using a solid phase fluorescent screening assay.

The PI decided to maximize the utility of the funds provided by using the full budget to support the stipend of a graduate student who was working on this project. This graduate student, Emin Atuk, was thus paid in Fall 2016 and Summer 2017 via funds from this grant. Emin used these funds to focus his full attention on another project that also involves chemical synthesis and supramolecular chemistry, but with a biological direction. Indeed, Emin generated outstanding results that enabled us to apply for a coveted National Institutes of Health R01 grant submitted on October 4, 2017. Vide infra for details.

Second Goal: The overall goal of this project was to generate agents termed DNA-small molecule chimeras (DCs; composed of a DNA domain and a small molecule domain) that have very high-affinity and selectivity for inhibiting carbonic anhydrase-IX (CA-IX). CA-IX is an important membrane protein that is a functional mediator of cancer metastasis. The main concept is that a synthetic small molecule, which is a known CA-IX active site binder (e.g., benzenesulfonamide 2 in Figure 1B), can be used as a lead to generate a surrounding DNA aptamer domain



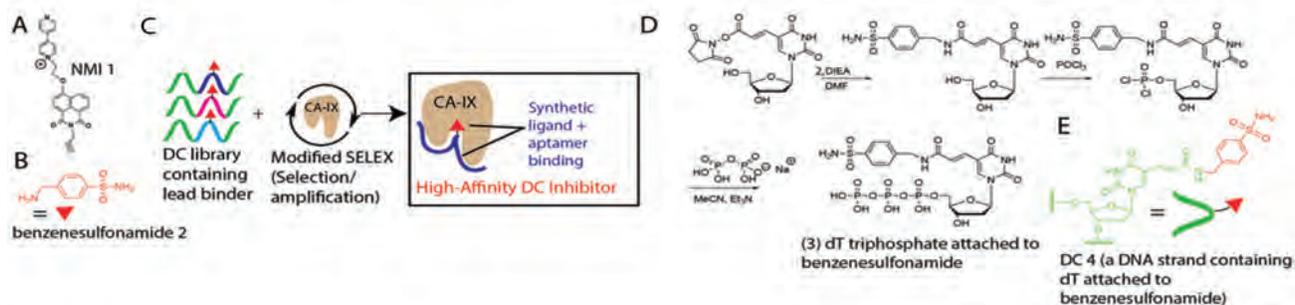


Figure 1. Structure of (A) naphthalene monoimide (NMI) based sensor 1 and (B) benzenesulfonamide ligand 2, that is an active site inhibitor of Carbonic Anhydrase-IX (CA-IX). (C) A Modified SELEX strategy for the development of high-affinity CA-IX inhibitors (based on DCs) that bind via both active-site/small molecule interactions and protein surface/DNA aptamer interactions. (D) Synthesis of deoxythymidine triphosphate 3 modified with benzenesulfonamide ligand. (E) A DNA strand where a central dT is attached to a benzenesulfonamide ligand.

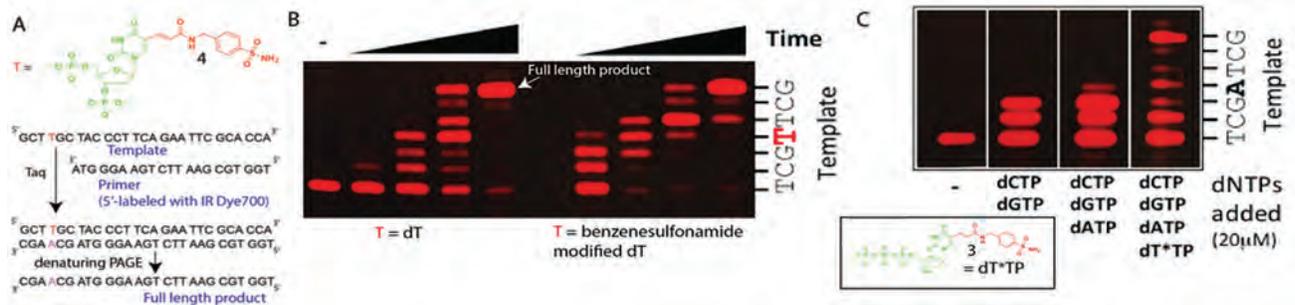


Figure 2. Illustration (A) and Denaturing PAGE results (B) of a primer extension rxn where Taq places a dA opposite benzenesulfonamide modified dT 4 (which is on the template strand). Taq DNA Pol can efficiently bypass (i.e., incorporate dA and complete the primer extension process) the benzenesulfonamide modified dT (panel B, right lanes) with similar efficiency as the natural dT control (panel B, left lanes) when all dNTPs are provided. (C) Denaturing PAGE illustrating that Taq Pol can readily insert benzenesulfonamide modified dT triphosphate 3 (dT*TP) opposite template dA and, importantly, extend from this product. The template sequence used is identical to that shown in panel A except that the sequence has a dA instead of a benzenesulfonamide modified dT. Note: All reactions were performed with 0.5U Taq Pol at 45°C with 20μM of the indicated dNTP. Reactions were stopped after 1 to 5 min and separated by PAGE.

that will greatly enhance the affinity and selectivity for CA-IX. In order to develop such molecules, the purpose of the NIH R01 grant was to establish a synthetic fragment based aptamer selection strategy (also called SELEX; systematic evolution of ligands by exponential enrichment) that enables the selection of such tight binders for CA-IX (see Figure 1C). In order for the federal grant to be feasible, we had to first show that key steps in the selection process were possible, that is (a) the benzenesulfonamide modified nucleotide triphosphate is a substrate for polymerases, and (b) the inhibitor modified nucleic acid, when incorporated onto DNA, is a template for

DNA polymerases. The seed funding from the Donor Name grant allowed us to successfully show that the above two criteria were indeed true.

Results: Emin first synthesized the deoxythymidine (dT) triphosphate modified benzenesulfonamide 3, as shown in Figure 1D. In addition, Emin also successfully attached deoxythymidine (dT) modified benzenesulfonamide onto a DNA strand to afford DC 4 (Figure 1E). Next, in collaboration with the Pursell group, we have obtained supportive results showing that benzenesulfonamide modified dT is functional in terms of being a template for DNA

Taq polymerase (Figure 2A). Specifically, Taq can incorporate dATP on a growing primer strand when benzenesulfonamide dT is on the template strand (Figure. 2B, right lanes), eventually leading to full-length product. In addition, Taq can incorporate the benzenesulfonamide modified dT trisphosphate 3 (dT*TP) when a template strand containing a dA is used (Figure. 2C, right lane). Qualitative analyses suggest that this incorporation happens with similar efficiency as the unmodified dT. In summary, these preliminary results show considerable feasibility that benzenesulfonamide modified dTs can be utilized in key polymerase mediated amplification steps required for a successful SELEX approach. These results greatly strengthen the feasibility of this approach, and we are waiting for positive reviews on our R01 application.

Respectfully submitted,
 Janan Jayawickramarajah, PhD
 Principal Investigator
 Associate Professor, Department of Chemistry

Jazwinski, Barbara Maria

School of Liberal Arts
 Department of Music

RESEARCH SUPPORT

The project I proposed involved recordings of original compositions for solo instruments and various chamber ensembles for release for streaming on websites, nationally and internationally, and for release on CD. I am pleased to report that, so far, the execution of the project has been proceeding very smoothly. In addition to chamber works, a new composition for symphony orchestra, premiered in New Orleans, has also become a part of this project. Enclosed below is the progress report.

Soliloquy for clarinet solo was premiered by Esther Lamneck in New Orleans at the Spectri Sonori

Concert Series (March 18, 2017) and subsequently recorded at the Dolan Studio (NYU) in New York. The recording has been mastered and awaits its release (streaming and CD).

Blue Waltz for symphony orchestra was recorded on May 22, 2017, by members of the Louisiana Philharmonic. It is in the process of being mastered in New York.

Invocations for violin, cello, and piano was presented at the 80th Anniversary of the American Composers Alliance concert in New York on May 13, 2017; the video recording has already appeared on YouTube; the recording for release on CD is scheduled for the fall.

Incantations for Violin solo is scheduled to be recorded on October 17th in New York City by Marina Kifferstein who will also present the work at public concerts in New York and in New Orleans.

The Girl by the Ocean for baritone and piano will be presented at the American Composers Alliance concert on October 21, 2017, in New York City, and subsequently recorded, also in New York, by Jeremy Huw Williams and Paula Fan, the two artists who originally premiered the work.

Respectfully submitted,
 Barbara M. Jazwinski, PhD
 Virginia Beer Professor of Music
 Newcomb Music Department
 School of Liberal Arts

Jones, Frank E.

School of Science and Engineering
 Department of Cell
 and Molecular Biology

RESEARCH BRIDGE FUNDING

The goal of our Donor Name Faculty Bridge Funding was to identify mechanisms for reactivation

of the breast cancer tumor suppressor HER4.
To this end we:

- Have identified HER4 suppression in breast cancer associated with worse patient prognosis
- Determined the mechanism of HER4 suppression in breast cancer
- Initiated experiments to reverse HER4 suppression and activate tumor cell killing

Our plans for the future are to design and analyze tumor cell killing peptides that mimic HER4 apoptotic activity.

Our laboratory has also published four manuscripts during this funding period

1. Huynh F. C., D. Nguyen, and F. E. Jones. 2017. Trastuzumab stimulation of ribosomal protein S6 kinase (S6K1) predicts de novo trastuzumab resistance. *Biochemical and Biophysical Research Communications* 483:739-744.
2. Han, W., M. E. Sfondouris, E. C. Semmes, A. M. Meyer, and F. E. Jones. 2016. Intrinsic HER4/4ICD transcriptional activation domains are required for STAT5A activated gene expression. *Gene* 592:221-226.
3. Han, W., M.E. Sfondouris, and F.E. Jones. 2016. Direct coupling of HER4 intracellular domain (4ICD) and STAT5A signaling is required to induce mammary epithelial cell differentiation. *Biochemistry and Biophysics Reports* 7:323-327.
Chen, F., J. Moran, Y. Zhang, K. Ates, D. Yu, L.A. Schrader, P. Das, F.E. Jones, and B. Hall. 2016. The transcription factor NeuroD2 coordinates synaptic innervation and cell-intrinsic properties to control the excitability of cortical neurons. *The Journal of Physiology* 594:3729- 3744.

Respectfully submitted,
Frank Jones, PhD
Gerald and Flora Jo Mansfield Piltz Professorship in
Cancer Research
Department of Cellular and Molecular Biology
School of Science and Engineering

Kaplan, Lev

School of Science and Engineering
Department of Physics

RESEARCH SUPPORT

Superradiance and Transport Efficiency in Open Quantum Systems with Disorder

The grant supported PhD student Yang Zhang in Summer 2016 in his work on optimal quantum transport in open systems in the presence of finite temperature and disorder. The grant also covered air travel expenses for me to travel to the 10th International Workshop on Disordered Systems in Brescia, Italy in June 2016 to give an invited talk, "Transport Efficiency in Open Quantum Systems with Static and Dynamic Disorder."

The work supported by the grant has resulted in one journal paper already published and one paper submitted in June 2017:

- (1) Y. Zhang, G. L. Celardo, F. Borgonovi, and L. Kaplan, "Opening-Assisted Coherent Transport in the Semiclassical Regime," *Phys. Rev.* 95, 022122 (2017).

Abstract: We study quantum enhancement of transport in open systems in the presence of disorder and dephasing. Quantum coherence effects may significantly enhance transport in open systems even in the semiclassical regime (where the decoherence rate is greater than the intersite hopping amplitude), as long as the disorder is sufficiently strong. When the strengths of disorder and dephasing are fixed, there is an optimal opening strength at which the coherent transport enhancement is optimized. Analytic results are obtained in two simple paradigmatic tight-binding models of large systems: the linear chain and the fully connected network. The physical behavior is also reflected in the Fenna-Matthews-Olson (FMO) photosynthetic complex, which may be viewed as intermediate between these paradigmatic models.

- (2) Y. Zhang, G. L. Celardo, F. Borgonovi, and L. Kaplan, "Optimal Dephasing for Ballistic Energy

Transfer in Disordered Linear Chains,” submitted to *Phys. Rev*, June 2017.

Abstract: We study the interplay between dephasing, disorder, and openness on transport efficiency in a one-dimensional chain of finite length N , and in particular the beneficial or detrimental effect of dephasing on transport. The excitation moves along the chain by coherent nearest-neighbor hopping Ω , under the action of static disorder W and dephasing γ . The system is open due to the coupling of the last site with an external acceptor system (sink), where the excitation can be trapped with a rate Γ_{trap} , which determines the opening strength. While it is known that dephasing can help transport in the localized regime, here we show that dephasing can enhance energy transfer even in the ballistic regime. Specifically, in the localized regime, we recover previous results, where the optimal dephasing is independent of the chain length and proportional to W or W^2/Ω . In the ballistic regime, the optimal dephasing decreases as $1/N$ or $1/\sqrt{N}$ respectively for weak and moderate static disorder. When focusing on the excitation starting at the beginning of the chain, dephasing can help excitation transfer only above a critical value of disorder W^{cr} , which strongly depends on the opening strength Γ_{trap} . Analytic solutions are obtained for short chains.

Additionally, the grant has enabled Yang Zhang to successfully complete and defend his PhD dissertation, and Yang graduated in August 2017.

We expect the work undertaken over the past year in collaboration with Italian colleagues to continue and to produce additional papers for publication. In particular, we are currently interested in extending the work in paper (2) to transport in situations where the initial excitation is not located at the end of the chain. Preliminary results suggest that in that situation dephasing may enhance transport even in a clean system, with no disorder.

We very much appreciate the valuable support that the Donor Name Faculty Grant has provided for our research work.

Respectfully submitted,
Lev Kaplan, PhD
Chair
Department of Physics and Engineering Physics
School of Science and Engineering

Kehoe, Dennis P.

School of Liberal Arts
Department of Classical Languages

RESEARCH CONFERENCE TRAVEL

I received funds to cover the costs of travel to international conferences that will form part of a prospective research group on law in the Roman Empire. The first of these meetings was a workshop on Roman Court Proceedings, held July 14-15, 2016, in Vienna, Austria, to which I was invited. The workshop was sponsored by the University of Vienna and the Austrian Academy of Sciences. Its principal organizer is Bernhard Palme, professor of ancient history and papyrology at the University of Vienna, and curator of the Papyrology Collection at the Austrian National Library in Vienna. The workshop brought together scholars from the US, Great Britain, Hungary, Italy, and Germany, as well as from Austria. The primary focus of the workshop was the substantial evidence for court proceedings in the Roman Empire preserved on documentary papyri, the medium for written documents from Egypt throughout antiquity, from the Pharaonic period through the Arab conquest. Thus many of the scholars invited to the conference are specialists in Greek papyrology from Egypt who have researched court protocols and petitions preserved on papyri to examine various aspects of the law of Egypt and the Roman Empire, not just substantive law, but also legal procedures and the use of legal institutions by the population of Greco-Roman Egypt. The overall purpose is for scholars from diverse fields to share their work on the administration of law in the Roman

Empire and, it is hoped, to develop a working group on this subject. I was included in this workshop because I am a scholar in Roman law, in particular in the relationship between law and the economy. In addition, I have done research using documentary papyri; earlier in my career, I had a fellowship from the Alexander von Humboldt Foundation to do research at the Institute for Papyrology at the University of Heidelberg.

At this workshop, I presented a paper titled “Access to Legal Institutions and the Rule of Law in the Roman Empire.” My paper for the workshop forms part of a book project on which I am working tentatively titled “Agency, Law, and the Roman Economy.” In this project, I seek to come to a better understanding of the relationship between law and the economy in the Roman world by considering broadly how various classes of people in the Roman Empire used the law to organize their financial activities and relied on the empire’s legal institutions to protect their interests. Accordingly, I am examining both the policies that the Roman legal authorities followed in defining property rights and obligations under contracts significant for the economy, as well as the degree to which actors in the Roman economy relied on the law and the empire’s courts to protect their interests, as opposed to turning to self-help and other private means of enforcing obligations. A principal focus of this study is on the work of the classical Roman jurists in interpreting areas of the law that directly impinged on the financial interests of Roman property owners, such as land ownership, land tenure, agency (in the sense of an agent performing important financial functions on behalf of a principal), and even marriage. In my paper for the workshop, I focused on the enforcement of debts that were secured against land. Foreclosures on mortgages represented occasions on which a financially weaker party would be particularly vulnerable, and the degree to which this was managed by Roman courts can tell us a great deal about the effectiveness of Roman legal institutions in protecting the interests of people in the Roman Empire. The alternative to involvement of

the courts in such proceedings is that economically stronger creditors could exploit economically vulnerable creditors by exercising self-help to take their land, even when the debtor was prepared to pay off the debt. My participation in the workshop in Vienna afforded me the opportunity to develop an area of research that will be an important part of my book project. The support I received from the Donor Name Faculty Fund has been invaluable to my research.

Respectfully submitted,
Dennis Kehoe, PhD
Andrew W. Mellon Professor in the Humanities
Department of Classical Studies
School of Liberal Arts

Kumar, Nirbhay

School of Public Health
and Tropical Medicine
Department of Tropical Medicine

RESEARCH SUPPORT

Impact of Schistosomiasis co-infection on Severity and Transmission of Malaria

More than 3 billion people worldwide are infected with multiple pathogens, of which infections with helminths (vector-borne, water-borne and soil-transmitted) and *Plasmodium* (vector-borne) display overlapping geographic distribution and rank among top co-infecting parasites. It is, therefore, germane to think beyond the “one organism-one disease” model and instead to factor-in the fact that many diseases are an outcome of either synergistic or inhibitory interactions of polymicrobial infections caused by bacteria, fungi, parasites, and viruses. It is important to understand the host responses to concurrent infections in order to develop new approaches to treat and prevent these infections. The focus of new research projects under

development in my lab is to evaluate host responses and disease transmission during concurrent infections with organisms responsible for malaria and schistosomiasis.

With pilot research support from the Donor Name Research grant, we propose to:

1. Establish the small animal model (laboratory mouse model) to evaluate the impact of co-infection with *Plasmodium yoelii* (a murine malaria parasite) and *Schistosoma mansoni* (a human parasite that readily infects laboratory mice).
1. Evaluate the outcome of co-infection on the outcome of malaria infection intensity and pathogenesis during various (acute to chronic phase) of infection with *S. mansoni*
1. Assess impact of *S. mansoni* co-infection on malaria transmission using established *An. stephensi* (mosquito vector) colonies in the PI's lab.

Achievements:

1. Aims 1 and 2: We established a Balb/c and CD-1 mouse models by first pre-infecting mice with *S. mansoni* followed by infection with *P. yoelii* (a murine malaria parasite). These studies revealed exaggerated malaria parasitemia in co-infected mice. We followed kinetics of blood stage asexual and sexual stage parasitemia. We also observed interesting patterns of gametocytemia observed in co-infected mice.
2. Aim3: We were able to successfully test these infected mice for their ability to establish infection cycle in the mosquitoes. We were able to compare initial kinetics of sexual development of malaria parasites that occurs in the mosquito midgut. We assessed, exflagellation and ookinete development. However, these studies were compromised somewhat due to collapse of our mosquito colony due to malfunctioning of temperature regulation in the mosquito

incubators, and mosquitoes dying due to warmer temperature.

In any case, we were able to use the data obtained to apply for an NIH RO1 grant (submitted Oct 2016, requesting \$1.8 million in direct cost) to further evaluate similar phenomena in more detail. Our first submission was unsuccessful. We are planning to resubmit a revised and modified grant application to the NIH at the next opportunity (March 2018).

Respectfully submitted,
Nirbhay Kumar, PhD
Principal Investigator
Professor Tropical Medicine
School of Public Health and Tropical Medicine
Director, Vector-Borne Infectious Disease
Research Center

Kurdia, Anastasia

School of Science and Engineering
Department of Computer Science

COURSE/TEACHING SUPPORT

Developing instant-feedback programming assignments

Problem description

CMPS 1500 Introduction to Computer Science I (Intro I) is a three-credit course that covers foundational computer science concepts and approaches, and that is largely dedicated to learning and practicing computer programming. Only a handful of institutions in the United States offer a Coordinate Major in Computer Science (CMCS) program, so the existing materials from other instructors or textbook publishers cannot be directly used in a CMCS program. No existing textbook covers even half of the material of the introductory courses. Consequently, a lot of CMCS teaching materials need to be custom designed.

Weekly programming lab assignments are the major opportunity to practice coding in the Intro I course, and there are about 50 programs one writes during the semester. Typically, the team of undergraduate graders downloads and evaluates each student's program manually. This process is slow (one week from submission to grade is typical), prone to inconsistencies (while the graders use a common rubric, it is not uncommon that two graders assign two different scores for the same assignment), and not scalable (increasing number of graders only increases discrepancies in grading).

Work description

The Donor Name Faculty Grant was used to fund six weeks of course enhancement summer work to address this problem. Several software platforms for programming assignment autograding and large course management were investigated, including Zybook/Zylabs combo, Mimir, Arkaive, Gradescope, Codio, CodeZynger, and Vocareum. Most existing lab assignments were revised and rewritten to be amenable for autograding. Over two hundred automated test for autograded lab assignments were developed and set up in Zylabs platform. Additionally, Arkaive, software for automatic attendance management, was studied and incorporated into the course.

Outcomes

Incorporating autograded labs had a number of positive effects on the course. Students received instant scoring and feedback, which allowed them to refine their code on-the-fly and without suffering grade penalties, placing emphasis on writing high-quality code rather than just on grade points. Using the set of analytic tools provided with the platform I could quickly assess class performance: who completed the lab, what the most common errors were, how many attempts were made, etc., and make more informed course management decisions. Without having to wait for the feedback, students too had a better opportunity to assess their progress in class and seek help early, if it was necessary. Most importantly, successful use of autograding allows accommodating more students in the course.

One unanticipated and very positive pedagogic side effect was that the students interacted not only with the code but also with the tests themselves. They got an opportunity to reason about code that passes tests even before developing that code. This type of thinking is called Test Driven Development (TDD) in contemporary software development practice. It is widely used in the industry but is not a typical component of the introductory course. In the past, I have made several attempts to teach TDD to the beginners and abandoned them because of the difficulties the students had grasping the concept. With autograded assignments, TDD organically came back into the course.

The developed autograded labs become the permanent part of the future course offerings. I intend to continue enhancing the Intro I course, and its successor, Intro to Computer Science II course, with automatic tools using the lessons learned and practices developed while working on this project.

Respectfully submitted,
Anastasia Kurdia, PhD
Professor of Practice
Department of Computer Science
School of Science and Engineering

Lee, Jean-Pyo

School of Medicine
Department of Neurology

RESEARCH SUPPORT

Combination Therapy: Repairing Vascular Integrity by Combining Pharmacological and Cellular Approaches for Neurovascular Disease

Stroke is a leading cause of death and long-term disability. The great promise of using stem cells to treat stroke has been inhibited by challenges to stem cell survival in the toxic environment of post-stroke tissue. Standard of care is reperfusion (clot



removal), either mechanically (thrombectomy) or by tissue plasminogen activator (tPA), but subsequent injury by ischemia/reperfusion (IR) curtails the treatment time window. When tPA infusion is delayed past 4.5 hours, vascular injury and neuronal death in the brain parenchyma occurs. In clinical trials, several months after recovery, stroke patients have been injected with NSCs directly into the tissue. We found that when NSCs are transplanted 24 hours post-stroke, inflammation, blood-brain barrier damage, and stroke infarct size are reduced within 48 hours post-stroke. Besides these short-term benefits, we also see long-term recovery of neurological function. Our long-term goal is to identify translational approaches to ameliorate the acute reperfusion damage, reduce stroke infarct size, and improve longer-term recovery. Our objective is to identify methods that improve the environment for NSC engraftment post-stroke.

We utilized the middle cerebral artery occlusion stroke mouse model to induce focal cerebral ischemia followed by reperfusion. 6 hours post-stroke, we administered tPA intravenously. Minocycline, anti-inflammatory drug, was administered intraperitoneally at various time points prior to tPA injection. One day post-stroke, we injected human neural stem cells intracranially. Here we report that minocycline pretreatment prior to tPA and neural stem cell transplantation reduced the mortality of delayed tPA-treated aged animal within 48hrs post-stroke. We investigated the effect of NSCs treated with minocycline-plus- delayed tPA treatment on long-term benefits on neurological function. We performed a behavioral test of motor function beginning 24hrs after NSC transplantation. Rotarod test was carried out 3 days(d) consecutively pre-stroke (as training) and from 2 to 28 days post-stroke. Here, we report that by combining minocycline prior to tPA significantly ameliorates neurological deficit in aged mice.

Furthermore, transplanting NSCs ameliorated the pathophysiology caused by delayed tPA.

Respectfully submitted,
Jean-Pyo Lee, PhD
Assistant Professor
Department of Physiology Center for Stem Cells
and Regenerative Medicine
School of Medicine

Lewis, Marva L. Theall, Katherine

School of Social Work
Department of Social Work

RESEARCH SUPPORT

The original proposal to the LBC was to use LBC funds to turn the current Talk, Touch and Listen While Combing Hair parent group curriculum into a hybrid format, online curriculum. We proposed to conduct a pre-and post-survey of the effectiveness of the program in this new online format. We have been working diligently for the past year in beginning this work. We have preserved the original Donor Name funds by using a combination of funding from other grants (primarily Institute for Mental Hygiene); and students - Masters Level Social Work student from Tulane School of Social Work; Doctoral level students from the Tulane Doctor of Social Work (DSW) Jillian Gauthier (Class of 2016) and City, Culture and Community doctoral student to assist with facilitation of parent groups. Two groups of the student's projects were accepted and presented through a competitive national conference. (The National Zero to Three National training institute held in New Orleans in December 2016.

During the first months of the grant we initially met with Tulane University Innovative Learning Center

staff, David Attenave to determine the process of creating a hybrid- online curriculum.

We have only partially succeeded in revising, and creating a curriculum that we would now like to translate into an online format. We are requesting an extension in use of the funds to use the services of a technology company currently working with Tulane University to translate different programs into an online format. In the year since we were awarded the grant we have solidified the core learning objectives of the curriculum; used each module with parents and received their feedback on different elements of the curriculum. Our original plan was to do a pre-and post-survey assessing outcomes. That plan was premature.

Accomplishments:

- Development of Talk, Touch and Listen Parent Group Facilitator’s Manual
- Development of Facilitator’s Training powerpoint
- Development of media to use in preparation for the online format.
 1. ‘Aries gets his hair combed’ video – illustrating tender headed combing sequence.
 2. The ‘Stages of hair combing interaction’ video used in the Parent Group training.
 3. A video poem, of pictures of children getting their hair combed while a poem is read about colorism.
- Development of Experiential Activities consistent with the core theme of the curriculum.
- National Presentation of Curriculum to Zero to Three
- Requested by Early Childhood Publisher attending the conference
- Participation of students in developing Puppet show to accompany Parent Café

With volunteer parents (and their signed consents) we have done some preliminary videotape,

developed the ‘Community Speaks: Videotape feedback sheet.’ A CNC staff has videotaped parents combing hair as they normally do at home. The parents use the video to ‘Search for strengths.’ This structured procedure will be used in the online format in the form of a group discussion. With the goal of creating and supporting community, the core learning objectives will be translated into the online curriculum.

Active Listening Skills:

We have developed a series of scenarios that parents will use active Listening skills.

8-8-16 conference

- Year 2 – Take Curriculum and turn it into Online format
- Conduct pre-post survey
- IRB

In the year since receiving the award the Center for Natural Connections has completed the following items:

Revised shortened curriculum:

The four sessions answer a series of questions: What are my family values? Skill - Practice stating them. WHO IS MY CHILD? Skill: What’s the best way to talk to her/him? What messages did I hear about skin color and hair type? Why are the stereotypes about skin color and hair? Where do I carry my stress? Skill: Ways to relax. What does the Community say are my TT&L Strengths? Skill: What are my goals?

We have practiced the revised curriculum on cooperation with the mothers at our three partner sites: The New Orleans Women’s and Children Shelter for homeless families; the Audrey Hepburn Cares Center (where both staff and medical physicians were trained in the delivery of the curriculum; and Kingsley House Head Start.

We have used feedback from other partner sites where we have conducted virtual trainings as well as in person trainings:

1. Lehigh University, Bethlehem, Pennsylvania
– Delivered the 8-week curriculum with a community group of parents. We incorporated their feedback into the revised curriculum.
2. Southern University of New Orleans – Parent Whisperers with undergraduate students.
3. University of District of Columbia – Training of 16 Facilitators for the Talk, Touch and Listen Parent Group.

Partner site training:

AUDREY HEPBURN CARE

OCTOBER 2016 - TUESDAY, 4:30 to 6 PM

4-Week model of TT&L Sessions

CLOSING CELEBRATION OF Miranda's

Puppet show

Research to be completed:

When enrolling prior to beginning group participants complete the Consent form, PATH and RICM pre/post surveys.

PATH, RICM, COLORISM, PARENTAL SELF-EFFICACY, SSI, CERAR, AAPI –

Complete PRE/POST HCI Video

Thank you for your support and funding of our program.

Respectfully submitted,

Marva L. Lewis, PhD

Co-Principal Investigator

School of Social Work

Katherine Theall, PhD

Co-Principal Investigator

School of Public Health and Tropical Medicine

Li, Jian

School of Public Health
and Tropical Medicine
Department of Biostatistics

RESEARCH CONFERENCE TRAVEL

Goal/Benefit:

As a biostatistician and bioinformatician, it is essential for me to broaden my view in analytical approaches, and understand and address issues in clinical research and the analytical needs by clinicians. Attending the potential research conferences listed below will benefit my research and career development through multiple aspects, including 1) Technical contents: various sessions of intended conferences will provide views on the most recent and future frontiers in quantitative analyses for human diseases and public health issues. 2) Empirical issues and needs covered by intended conferences will provide inspiration for new method developments. 3) Networking with conference participants from both theoretical and empirical fields for great opportunities in collaborations for method development and in conducting joint data analyses of clinical research studies.

Progress

With the support of this travel grant, I was able to attend a scientific conference focusing on both the analytical and empirical issues in diabetes studies: the 9th World Congress on Prevention of Diabetes and its Complications, held at Atlanta on December 2-4, 2016. I presented a poster during the meeting, entitled "On investigation of relationship between gut microbiota and hemoglobin glycation index in European and Asian populations." The abstract was later published in a 2017 issue of Endocrine Practice.

Jian Li, PhD

Assistant Professor

Global Biostatistics and Data Science

School of Public Health and Tropical Medicine

Li, Jian

School of Public Health
and Tropical Medicine
Department of Biostatistics

RESEARCH SUPPORT

Project goal

This project is to develop statistical methods for improving the efficiency in using disease-causing and correlated factors in aiding in disease diagnosis, prognosis prediction, and intervention. Two aims were proposed for fulfilling the project goal: 1) to integrate multiple factors, including both genetic and clinical factors, into the same model, and 2) to quantify, and adjust if needed, effects when intervention is performed on correlated factors.

Progress

We have proposed six tasks, B1-3 and C1-3, with the intention to complete B1 and C1, complete or almost complete B3 and C2, and conduct B2 and C3 beyond the budget period. The six tasks include B1) combining multiple factors; B2) usage in causality analysis; B3) sufficiency study using simulations; C1) causal power quantification; C2) predictive model building and evaluation, and C3) Intervention strategy evaluation.

We have completed tasks B1 and C1 as planned. Briefly, methods including LASSO (least absolute shrinkage and selection operator), network approach, and various statistical learning techniques have been explored and applied in choosing and combining genetic and/or clinical factors, in order to obtain composite information index for subsequent analyses (B1). The change/effect on causality ability of different factors has been studied numerically (C1).

Tasks B3 and C2 have been initiated, but have not been completed. Particularly, simulations were actually used in all tasks, and we have analyzed a real

data set with two longitudinal data points. Based on the conducted work, we have one abstract accepted/presented at a conference, one manuscript written, and two under preparation.

J Li, XY Wang, YZ Liu. On investigation of the relationship between gut microbiota and hemoglobin glycation index in European and Asian populations. Presented at the 9th World Congress on Diabetes Prevention. Accepted in Endocrine Practice.

J Li, WJ Sun, etc. Prediction of acute ischemic stroke risk and recovery based on inflammation markers. Manuscript prepared.

(Two additional manuscripts are under preparation for development of prediction index and its application)

To be done/Future plans

We will continue our work in completing tasks B3 and C2 and complete the relevant manuscripts afterward.

For tasks B2 and C3, we plan to initiate them fall 2017. This plan is made in coordination of PI's extramural grant application, as we are currently preparing and drafting proposals in comparing the effectiveness and potential improvement of various intervention methods in real-world clinical settings, which is clearly closed related to our task C3 of intervention strategy evaluation. The proposal is planned to be submitted in fall 2017.

Respectfully submitted,
Jian Li, PhD
Assistant Professor
Department of Global Biostatistics and Data Science
School of Public Health and Tropical Medicine

Lin, Tiffany

School of Architecture
Department of Architecture

COURSE/TEACHING SUPPORT

Art + Architecture: Research and Course Preparation for Interdisciplinary Teaching

It is a privilege to prepare this report summarizing the research and course preparation for a new interdisciplinary studio made possible by a Donor Name Faculty Grant. This extraordinary opportunity has enabled me to propel my research and teaching and establish an important collaboration between the School of Architecture and the Newcomb Art Department.

In my spring 2016 grant application, I stressed the importance of interdisciplinary courses that embrace the innate synergy between art and architecture in universities that offer both disciplines, especially when they are housed in separate departments, as is the case at Tulane. There was little cross-pollination between the architecture school and the art department, although our programs and faculty would greatly benefit from a shared discourse. With the generous support of the Donor Name Grant, I was able to reach out to Aaron Collier and several of his colleagues at the Newcomb Art Department to develop a curriculum for a new interdisciplinary studio course entitled: *Architectural Painting: Spatial Analysis and Speculation* (AVSM-4700). This course was implemented with great success for the first time spring 2017. Since there was a significant wait-list for this course (28 students interested in 15 spots), I hope to offer this course again in the future, furthering the conversation initiated with the Newcomb studio art faculty. Course evaluations and images from guest lectures and workshops are included for reference.

In addition to developing and implementing the architectural painting curriculum, the parallel practices of painting and architecture have enabled my research to advance design pedagogies that

distill formal and spatial principles through two-dimensional exploration. In the summer of 2016, I produced a series of drawings and paintings for an exhibition at the American Institute of Architects New Orleans Design Center entitled: *Linework: Architectural Drawings and Paintings*. This body of work used speculative drawings and paintings as a means of understanding the intersection between empirical analysis and tactile speculation - the reciprocation between architecture and fine arts. The focused time allotted to produce this show inspired critical ideas and discussions that reinforced the academic course being developed.

The collaboration between Aaron Collier and me has also led to a co-authored abstract that summarizes the approach for an interdisciplinary studio elective that uses the idiom of abstract painting as a vehicle for analyzing, distilling, and exploring spatial design. The forthcoming paper entitled: "Thinking Through Space: The Reciprocity of Painting and Architecture," has been submitted to the Association of Collegiate Schools of Architecture (ACSA) Conference in Marfa, Texas fall 2017. We hope to augment this paper into a publication that studies painters and architects whose processes are germane to one another.

I submit this report with tremendous gratitude to Donor Name and her family for supporting a topic that has galvanized an important stage of my teaching and practice. As a newly tenured professor, this grant opportunity has motivated me to pursue a focused line of research and pursue a partnership with the Newcomb Art Department which would have been difficult without grant support.

Respectfully submitted,
Tiffany Lin, AIA
Associate Professor
Department of Architecture
School of Architecture

SUM 16	FA16	SP17	SUMMARY OF GRANT-SUPPORTED ACTIVITY
x	x	x	Research Assistant 12hrs/week
x			Setup dedicated painting studio at Newcomb Art Department
x	x	x	Purchased books, studio equipment, painting supplies
x	x		Exhibition of work at the AIA New Orleans Design Center
x	x	x	Collaboration with Aaron Collier, Assistant Professor, Newcomb Art Department
	x		Audit Professor Collier's Beginning Painting class (ARST-0125)
	x	x	Travel to architectural subjects of analysis and reviews at universities with similar curricula
		x	Implement new interdisciplinary course: Architectural Painting (AVSM-4700)
		x	Guest lectures and workshops: Aaron Collier, Assistant Professor, Newcomb Art Department
		x	Guest lecture: Anthony Baab, Professor of Practice, Newcomb Art Department
		x	Guest lecture: Anne Nelson, Professor of Practice, Newcomb Art Department
		x	Guest critic for final review: Sanda Illiescu, Associate Professor, University of Virginia
		x	Submit abstract to ACSA Conference in Marfa, TX and plan for future publication of work



Pictured: Final review of student work: AVSM 4700: Architectural Painting: Spring 2017. Guest critics: Aaron Collier, Newcomb Art; Sanda Illiescu, Univ. of Virginia, Art+Architecture

SPRING 2017: AVSM 4700: Architectural Painting



Pictured: Guest lectures and workshops: Aaron Collier, Assistant Professor, Newcomb Art Department



Pictured: (Left) Guest lecture by Anthony Baab, Professor of Practice, Newcomb. (Right) Guest lecture by Anne Nelson, Professor of Practice, Newcomb Art Dept.



Pictured: AVSM 4700: Architectural Painting: Spring 2017 Exhibition at the Tulane School of Architecture Studio Walkthrough

SmartEvals!

TULANE UNIVERSITY

**TIFFANY LIN Teaching AVSM 4700 UG Architectural
Painting Seminar sec: 01 2017 Spring**

There were: 11 possible respondents.

Cross-listed with: AVSM 6700(included)

	Question Text	N	RR	My Avg	SD	Nat'l Avg	Str Agree	Agree	Nat'l Disagree	Str Disagr	
1	◇ Instructor timeliness	10	91%	4.8	0.6		90% (9)	0% (0)	10% (1)	0% (0)	
2	◇ Instructor preparedness	10	91%	4.8	0.4		80% (8)	20% (2)	0% (0)	0% (0)	
3	◇ Organized lecture	10	91%	4.7	0.5		70% (7)	30% (3)	0% (0)	0% (0)	
4	◇ Effect. deliv	10	91%	4.9	0.3		90% (9)	10% (1)	0% (0)	0% (0)	
5	◇ Objectives clear	10	91%	4.8	0.4		80% (8)	20% (2)	0% (0)	0% (0)	
6	◇ Useful syllab. prov	10	91%	5	0		100% (10)	0% (0)	0% (0)	0% (0)	
7	◇ Exams adv. notice	10	91%	4.9	0.3		90% (9)	10% (1)	0% (0)	0% (0)	
8	◇ Precise / patient	10	91%	4.8	0.4		80% (8)	20% (2)	0% (0)	0% (0)	
9	◇ Receptv. helpful	10	91%	4.9	0.3		90% (9)	10% (1)	0% (0)	0% (0)	
10	◇ Instructor's interest	10	91%	5	0		100% (10)	0% (0)	0% (0)	0% (0)	
11	◇ Perf eval fair	10	91%	4.9	0.3		90% (9)	10% (1)	0% (0)	0% (0)	
12	◇ Approp. feedbk	10	91%	4.7	0.7		80% (8)	10% (1)	10% (1)	0% (0)	
13	◇ Course imp. /useful	10	91%	4.7	0.5		70% (7)	30% (3)	0% (0)	0% (0)	
14	◇ Incr. knowl	10	91%	5	0		100% (10)	0% (0)	0% (0)	0% (0)	
15	◇ Priority	10	91%	4.6	0.5		60% (6)	40% (4)	0% (0)	0% (0)	
							Exc	Good	Okay	Poor	Terr
16	◇ Overall inst	10	91%	5	0		100% (10)	0% (0)	0% (0)	0% (0)	0% (0)
17	◇ Texts	9	82%	4.7	0.5		67% (6)	33% (3)	0% (0)	0% (0)	0% (0)

Text Responses

Question: In your opinion, what were the greatest strengths of the course?

I really enjoyed how the course integrated painting with architecture because it was a way of looking at design that I haven't been exposed to elsewhere in the curriculum. I thought the workload was manageable, but I still feel like I made a lot of work I was proud of.

Using methods/theories of painting applied to architecture, learning about color theory and different types of painting/painters.

One of the best things about the course was the contribution that other artists and professors added to the course. Tiffany and Aaron are a very good combo as they have differing insights and perspectives to provide.

The material was extremely interesting, and the professor was excited to share her knowledge, which is always a delight when the professor is enthusiastic.

Tiffany Lin was the greatest strength of the course. She was incredibly patient and went above and beyond. She genuinely cares for her students and taught me both architectural concepts as well as painting skills in one class. I never thought I could learn so much in one class. It was the best class I've taken in the school of architecture.

The content of the lectures and readings were definitely one of the greatest strengths. All content was interesting, helpful, and improved my understanding of both architecture and painting.

An elective which is very different from the regular architectural electives being taught. It gave me an insight into how paints can bring joy to life.

An effective introduction to a broad subject that most of us had no experience with. Keeping it relevant to architecture and giving us opportunities to explore our own interests within the guidance of the assignments. Oh, and Aaron Collier!

Question: In your opinion, what aspects of the course are most in need of improvement?
It would have been helpful for the course to meet two days a week because it would have given us more time to work on and get feedback on our paintings.
Could use a field trip or two - there is so much art and architecture in the city, we definitely could have taken time to see it!
I feel the students needed more time to prepare their final project. I mean, I felt I need much more time.
Class should meet more often, times to meet out of class should be more organized
I wish that we had painted one larger painting and one less triptych. Especially for the final project, I would have liked to work on one painting at a larger scale.
The class should be on two days instead of one per week.
I think it was hard to coordinate with studio. I often found myself staying up late the night before rather than being able to start earlier just because I was so busy with my studio work. I wish I had more time to spend on this class. I don't know that having two classes a week will necessarily help with the time though.
While the lectures were interesting, they often took up most of the class time. More time to paint during class would have been nice as most of the students were beginner painters. This could be solved by holding the class twice a week in order to designate time to paint together.
The assignments need to be reduced as the current amount doesn't allow the student to fully complete the work.
The architectural content could be introduced sooner -- perhaps instead of the two collage reproduction exercises a similar thing could be done with architectural sources. The final triptych (based on my studio project) was really enjoyable and helpful; it would have been nice to get to that earlier on.
Question: What were the greatest strengths of the instructor's teaching
Professor Lin was extremely enthusiastic about the class, and she gave great feedback on our work! She showed us really great precedents and inspired me to integrate art with my architectural designs.
PASSION! Tiffany has so much passion for understanding and sharing this research with us.
Conviction
Tiffany is very passionate and knowledgeable about the subject
Tiffany is so passionate about architecture and painting and passing her knowledge on. I appreciate her ability to provide the interdisciplinary experience. Painting has definitely influenced my time in the studio.
She has a wealth of knowledge and enthusiasm in the subject that is infectious.
She was very clear and very patient. She also adapted really well to every student's needs. She is by far one of the best professors I've had at Tulane. You learn so much from her.
The professor is an amazing lecturer and educator in general, but the greatest strength of her teaching to me is the investment she shows in her students' lives. The professor catered to students needs, stress levels, and schedules, while still pushing the curriculum of the class forward.
Her knowledge in the field of art and architecture made this elective a great learning for everyone. She also went outside her office hours to help improve our perception and understanding of the art that we had created.
Openness to student input and discussion. The whole class was a conversation.
Question: How could the instructor improve his or her teaching ability?
Nothing she was great!
If the class was the same time every week, I would be on time more.
Times to meet out of class should be more clear/organized
I don't know if meeting twice a week would be better, but more one-on-one time with Tiffany would be great for critiques of paintings.
None!
I think Tiffany did an excellent job teaching this class especially since it was her first year teaching it. Truly went above and beyond my expectations.
I think a little more freedom with the assignments would have been nice. This was difficult to do this year, as it was the first time holding the course and most students didn't know how to paint, but with increased class time to spend on developing painting skills, I think most students could handle less rigid assignments, and therefore produce a more diverse collection of work.
More focused in-class presentations. The content was great but our discussion frequently felt rushed and we never had time for group painting. This would probably be helped by having two classes per week.

Masquelier, Adeline M.

School of Liberal Arts
Department of Anthropology

RESEARCH SUPPORT

Education, Islam, and the Double Burden of Adolescent Girls in Niger

Introduction

In Spring 2016 I was fortunate to receive a Donor Name Faculty Grant to conduct a feasibility study on incidents of schoolgirl possession in Niger. In December 2016 I traveled to Niger during my sabbatical and conducted preliminary research on mass possession in Nigerien schools.¹ This preliminary research was conducted in Niamey, the country's capital, and Dogondoutchi, a provincial town 170 miles east of Niamey. By conducting interviews and archival research, I collected data on the reported outbreaks of possession. The information I gathered has enabled me to clarify how these "spirit attacks" 1) are variously experienced and narrated by teachers, parents, and others in local communities; 2) speak to a wider set of concerns having to do with development, Islamic identity, indigenous knowledge, the environment, and visions of a good life.

Girls' Education In Niger

In the wake of the shooting of Malala Yousafzai in Pakistan in 2012 and the kidnapping of schoolgirls in Chibok, Nigeria, in 2014, girls' education appears to have become the proposed solution to a wide range of issues, including poverty, fertility, human trafficking, and terrorism in the global south. If such concerns align with the Millennium Development Goals of boosting access to school and achieving gender parity, they often ignore complex social realities as well as the lived experience of the young women targeted by global educational policies implemented from the top down. At one level, my research project aims to document what happens on the ground when a singular global policy of getting girls in school is implemented in one of the

poorest countries on earth that lacks the capacity to develop a wider women's rights agenda. As an anthropologist, I seek to expose the inadequacies of telling a "single story" (Adichie 2009) about gender, schooling, and development in Niger. In-depth, explicit discussions of these issues are not entirely typical among ordinary Nigeriens. More commonly pragmatic understandings are embedded in accounts of personal fortunes and failures and in the kind of shared experience of struggling and surviving that circulate in conversations. For those who lack a voice, however, possession can become a useful medium of expression.

In the past two decades, outbreaks of spirit possession in Nigerien schools have been reported by the media. I too have heard that certain schools were especially dangerous because "spirits lived there" and, over past two decades, I have collected narratives of possession that suggest that a real struggle is taking place on the bodies of young women. When schoolgirls are attacked by spirits, classroom activities are disrupted, and local administrators are occasionally forced to shut down the school. Exorcists may be brought in to free the victims from their spiritual tormentors and cleanse the school from evil influence so classes can resume. Girls who have been possessed are often unable to return to school and proceed with their studies.

¹ Education here refers to schooling based on the Western, co-ed model. There are other models of education in Niger implemented in Qur'anic schools (where students read and memorize the Qur'an) and in Islamic schools (institutions of advanced learning where students are exposed to specialized branches of Islamic learning). These are not the subject of this study.

Niger has the lowest literacy rates in the world. This makes Niger ground zero for the implementation of policies aimed at boosting girls' enrollment in school. Since the World Bank has become a key player in global education policy, countries like Niger

have been encouraged to improve girls' access to school—regardless of the quality of the education they provide or their capacity to enable girls to learn. According to the World Bank, girls' education is the best investment for development. In Niger, it has become the yardstick by which the country's development is measured. In school, girls learn that the country has a major investment in them. This places enormous pressure on their young shoulders.

Paradoxically, girl's education is routinely devalued by conservative Muslim religious authorities who insist that adolescent girls don't belong in school. Attending school, many Muslim religious leaders claim, puts young women's sexual purity at risk. Parents are pressured to pull their pubertal daughters out of school and marry them off. Though many of them are aware of the tangible material rewards associated with Western education, parents nevertheless worry about their daughters' safety given the prevalence of sexual violence in schools. Hence while access to school has dramatically expanded in the past two decades, very few girls finish their studies. Over half the girls in Niger are married by or before their fifteenth birthday.

As a state of altered consciousness during which the human "host" is invaded by an alien "spirit" in need of a human voice, spirit possession enables people to say things they are otherwise not able to communicate because of the sensitive or private nature of the information or because of who they are. My research aims to explore what role spirit possession plays in dramatizing the anxieties of female adolescents caught in polemics about the perils and possibilities of Western education. I hypothesize that the possession episodes are indirect attempts on the part of adolescent women to come to terms with the conflicting messages they are exposed to, on the one hand, they must attend school and, through their scholarly and professional achievements, become symbols of Niger's development. On the other, they must marry early and, as wives and mothers, turn themselves into symbols of Nigerien society's moral order. Being pulled in one direction by Western education

and in another by Islamic models of marriage and womanhood has a cost, which possession translates into a pathology. Girls who suffer from spirit attacks must be healed before they can return to the classroom—if they return at all.

During my feasibility study, I spoke with teachers, school principals, and parents, as well as Muslim and Christian religious specialists who have conducted exorcisms. I was unable to consult with local authorities involved with educational policy, but I have contacted a wide variety of individuals who have agreed to be interviewed when I return to Niger. I have also identified a number of schools whose history I plan to reconstruct in detail.

Religion And Ecology

Significantly, the spirit attacks that have taken place in schools do more than shed light on the conflicts schoolgirls experience in a society where schooling is controversial. They also speak to broader issues at the intersection of religion, society, and ecology. When questioned by religious specialists, the possessing spirits reveal how the construction of schools has led to the cutting of trees, a trend that has resulted in the loss of their habitat. Trees are part of a broader cosmology that has been profoundly disrupted by the occupation of all available farmland and the shift toward private property. The loss of tree cover is also associated with the promotion of Islamic law in Niger, which allows the individual ownership of land. The girls' possession seems to compel people to confront the consequences of desertification and urbanization. It is, I suggest, a commentary on a forgotten kind of ownership as stewardship that is profoundly at odds with Islamic notions of property and personhood.

Why girls who have little to do with farming and are typically removed from questions of environmental sustainability evoke these issues when they are possessed is a question I have yet to answer. To explore these issues further, I recently applied for funding from the National Geographic Society. If awarded funding, I will document the history of sacred natural sites and explore people's knowledge



of these sites, focusing on one particular region of Niger. As individual landmarks or as part of a sacred grove, these sacred trees exemplify how symbolic systems continue to affect people's management of the environment in a region currently threatened by desertification and soil degradation. The proposed research will piece together a picture of a landscape where forests, people, and spirits met.

Documenting the history, significance, and politico-legal status of these sacred trees and sacred groves will provide insights into the complex ways in which religion and ecology intersect in this region of the Sahel. At a time when efforts to combat desertification and enhance biodiversity are underway, the data collected will facilitate the potential for local discussions of how religion relates to environmental protection.

Future Research On Girl's Education

I plan to conduct another short trip to Niger (supported by my Donor Name Grant) before applying for funding from the Wenner-Gren Society for Anthropological Research to conduct extensive research on schoolgirl possession. A main question I will seek to answer is what can spirit possession (and the narratives/commentaries it generates) tell us about the challenges young women face in competitive school environments when the goal of governments and non-governmental organizations is all too often limited to getting girls in school, and the wider issues of gender inequality are pushed aside. I am very grateful to Donor Name for the support I have received to conduct this preliminary research.

Once the research is completed, I plan to write a monograph on how spirit possession provides a forum for the articulation of two sets of concerns, one located at the intersection of gender, education, and development, and the other located at the intersection of religion, ecology, and sustainability. Support from the Donor Name Faculty Grants will be acknowledged in any publication that results from this research.

Respectfully submitted,
Adeline M. Masquelier, PhD
Professor
Department of Anthropology
School of Liberal Arts

Reference

Adichie, Chimamanda Ngozi. 2009.
The Danger of a Single Story.
https://www.ted.com/talks/chimamanda_adichie_the_danger_of_a_single_story

Mayer, Vicki A.

School of Liberal Arts
Department of Communication

OTHER

The objective of this grant is to support the ongoing development of coordinated digital humanities (DH) projects across Tulane and in partnership with local universities, archives, and community nonprofits. The grant was to assist a PhD student over 12 months to develop better coordination operations for a more seamless interfacing between institutions in the NOLA Digital Consortium, as well as Tulane faculty and students contributing to the affiliated DH projects for service-learning and community engagement. As stated in my original application, I have used 2016-2017 to recruit and train a PhD student to do this work while I am away on sabbatical (2017-2018).

To date, I have recruited the student to execute the grant functions. Jennifer Miller Scarnato is a first-year PhD student in the City, Culture, and Community program. She has an MA in Social Work and work experience in digital media. Over the past year, I have been training her to build out the consortium website with the collaborative inputs of the various stakeholders in digital humanities in the city. Over summer, I began paying her to complete

her training and slowly take over more functions of the consortium and its digital projects/presences.

I am very appreciative of having this mentorship opportunity to sustain our community network.

Respectfully submitted,
Vicki Mayer, PhD
Professor
Department of Communication
School of Liberal Arts

McCarren, Felicia

School of Liberal Arts
Department of French and Italian

INTERDISCIPLINARY FACULTY WORKGROUP

With support from a Donor Name Faculty Grant, we have been able to solidify and extend our research group on Performances, Archives, and Repertories in the French Atlantic World. Our research explores archival traces of performances on stage and in the streets of the historic Francophone Atlantic. Funds made possible the design and renewal of our website:

www.parifa.org/. There is more to be done by our webmaster, and this will take shape during fall 2017.

With funding, I was able to organize meetings with campus faculty working in New Orleans archives, and to design our next two-day workshop in which this extended group will participate. This next event will take place in October on our campus and has been co-organized by Toby Wikstrom (French) and Emily Clark (history). We were also able to apply for more funding to make this next event possible with the help of our assistant Sophie Capmartin.

On May 30th, some of us organized a workshop event “Regards et resistances: performances, archives et les figurants de l’histoire” at the Paris

Institute for Advanced Study where I have been a resident this year.

www.paris-iea.fr/fr/evenements/regards-et-resistances-performances-archives-et-les-figurants-de-l-histoire

Respectfully submitted,
Felicia McCarren, PhD
Department of French and Italian
School of Liberal Arts



Pictured: Emily Clark and Felicia McCarren at the Hotel de Lauzun (Paris IEA center) May 30, 2017.

McKinney, Laura A.

School of Liberal Arts
Department of Sociology

RESEARCH CONFERENCE TRAVEL

The grant money was used to fund travel to attend the Society for the Study of Social Problems (SSSP) annual meeting. The meeting was held in Seattle, Washington, on August 19-23, 2016. I attended the meeting as the incoming chair of the Environment and Technology Division of the SSSP. I also served as an invited “critic” on an author meets critic panel presentation featuring Jason Moore’s recently published text, *Capitalism in the Web of Life*. The discussion was lively and engaging; enabling participants to vet the author’s text, fomenting in a fruitful dialogue on the strengths and weaknesses of the viewpoints offered in the book. Thank you!

Respectfully submitted,
Laura McKinney, PhD
Assistant Professor
Department of Sociology
School of Liberal Arts
Chair, Environment and Technology Division Society
for the Study of Social Problems
Chair, International Development Research Interest
Group Rural Sociological Society

Meadows, Stryder

School of Science and Engineering
Department of Cell
and Molecular Biology

RESEARCH SUPPORT

I would like to express my appreciation for the support from a Donor Name Faculty Grant in the spring of 2016. The funding provided by this award has been key to establishing an Ehd2 mouse model that can be used to study the *completely unknown* role of Ehd2 in blood vessels. This has been a fairly long process, as this requires the continual breeding and genotyping of mice (which can be expensive and is often not straightforward). However, we are pleased that this mouse colony is now primed for experimental studies. In fact, we have collected numerous samples for analyzing blood vessel development and function. Our initial experiments suggest that Ehd2 is important for blood vessel formation, as mice lacking Ehd2 have drastic disruptions in the patterning of their vessels.

I had anticipated that this project would have been further along by this time. However, I did not accept a new graduate student into the lab last year. This obviously slowed our progress. Nevertheless, I now have a new graduate student in the lab that will be working on this project full time, and I expect that we will make fast advancements in our studies. We are very excited about elucidating the role of Ehd2

in blood vessel patterning and are optimistic that these studies will lead to future external funding. The opportunity to start this new project was greatly aided by the Donor Name Faculty Grant and will be rightfully acknowledged upon publication of any work related to this project.

I very much appreciate your interest and continued support in our research.

Respectfully submitted,
Stryder Meadows, PhD
Assistant Professor
Department of Cellular and Molecular Biology
School of Science and Engineering

Morici, Lisa A. Sammarco, Mimi

School of Medicine
Department of
Microbiology/Immunology

RESEARCH SUPPORT

In Vivo Testing of Bacteriolytic Membrane Vesicles as a Novel Therapeutic for Multidrug-Resistant Bacterial Wound Infections

Proposal Objectives:

The emergence of multidrug-resistant organisms (MDROs) represents the single greatest threat to our ability to successfully treat infectious diseases. By 2050, it is estimated that 10 million people globally will die each year from MDROs, surpassing all other major causes of death. Some bacteria, such as the Carbapenem-resistant Enterobacteriaceae (CRE), *Acinetobacter baumannii*, and *Pseudomonas aeruginosa*, possess such broad-spectrum antibiotic resistance that few available drugs remain to treat infections with these MDROs. Infection of acute and chronic wounds, such as diabetic ulcers, pressure wounds, and burns, impairs wound healing and leads

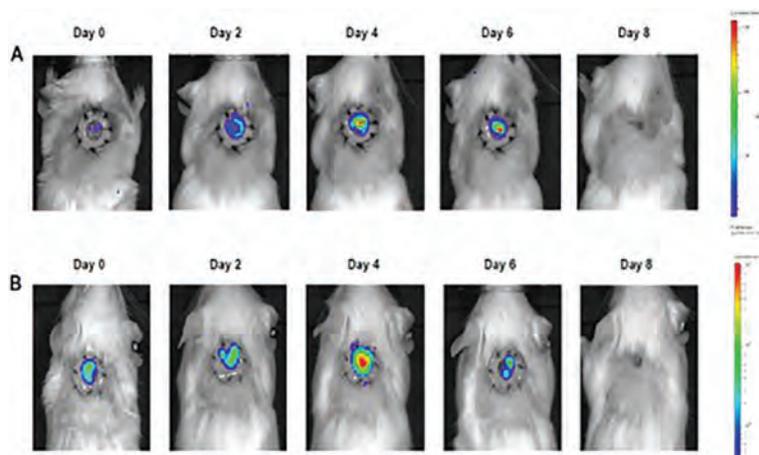
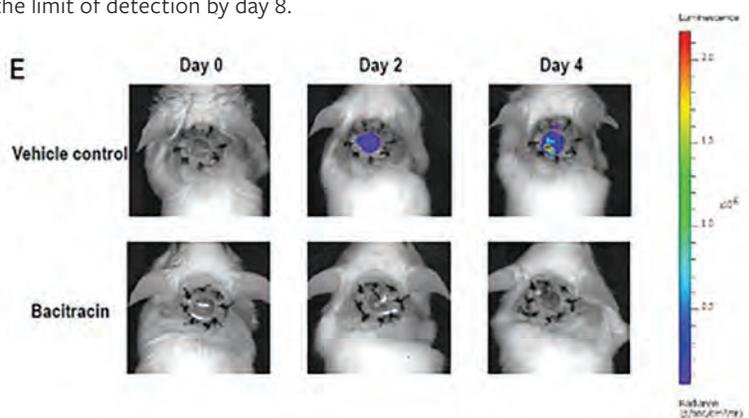


Figure 1. Representative mice in the infection model shown above. The images depict a single mouse infected with 1×10^5 CFUs of MRSA (A) or *P. aeruginosa* (B) over the course of eight days. Luminescence indicative of bacterial proliferation is visualized as a heat map thru radiance values quantified by the IVIS. Corresponding with the data in figure 2, the heat maps demonstrate that for both the MRSA and *P. aeruginosa* infected mice, the infection peaks between days 3-5 and is subsequently cleared such that radiance values are below the limit of detection by day 8.



to further morbidity and mortality. MDROs are also problematic to the military and frequently infect the type of complex wounds seen from combat. It is therefore imperative to develop novel therapeutics that can circumvent the antibiotic resistance mechanisms of these organisms. To address this need, our group has developed a novel antimicrobial product utilizing bacterial membrane vesicles (MV) that are designed to specifically degrade the bacterial cell wall, arguably the bacteria's most important line of defense. The objectives of our proposal were to:

1. Utilize a punch wound model in mice to develop a wound infection model with two priority bacterial pathogens, *P. aeruginosa* and *S. aureus*.

2. Evaluate MV safety and efficacy in vivo using the wound infection model established in Aim 1.

Research Accomplishments:

We successfully completed Aim 1 and established a robust and reproducible infection model using both *P. aeruginosa* and methicillin-resistant *S. aureus* (MRSA) (Figure 1).

This model will be used to test the efficacy of MVs as proposed in Aim 2 in the very near future. We have shown that sham-treated (vehicle only) mice fail to clear the infection, whereas mice treated with the antibiotic, Bacitracin, do clear the infection (Figure 2, marked "E" below). This work sets the stage to evaluate MVs and other novel antimicrobials developed by investigators at Tulane.

Extramural Grant Submissions:

We have already submitted two grants utilizing the infection model that we developed with the help of the Donor Name grant:

1. Louisiana Board of Regents: Research Competitiveness Support, total costs \$150K
2. NIH/NIAID: R01 Multi-PI grant, total costs \$5M

Student Training:

All of the work funded by the Donor Name grant was performed by doctoral student, Joe Hoffmann (Morici lab) and surgical resident Dr. Jessica Friedman (Sammarco lab). They have already presented a poster on their work at the Basic Medical Science Graduate student retreat held this month, and both plan to present the work at national meetings in the near future.

This work will also be a significant contribution to Joe Hoffmann's written PhD dissertation.

Respectfully submitted,
Lisa Morici, PhD
Principal Investigator
Associate Professor of
Microbiology and Immunology

Mimi Sammarco, PhD
Co-Principal Investigator
Assistant Professor of Surgery

Morris, Gilbert F.

School of Medicine
Department of Pathology

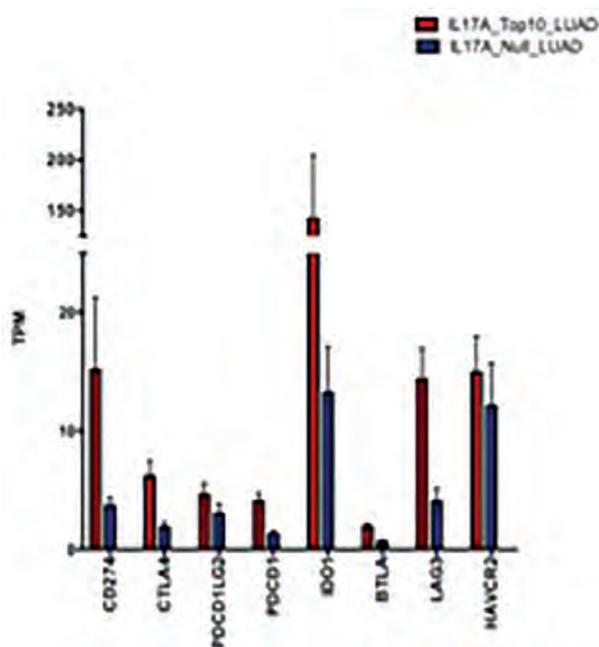
RESEARCH SUPPORT

Cigarette smoke is the underlying cause of nearly 90% of lung cancers. Smoking elicits a type of lung inflammation (Th17) dependent on an inflammatory cell type (Th17 cells) that is characterized by expression of interleukin-17A (IL-17A, the most

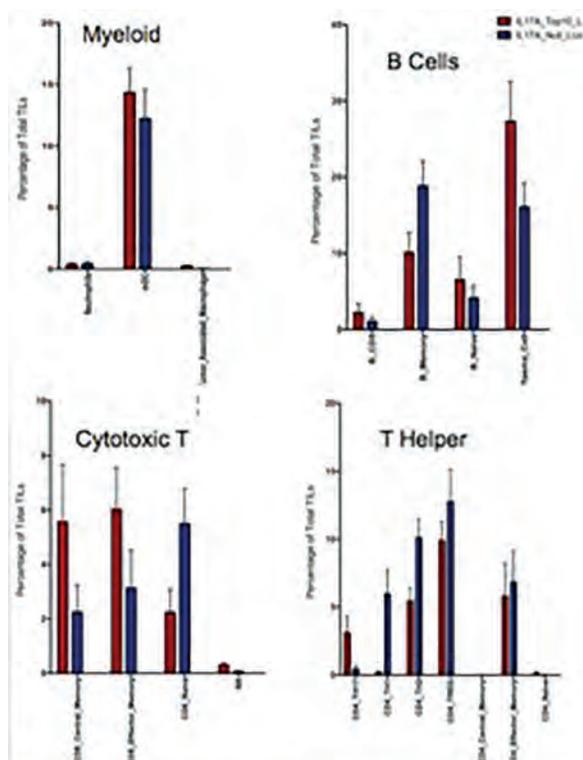
potent member of the IL-17 family of 6 cytokines, is commonly referred to as IL-17, and so hereafter). Recently, our group and others established a critical role of IL-17 in the growth of autochthonous mutant K-Ras-expressing lung tumors in mice. These findings were essential due to ambiguous observations regarding the pro- and anti-tumorigenic effects of IL-17 in tumor graft models. A goal of our research is to elucidate the mechanisms of lung tumor promotion by IL-17.

One aim is to identify mRNAs that are alternatively spliced in an IL-17-dependent manner in mutant K-Ras-expressing lung cancer cells. Further, we hope to identify equivalents in humans with the expectation that these unique splice variants will serve as biomarkers and/or therapeutic targets. To do this, we first utilized informatics and RNA-sequencing based approaches to analyze primary human lung adenocarcinoma samples. Using data obtained from The Cancer Genome Atlas, our comprehensive transcriptome analysis has shown that IL-17 expression is positively correlated with the expression of serine/arginine-rich splicing factor 1 (SRSF1), a key cellular splicing factor.

Consistently, there is a significant alteration of the global splicing activities between the IL-17(+) and IL17(-) lung adenocarcinomas, indicating that the IL-17 may affect the tumor splicing events by targeting SRSF1. Moreover, our Ingenuity Pathway Analysis has identified alteration of key cancer-related pathways, upstream regulators, and biological functions between IL-17(+) and IL17(-) lung adenocarcinomas. Taken together, our RNA-seq based transcriptome analysis of lung adenocarcinoma has revealed many previously unknown roles of IL-17 in the lung carcinogenesis. Most notably, our study showed that IL-17A drastically induces expression of immune checkpoints such as PD-1, PD-L1, CTLA4, IDO1, etc., and thus facilitates tumor immune evasion.



In accord, our RNA-seq based immune deconvolution analyses showed that IL-17A (+) human lung adenocarcinoma samples have an altered infiltration of various types of immune cells than IL-17 (-) lung adenocarcinoma.



Additionally, by sequencing RNA prepared from IL-17-treated, mutant K-Ras-expressing lung tumor cells in culture, we hope to find the overlap between alternatively spliced isoforms obtained from clinical data and those garnered from cells in culture.

Another aim is to investigate the possible protective effects of vitamin D in Th17- driven carcinogenesis through specific repression of Th17 inflammation. Indeed, our RNA-seq based Ingenuity Pathway Analysis (IPA) shows that the vitamin D signaling is inversely correlated with the IL-17 signaling in lung adenocarcinoma samples. It is well known that vitamin D insufficiency occurs more frequently in black Americans than other racial groups due to increased melanin pigmentation in the skin that absorbs UVB and thereby reduces vitamin D production. The latest lung cancer statistics show that African American men are more susceptible to lung cancer mortality with 74.9 annual deaths per 100,000 persons, which is much higher than other major American race/gender groups including white men (62.2 per 100,000), black women (36.7 per 100,000), and white women (41.1 per 100,000). To date, the underlying cause for such disparity remains unclear, and it cannot be explained by genetic variation, smoking behavior, access to health care, and other known socioeconomic risk factors. Our research plan is as follows. We will first demonstrate that lung adenocarcinomas from black males possess RNA-seq signatures characteristic of low vitamin D and high Th17 inflammation. Since cigarette smoke is a Th17 adjuvant, we will determine whether a selective Th17 inhibitor will repress the accelerated tumor growth in smoke-exposed mice. Finally, we will determine whether enhanced vitamin D signaling reduces tobacco smoke-related lung carcinogenesis by repressing Th17 inflammation. Our investigation into the link between vitamin D and lung cancer will ideally lead to a strategy that reverses the poor lung cancer prognosis in African-American men.

Although our Donor Name Faculty Grant funding started in July 2016, Christian Nguyen was unable to start on this project until December 2016 due to delays in the hiring process. Nevertheless, he

has made substantial progress in a relatively brief period.

Presentations since 7-1-16

Oral

“Modeling Murine Lung Tumors in Humans.”
Gilbert Morris, PhD, Department of Pathology and
Laboratory Medicine, Grand Rounds, 3-24-17.

“Next Generation Sequencing in Viral Oncology.”
Zhen Lin, PhD, Department of Pathology and
Laboratory Medicine, Grand Rounds, 5-5-17.

“IL-17A in the Pathogenesis of Lung
Adenocarcinoma.” Zhen Lin, Christian Nguyen,
Beibei Xu, Erik Flemington, Gilbert Morris. 2017
Thomas L. Petty Aspen Lung Conference, Aspen,
Colorado, 6-7-17.

Poster

“IL17A in the Pathogenesis of Lung
Adenocarcinoma.” Zhen Lin, Christian Nguyen, Erik
Flemington, Gilbert Morris. 2017 Louisiana Cancer
Research Consortium Scientific Retreat, 3-10-17.

Awards since 7-1-16

Fulbright Scholarship, Spain. Christian Nguyen.
Awarded March 2017.

Tulane School of Medicine Faculty Research Pilot
Program

Principal Investigator: G.F. Morris; Co-Principal
Investigator: Z. Lin

Agency: Tulane University School of Medicine and
Department of Pathology

The major goal of this project is to demonstrate that
cigarette smoke accelerates lung tumorigenesis and
alters mRNA splicing in a sex-selective manner.

Pending

Reversing the enhanced lung cancer mortality in
African-American men

Principal Investigator: Z. Lin; Co-Principal
Investigator: G.F. Morris

Agency: Department of Defense Idea Award, Lung
Cancer Research Program

This proposal will use RNA sequencing of clinical
samples and mouse models to investigate the
hypothesis that an inverse relationship between
vitamin D levels and Th17 inflammation accounts for
the reduced survival of African American males with
lung adenocarcinoma.

Respectfully submitted,
Gilbert Morris, PhD
Associate Professor
Department of Pathology
School of Medicine

Mostany Ibanez, Ricardo

SCHOOL OF MEDICINE

DEPARTMENT OF PHARMACOLOGY

RESEARCH BRIDGE FUNDING

Cortical plasticity during the estrous cycle: implications for learning

I was awarded a Donor Name Faculty Grant in the
form of a research bridge grant to support the
continuation of my research project *Cortical
plasticity during the estrous cycle: implications for
learning*, which was funded by a Louisiana Board
of Regents Pilot Funding for New Research award
(LEQSF-EPS(2015)-PFUND-416) from October 2014
to September 2015.

During the life of the current award we have
collected a great amount of new data from in vivo
imaging studies, and we were able to extract data
on density and dynamics of dendritic spines, and on
volume and morphology of dendritic spines across
the estrous cycle in female mice. In addition we
were able to obtain data on differential experience-
dependent structural plasticity of dendritic spines
induced by sensory stimulation across the estrous

cycle. It is important to note that synaptic plasticity is crucial for learning and memory. These exciting new data suggest that during proestrus and estrus the cortex is more efficient inducing synaptic plasticity than during metestrus and diestrus, therefore facilitating memory formation and learning processes. We also introduced a male mouse group to compare the results obtained with it. There are no differences in the density or turnover rate of dendritic spines of layer 5 pyramidal neurons between female and male.

We are currently preparing a manuscript on density, dynamics, and the morphological characterization of dendritic spines in the primary somatosensory cortex across the estrous cycle. We expect to have it submitted to *Frontiers in Molecular Neuroscience* by the end of July 2017 in response to an invitation to participate in the research topic *The Male and Female Brain: Molecular Mechanisms of Sex Differences*.

The Donor Name Research Bridge Fund Grant has supported the breeding and maintenance of the transgenic mice (Tg(Thy1-EGFP)MJrs (GFP-M; Stock 007788 <http://jaxmice.jax.org/strain/007788.html>) needed to complete those experiments, it has covered supplies for the surgeries and the in vivo imaging, and is partially supporting the salary of a research assistant.

Future investigations will involve the use of different lines of transgenic mice to manipulate the expression of estrogen receptors in principal neurons in the cortex. Our goal is to use the data obtained for the submission of a National Science Foundation or National Institutes of Health grant in the near future.

Please feel free to contact me if you need any additional information.

Respectfully submitted,
Ricardo Mostany, PhD
Assistant Professor
Department of Pharmacology
Tulane Brain Institute
School of Medicine

Murfee, Walter L. III

School of Science and Engineering
Department of Biomedical Engineering

RESEARCH CONFERENCE TRAVEL

Over the span of three weeks in July 2016, I visited three leading research laboratories in Germany. These included short visits with Axel Pries's laboratory in the Center for Cardiovascular Research at Charité – Universitätsmedizin and with Ferdinand le Noble at the Karlsruher Institut für Technologie (KIT). I have long shared Pries' interests in microvascular network patterning and envision that our scientific discussions will spark new questions for the both of us regarding the interdependent relationships between network structure and remodeling and le Noble is a leading expert on the regulation of arteriovenous identity and vascular patterning. During my visits, I was able to share research ideas through seminar presentations and cultivate new scientific connections with international leaders in microvascular research. The main part of my experience was a two-week visit to the Walter Brendel Centre of Experimental Medicine (WBex) at Ludwig-Maximilians-Universität München at which I conducted daily experiments in the laboratory of Markus Sperandio (professor of medicine). My own research is focused on investigating the cellular dynamics involved in microvascular growth, which is a common denominator for most pathological diseases, such as tumor growth, myocardial infarction, diabetes, and hypertension. The ultimate goal of our research is to develop new tools that allow time-dependent measurements at the single cell level in a complex tissue environment to assess functional changes and help guide diagnosis and therapeutic treatments. Today's tools provide mostly snapshots of single cells and not the movies of changes over time that could help us understand transitions from one state to another. While in Sperandio's laboratory, which is a leader in leukocyte rolling and intravital microscopy, I gained experience harvesting mice tissue and obtained proof of feasibility experiments

that has motivated a new direction for my laboratory back at Tulane. Our collaborative work has already led to multiple abstract submissions to scientific conferences and the preparation of a journal article. The WBex is a premier cardiovascular research center and was an ideal choice because my research interests overlapped with multiple laboratories. Needless to say, the immersion in Sperandio's laboratory and my discussions with other faculty were a wonderfully enriching experience. I was able to learn new methods, identify new scientific questions, and form new relationships with world leaders in research. This personal experience would not have been possible without the support of my Donor Name Faculty Grant.

Respectfully submitted,
Walter Lee Murfee, PhD
Associate Professor
Department of Biomedical Engineering
School of Science and Engineering

Murina, Andrea T.

School of Medicine
Department of Dermatology

RESEARCH CONFERENCE TRAVEL

The Donor Name Faculty Grant funding was used to attend a dermoscopy course at the American Academy of Dermatology Meeting called Dermoscopy A to Z. Dermoscopy is a non-invasive tool used by dermatologists that requires the recognition of structures in the skin and an algorithmic approach to diagnosis. Knowledge of this specific area of dermatology improves the early diagnosis of melanoma and other types of skin cancer. All types of skin cancer are increasing in incidence in the United States, including melanoma. Our goal as dermatologists is to detect melanoma early so that with early intervention, lives can be saved. As a result of this training, we have

implemented instructional lectures on dermoscopy for residents and medical students. We have also started offering total body photography for patients who are high risk for melanoma as well as the formation of a Pigmented Lesion Clinic for the clinical monitoring of these patients using dermoscopy. This type of clinic is the first of its kind in the New Orleans area, and we are proud that it is happening at Tulane.

Respectfully submitted,
Andrea Murina, MD
Assistant Professor
Department of Dermatology
School of Medicine

Norton, Elizabeth B.

School of Medicine
Department of
Microbiology/Immunology

RESEARCH SUPPORT

Improving existing research by expanding into Microbiome Research

Progress Report:

The objective of this proposal was to use Tulane Research support funding to help my laboratory perform pilot microbiome studies within current research areas. Since receiving this Donor Name Faculty grant, my lab has been able to analyze the gut microbiome using cutting-edge sequencing technology.

The samples tested came from a variety of our ongoing research experiments, totaling ~200 samples. These experiments included changes to the gut microbiome during inflammatory bowel disease, chronic viral infection, or age; and how various therapies may exert their effect through the microbiome. We are still analyzing all of our data,

but the most exciting findings to date were that fecal transfer from young mice to old mice improved their ability to respond to flu vaccination. Thus, a therapeutic ‘transplant’ of gut microbiome may assist the elderly and boost their overall health.

Respectfully submitted,
Elizabeth B. Norton, MPH, PhD
Principal Investigator
Assistant Professor
Department of Microbiology and Immunology
School of Medicine

Oliver, Christopher Scott Pealer, Casius

School of Liberal Arts
Department of Sociology

INTERDISCIPLINARY FACULTY WORKGROUP

Public Environmental Studies: Assessing Environmental Issues, Promoting Active Community Engagement, and Responding to Community Needs (EVST Workgroup)

Co-PIs:

Christopher Oliver, Phd
Professor of Practice, Sociology
and Environmental Studies

Casius Pealer, JD
Favrot Professor of Practice, Architecture
and Director, Masters of Sustainable
Real Estate Development

Summary of Activities

Over 2016-2017, EVST Workgroup (WG) held four formal meetings, as well as met less formally with visiting scholars with expertise in the field of lead pollution, lead exposure, lead remediation, and lead regulation and policy (see below for the list of speakers which EVST Workgroup members met with

through both workshops and dinners). The WG’s activities primarily consisted of two overlapping pursuits: a) assessing the approach of the city of New Orleans in regard to public engagement, risk communication, and environmental remediation in response to existing or potential lead contamination exposures; and b) the development of a working proposal to be submitted to potential funding opportunities for future research on the policy and regulation, risk communication, and logistics (e.g., identification, response, and remediation) of existing or potential lead contamination exposures of contaminated sites in Orleans Parish.

Below is a more detailed illustration of each of subgroup’s activities during 2016-2017:

Activity #1 — Public Engagement on the Potential for Lead Contamination of Household Residences and Public Spaces. The WG worked collectively to understand how government officials and regulators provide information to New Orleans residents regarding the existing and potential avenues for lead exposure, with primary emphasis on residential exposures but also examining exposures at work and in other public facilities or public spaces (e.g., schools, parks, etc.). In our efforts, we examined existing literature that is (or was) put out by the city on these issues and met with city officials associated with the regulation and oversight of lead and other environmental contaminants. Additionally, we met with officials from the mayor’s office (and associated policy consultants hired) to discuss the mayor’s office’s new task force on lead pollution. Currently, a small subgroup of our EVST workgroup is working to address these issues through local neighborhood and community groups in both housing- and environment-related fields. As part of this work, we plan to assess how much of the information coming from the city is either finding its way to the residents of New Orleans, as well as what types of information are absent from the literature that is reaching the city’s residents.

Activity #2 — Development of a Research Proposal for Study of Lead as an Environmental Contaminant.

The EVST workgroup spent most of the spring and early summer 2017 developing the preliminary framework for a research grant proposal. The primary emphasis of the proposal is for research to assess the processes, logistics, risk/science communication, and the policy and regulation of lead as an environmental contaminant within Orleans Parish. However, we are also working with a group from University of California at Berkeley (UCB) (Michael Mascarenhas, Environmental Studies, UCB - also see below for his talk at Tulane in Spring 2016) to potentially develop a co-sponsored project examining these issues in multiple urban US metropolitan areas. The UCB study group has been working on events surrounding the Flint, Michigan lead contamination disaster for the past two years, paying particular attention to issues of environmental racism and environmental justice. We are hoping to collaborate with this group by using New Orleans as one case study among possibly 6-8 other urban metros who are also experiencing high levels of lead in their waters, soils, air, and residences. Currently, the EVST WG is using the summer and coming fall to further refine our segment of this research through archival, policy, and institutional analysis of past and current approaches to lead pollution policy.

Co-sponsored events partially funded through this grant (note: each of these events were co-sponsored with the EVST Focus on the Environment Speaker Series 2016-2017):

Barbara Allen
Professor of Science and Technology in Society,
Virginia Tech University - Capitol Campus Thursday,
October 20, 2016, @ 6:30 PM
Location: Richardson Memorial Hall Room 201

Gerald Markowitz
Distinguished Professor of History, John Jay College
/ City University of New York (CUNY) Graduate
Center Wednesday, November 9, 2016, @ 6:30 PM
Location: Richardson Memorial Hall Room 201 /
J. Herndon Thomson Hall

Michael Mascarenhas
Rensselaer Polytechnic Institute, Troy, New
York (now University of California at Berkeley,
Environmental Studies)
Title of talk: Lies in the Water: Illiberalism, Racism
and the Tragedy of Flint
Date: Wednesday, March 8, 2017, @ 6:00 PM
Location: Woldenburg Art Center, Room 201

David Rosner
Columbia University
Date: Wednesday, March 15, 2017, @ 6:00 PM
Location: Stone Auditorium, Woldenburg Art Center
[Co-sponsored with Thomas Beller, English and
William L. Duren Professor, 2016-2017] [CANCELED
DUE TO WEATHER/TRAVEL ISSUES]

Future Activities:

Public Engagement on Lead in New Orleans: We plan to continue our work with both the city of New Orleans and local neighborhood and community groups working in both housing- and environment-related fields to assess how government officials and regulators provide information to New Orleans residents regarding the existing and potential avenues for lead exposure, with the expressed intent of implementing a cooperative framework to enhance these efforts and provide effective communication regarding existing and potential risks.

Research Proposal for Study of Lead as an Environmental Contaminant: We will continue our interdisciplinary work towards a proposal to seek extramural funding (e.g., Environmental Protection Agency, National Science Foundation, National Institute of Environmental Health Sciences) to continue our research on risk and science communication and policy regulatory framings of the issue of lead as an environmental contamination within Orleans Parish, as well as working with the UCB study group with the hope of a developing and implementing cooperative study that broadens our work to other US cities.

List of EVST Workgroup Participants

Participants - Tulane affiliates:

Christopher Oliver, Sociology / Environmental Studies / Urban Studies / City, Culture, and Community Program (Tulane) (co-organizer/co-PI, EVST Workgroup) (meeting facilitator)

Casius Pealer, Architecture and Director, Sustainable Real Estate Program (Tulane) (co-organizer/co-PI, EVST Workgroup)

Thomas Beller, English / EVST (Tulane)

Steve Ostertag, Sociology (Tulane)
David Morris, Sociology (Tulane)

Theo Hilton, Anthropology (Tulane),
doctoral student

Dustin Robertson, City, Culture, and Community Program / Urban Studies (Tulane) doctoral student

Participants - Non-Tulane affiliates:

Eban Walters, Kipp Schools and Psychologist
(non-Tulane affiliate) (PhD, Vanderbilt)

Respectfully submitted,
Christopher Oliver, PhD
Professor of Practice
Department of Sociology and Environmental Studies
School of Liberal Arts
City, Culture, and Community Program / Urban Studies, Affiliated Faculty

Casius Pealer, JD
Favrot Professor of Practice, Architecture
and Director, Masters of Sustainable
Real Estate Development
School of Architecture

Oliver, Christopher Scott Ostertag, Stephen F.

School of Liberal Arts
Department of Political Science

RESEARCH SUPPORT

Assessing Neighborhood Resources, Needs, and Concerns in Changing Times

Summary of Activities:

Pilot Questionnaire:

Our pilot study last summer (2016) attempted to examine and understand the basic needs and concerns of residents living and working in the Tulane/Canal/Gravier (TCG) neighborhood of New Orleans. We sought to assess the opinions local residents, business owners, and New Orleans residents living in adjacent neighborhoods who frequent the TCG community by examining their perspectives on the existence and efficacy of a variety of city services and neighborhood conditions/qualities, all in an effort to understand the extent to which people's needs are being met, to inform ideas on how to better address those needs, and to understand how people adapt to significant urban changes. As part this work, we developed a mixed methods approach using a combination of existing quantitative data (e.g., City of New Orleans, Data Center, and US federal sources such as census data and Housing and Urban Development) and ethnographic interviewing and a social science survey approach. We developed a pilot questionnaire using an open-ended format, which allowed participants to discuss and elaborate on their concerns in an attempt to bring attention to issues not necessarily known prior to the start of our research. The survey was administered by three teams of two individuals - each team was led by a faculty member (Ostertag and Oliver) or advanced graduate student (Cate Irvin, doctoral candidate in Tulane's City, Culture, and Community Doctoral Program) and then was further comprised of one undergraduate student each (drawn from students



enrolled in the Tulane School of Liberal Arts Summer Program in Urban Ethnography during summer 2016).

The results of our questionnaire were mixed, in part directly affected by the difficulties of recruitment. Further, since we used this initial opportunity to also mentor and teach graduate and undergraduate students how to develop and administer open-ended questionnaires, we experienced some methodological “unevenness” in responses. Nevertheless, this pilot questionnaire provided us with an excellent opportunity to understand how the respondents would view and answer each of the questions, allowing us to gauge which questions were effective and which needed to be either revised or removed from the survey.

Analysis of Housing Issues:

Related to the work described above, one of the project’s PIs (Oliver) embarked upon a parallel research project examining the encroachment of tourism and tourism-related activities (e.g., Airbnb, Uber, other service-based tourism activities), with particular attention given to short terms rentals (or STRs) and their consequences (e.g., housing access and affordability). Through the use of existing data sources, including the recently established City of New Orleans short term rentals database, Oliver developed a multi-year model to see if there are any relationships between the rise of STRs in (and adjacent to) TCG neighborhood and housing changes. This work includes several other New Orleans neighborhoods to try to understand the interrelated aspects of housing affordability and mobility among both TCG community members and those who work in TCG businesses. As part of this work, we hired a graduate student (Isaac Freitas, a doctoral candidate in Tulane’s City, Culture, and Community Doctoral Program) to collect secondary data and analyze them using STATA and to put some of the geocoded data in a GIS for spatial analysis.

The preliminary results of this work were presented at a professional conference in Montreal, Canada in August 2017.

[Please note that both Cate Irvin and Isaac Freitas were paid through a combination of funds from this Donor Name Faculty Grant and from funds provided by the Tulane Center for Public Service (CPS) to Ostertag and Oliver as part of Summer Program in Urban Ethnography during Summer 2016]

Future Plans for Research:

- A. **Narrowing of Substantive Concerns:** As we move forward, we’ve narrowed the scope of future work to issues directly related to housing, employment, and community effects. One aspect will address the issue of housing affordability, while others will examine issues of crime and neighborhoods stability. Within this, we plan to continue our work regarding urban development associated with the two new medical centers, identifying if there have been any direct consequences on housing accessibility and affordability. Further, we plan to examine the continuing encroachment of tourism and tourism-related activities (e.g., Airbnb, Uber, other service-based tourism activities) and their consequences (e.g., wages, employment, and access/affordability). Lastly, we will continue our conversations regarding changes in the neighborhood and their relationship to changes in crime and associated consequences.
- B. **New Survey Instrument:** We plan to expand upon our existing survey by adopting new questions to better examine and illustrate the above issues as related to the new developments along the Tulane Avenue Corridor, paying particular attention to the areas being directly impacted by the two new large medical complexes: the University Medical Center (UMC) and the federal Southeastern Louisiana Veterans Health Care System facility, both located next to each other along Tulane Avenue (and bordered by Canal Street to the northeast).
- C. **Ethnographic Work:** We plan to continue to recruit neighborhood residents and employees to take part in open-ended, ethnographic interviews and/or focus groups.

These data (survey and ethnographic data) will allow us to continue to explore and assess people's opinions of city services and neighborhood characteristics in a way that allows participants significant control over identifying and elaborating on important topics. Once collected, this study should provide ample evidence highlighting pressing issues and concerns among area residents and employees, reveal how participants would like to best address these concerns in the future and uncover how residents adapt to significant social changes.

- D. Quantitative Data Analysis: We plan to access and analyze existing quantitative data sources (e.g., City of New Orleans, Data Center, US federal sources such as Census data and HUD) to examine and illustrate the various community changes regarding neighborhood demographics.

Professional Presentations:

Oliver presented the preliminary results of his work on short terms rentals (or STRs) and their consequences on housing access and affordability at the Society for the Study of Social Problems (SSSP) in Montreal, Canada in August 2017. Ostertag and Oliver attended these meetings (held in conjunction with the meetings of the American Sociological Association).

Respectfully submitted,
Christopher Oliver, PhD
Professor of Practice
Department of Sociology
School of Liberal Arts

Co-Project Investigator
Stephen Ostertag, PhD
Professor of Practice
Department of Sociology
School of Liberal Arts
Co-Project Investigator

Oliveros, Virginia

School of Liberal Arts
Department of Sociology

RESEARCH CONFERENCE TRAVEL

In 2016 I was awarded a Donor Name Grant to attend the European Political Science Association General Conference (Brussels, June 23-25). The paper I presented "The Differential Impact of Weberian State Structures in Patronage States: Evidence from a Conjoint Survey Experiment," co-authored with Christian Schuster, University College London, has been accepted for publication at one of the most important journals in the field: *Comparative Political Studies* (available online first since June 2, 2017. DOI: 10.1177/0010414017710268). The feedback received at the conference was key for such a successful outcome.

Respectfully submitted,
Virginia Oliveros, PhD
Assistant Professor
Department of Political Science
School of Liberal Arts

Pandey, Kailash N.

School of Medicine
Department of Physiology

RESEARCH BRIDGE FUNDING

Ongoing research on hypertension and cardiovascular diseases

Progress Report:

The Donor Name Grant has been very critical and helpful to the progress of our ongoing research projects on hypertension and cardiovascular diseases. We have established the guanylyl cyclase/natriuretic peptide receptor-A gene (Npr1)-Floxed mice and tissue-specific conditional nephron tubule

(NT)-, podocyte (PD)-, cardiomyocyte (CM)-, and smooth muscle (SM) cell-specific Cre mice colonies.

The Donor Name fund was very critical to genotype the breeding pairs and to establish these mouse colonies at Tulane University Health Sciences Center, which are now being used for our ongoing research programs. The grant support has helped to secure one of my competing renewal NIH grant projects (HL062147: 04/01/17 – 03/31/21).

During the grant funding period, we have established and expanded our NT-, PD-, CM-, and SM-specific conditional Npr1^{-/-} mice colonies. We hope to generate and expand these important mouse models during 2017 to obtain preliminary data to submit second competing renewal and new NIH grant applications. The fund has been extremely important and critical to continue and support our ongoing research activities, which is vital to generate the continuing competing and new NIH grant fundings in the field of hypertension and cardiovascular diseases.

Budget Report:

We have carefully managed the budget to support the expenses, which will help to generate the critical preliminary data. We have used some expenditures with supplies and mice related expenses. We would like to request to utilize the remaining balance in the budget period of July 1, 2017 – June 30, 2018. The remaining fund, which we have carefully saved, will be utilized to collect new preliminary results, which would be very important and critical to submit revised competing renewal and new NIH grant applications.

I am respectfully requesting your kind approval for the extension of this current CLB Award and the remaining balance will be utilized during the period of July 1, 2017 – June 30, 2018. Thank you very much for your kind support.

Respectfully submitted,
Kailash N. Pandey, PhD
Professor
Vice Chair of Research
Department of Physiology
School of Medicine

Park, Hee-Won

School of Medicine
Department of Biochemistry and
Molecular Biology

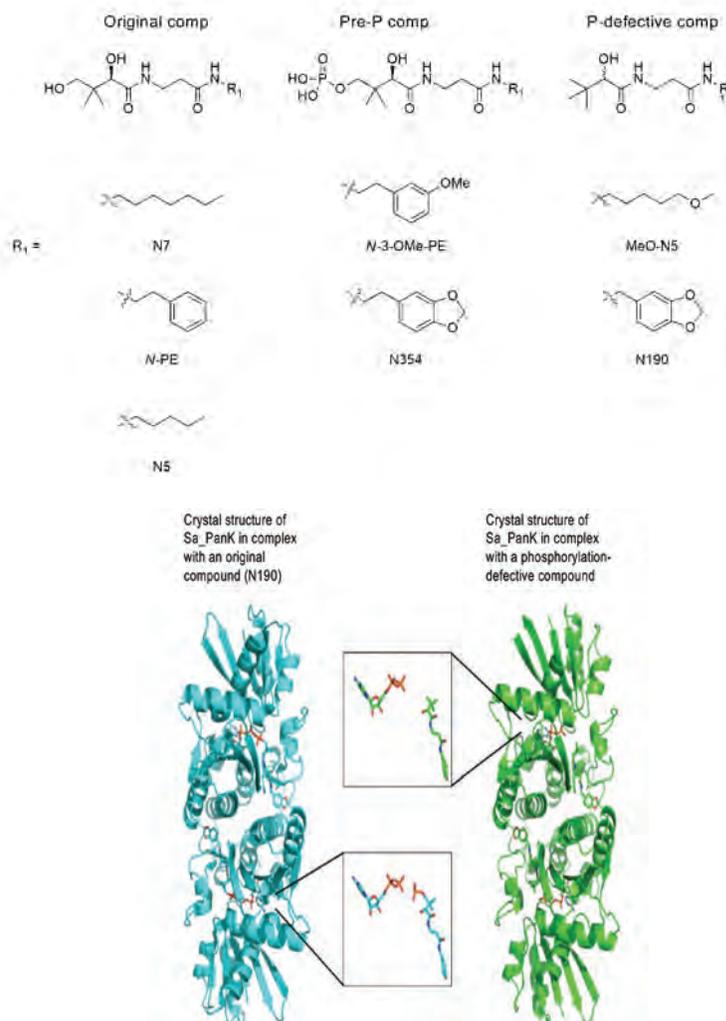
RESEARCH BRIDGE FUNDING

Structure-guided optimization of antimicrobial vitamin B analogs

Our immediate goal of the current project is to target pantothenate kinase from *Staphylococcus aureus* (Sa_PanK) and lipoate-protein ligase A from *Enterococcus faecalis* (Ef_LpIA) in order to develop narrow-spectrum antibacterial agents using the structures of Sa_PanK and Ef_LpIA in complex with respective inhibitors as a guide. To be productive within one year of the Donor Name Faculty grant period, however, we focused on the Sa_PanK project. In our last publication, we tentatively determined the mechanism of inhibition for the original compounds we tested.

While these compounds are substrates of Sa_PanK for the phosphorylation reaction, the phosphorylated products are stayed bound at the active site and block the binding of authentic substrates to shut down the reaction. To confirm this mechanism, we synthesized phosphorylation-defective and pre-phosphorylated compounds (see below), which are otherwise the same as the initial compounds.

To characterize the new phosphorylation-defective and pre-phosphorylated compounds, we measured



the concentration of each compound where the reaction is reduced by half (IC₅₀) using the coupled reaction of pyruvate kinase and lactate dehydrogenase. We also measured the binding affinities (K_d) of all the compounds using isothermal titration calorimetry. The IC₅₀ and K_d values of the new compounds correlate well with those of the corresponding original compounds. The exception was the pre-phosphorylated N7 compound, which showed poorer inhibition of and binding to the enzyme. Further experiments are needed to confirm this result.

To understand how the new compounds behave similarly to the original compounds in terms of inhibition and binding, we determined the crystal

structures of Sa_PanK in complex with several of the new compounds. As expected, comparing the crystals structures Sa_PanK in complex with the original compounds shows both the new compounds and the original compounds share the common binding mode (see below, the middle column). This finding suggests that the inhibitory effects of the original compounds are independent of their capability to be phosphorylated.

Using these exciting data, we are writing a manuscript for publication. Further, we submitted a grant preproposal at a peer-reviewed medical research program at the Department of Defense in the summer of 2017.

Respectfully submitted,
 Hee-Won Park, PhD
 Associate Professor
 Department of Biochemistry and Molecular Biology
 School of Medicine

Pfrimmer, Amy Elizabeth

School of Liberal Arts
 Department of Music

RESEARCH SUPPORT

First, let me say how profoundly thankful I was to receive a 2016-2017 Donor Name Faculty Grant. The support, particularly towards publication and distribution costs, allowed me to complete two promised commercial recordings released under the MSR Classics label. *Souvenance* is a collection of César Franck's *mélodies* and organ works, while *Eternal Life* is a compilation of sacred songs, arias, and spirituals, by such composers as Mendelssohn, Fauré, Gounod, Mozart, Malotte, Franck, and Schubert.

Commercial recording was an entirely new process, and significant learning experience, for this musical artist. Also, importantly, completing these recordings was a primary recommendation of my third year, mid-tenure review. In the process, I learned about countless production aspects.

The actual recording of all music for both CDs was completed during fall 2016. The first, *Eternal Life*, includes classic sacred songs, arias, and spirituals. Production needs I learned included how to deal with Tulane Facilities Services – frequently on my speed dial during August and September when the A/C was out in Rogers Chapel, our recording location. In order to complete the recording, we relocated to Loyola University's Nunemaker Hall. Also new to me was the editorial process of researching and writing a liner, editing musical takes, as well as splicing and

mixing to create a professionally polished look and sound. The CD recording was released in February 2017. At that time, in anticipation of potential Lenten/Easter season audiences, I authorized an early release of the digital recording through amazon.com, iTunes, Google Play, and other digital distribution sources.

In October, I traveled to Strasbourg to record Franck *mélodies* for a CD with my partner Thomas Kientz. We were allowed to use facilities of the L'église St. Guillaume that lent a beautiful acoustic and ambiance to the recorded music. I combined that trip with opportunities to sing invited concerts at the American Cathedral in Paris, and L'église St. Eustache, Paris. The American Cathedral concert was part of *Les Georges Arts V* series and included classical songs (including Franck *mélodies*), arias, and spirituals performed with my collaborative pianist Thomas Kientz.

The St. Eustache concert, part of the historic Paris church's Sunday organ *audition* series, was performed before a packed house and included repertoire for organ and voice. For that concert, my partner was organist Thomas Ospital, and we performed Louis Vierne's *Les Angelus*, as well as music of Gabriel Fauré, Jehan Alain, and Francis Poulenc.

The second recording is entitled *Souvenance: Mélodies and Organ Works of César Franck*. As previously mentioned, the music was recorded in Strasbourg, France. My partner for the CD was pianist/organist Thomas Kientz, and our Strasbourg recording engineer was Jean-François Cardonne. Together we worked to select the best takes of each piece. I brought the raw recorded material back to New Orleans and worked with recording engineer Jay Crutti on editing and mixing. I also wrote the liner, created the track order, and worked with MSR publisher Robert LaPorta on the editing of the liner booklet and the look of graphics. *Souvenance* was released in April 2017, and the digital release will happen following the customary six-month period following the release of the disc.

The goals of my grant proposal were met with both recordings created under contract with MSR Classics label, MSRCD.com. Both recordings became commercially available in spring 2017. As an added bonus, pianist/organist Thomas Kientz, my Franck recording partner, and I organized two concerts and a lecture that took place in Strasbourg this summer – a concert featuring the sacred music of César Franck, a lecture regarding the music of Franck and details of our project, and a concert featuring the music of our recording, *Souvenance*. Dependent upon when Kientz can return to New Orleans, we will also program a New Orleans area concert promoting the CD.

I am incredibly grateful to Donor Name for this important financial backing.

Respectfully submitted,
Amy Pfrimmer, MM
Assistant Professor
Lillian Gerson Watsky Professor in Music
Newcomb Department of Music
School of Liberal Arts

Pursell, Zachary F.

School of Medicine
Department of Biochemistry
and Molecular Biology

RESEARCH SUPPORT

Progress Report

Cell line construction

The first aim of our proposed studies was to use CRISPR-mediated gene targeting to introduce two of the remaining Pol ϵ cancer-associated mutations into human cell lines. We were successful in doing so. In fact, we were also able to use the Donor Name Faculty Grant funds to successfully knock-in an additional allele of Pol ϵ and two cancer-associated mutations of another critical DNA polymerase,

Pol δ . We were able to make each mutation in both mismatch repair-deficient and –proficient cell lines.

Define contributions of Pol ϵ EDM mutants to spontaneous mutagenesis

We had previously characterized the genome- and exome-wide mutational spectra in human cell lines caused by a model Pol ϵ mutant. In the current aim, we were able to begin characterization of the L424V and V411L mutants in cell lines using a reporter assay system. We demonstrated that both Pol ϵ alleles are moderate to strong mutators in human cell lines, regardless of their mismatch repair status. We submitted seven Pol ϵ mutant and control cell lines to a commercial service for whole-exome sequencing in early May 2017. The samples passed quality control, and we are currently awaiting delivery of the mutation report.

Support for applications for external funds

The most substantial benefit of these funds was in helping the PI submit a highly competitive National Institutes of Health R01 proposal. We used these preliminary studies in support of an NIH R01 application in October 2016. This proposal was scored very well, with an impact score of 17 and percentile of 3.0%, well within the National Institute of Environmental Health Sciences pay line. **Thus, this Donor Name Faculty Research Grant had a direct positive impact on a likely to be funded NIH R01 proposal.**

Budget Report

The funds were used essentially as described in the initial budget, with one modification. The CRISPR reagents cost approximately \$1,000. The whole-exome sequencing cost approximately \$5,000. The modification involved the conference attendance. We were able to use the same budgeted funds to support the attendance of both the PI and his senior graduate student at the Joint Keystone Symposia of Genome Stability and DNA Replication in Santa Fe, New Mexico in April 2017.

Remaining Work

As noted above, we are currently awaiting the results from the whole exome sequencing. Based on our

preliminary reporter gene studies, we anticipate the whole-exome studies to validate the human tumor sequencing studies. We anticipate submitting these results as part of a manuscript in Fall 2017.

Respectfully submitted,
Zachary F. Pursell, PhD
Assistant Professor
Department of Biochemistry and Molecular Biology
School of Medicine

Reuber, Alexandra Maria

School of Liberal Arts
Department of French and Italian

RESEARCH CONFERENCE TRAVEL

Thanks to the additional funding awarded by the Donor Name Faculty Grant, I was able to participate in this year's National Conference of the Popular and American Culture Association (PCA/ACA), during which I presented my latest research on the fiction of Stephen King. In my paper entitled "Gothic Recall: Stephen King's Uncanny *Revival* of the Frankenstein Myth," I examined Stephen King's recent novel *Revival* (2014), the author's new attempt at rewriting Mary Shelley's gothic masterpiece *Frankenstein or the Modern Prometheus* (1883) as well as one of his own first literary appropriations of the Frankenstein myth, *Pet Semetary* (1983). While highlighting Shelley's strong influence on King's novel *Revival*, my study of the text went beyond an examination of King's transference of typical 19th-century gothic archetypes into a 21st-century American setting.

In my psychoanalytical reading of King's text, I focused on the novel's main character, Reverend Jacobs, and his sudden loss of his child and wife. While starting out with King's depiction of the man's pathological mourning of his beloved external objects, my psychological reading of the text soon

took the audience down a very dark path of a highly traumatized mind. It allowed for the discovery of the Reverend's cluster B personality disorder: the dark triad, a disorder that is composed of Machiavellianism, psychopathy, and narcissism. This being said, my analysis showed that King's novel *Revival* goes far beyond a simple revival of the Frankenstein myth and its implied danger of scientific experiments gone wrong. It questioned the impact of a (lost) object on an unstable, yet, false notion of self, and by doing so, on the development of selfhood itself.

My paper was very well received, and it looks like as if it will be accepted for inclusion in a volume of collected essays focusing on Stephen King's contemporary fiction; a volume that most likely will be published by one of Rowman and Littlefield's publishing houses. Moreover, another publisher approached me, after having listened to my paper and encouraged me to turn it into a monograph.

As you can see, while representing Tulane University, I gained a lot from attending this year's PCA conference. Not only did my conference participation allow me to bring my research ideas to fruition and to pursue publication venues, but also to strengthen existing contacts in the field as well as making new ones. Without your support, this would not have been possible. Thank you so much for providing me with your funding.

Respectfully submitted,
Alexandra Reuber, PhD
Senior Professor of Practice
Department of French and Italian
School of Liberal Arts



Rodning, Christopher Bernard

School of Liberal Arts
Department of Anthropology

RESEARCH SUPPORT

Archaeology of Culture Contact: Native Americans and Spanish Conquistadors in Western North Carolina

Recent Activities

Introduction:

Broadly speaking, my archaeological research focuses on the nature of Native American responses to European contact and colonialism in the American South, particularly in the southern Appalachians, the historic homeland of ancestral Catawba and Cherokee towns and other groups. During the sixteenth century, the southern Appalachians formed the northern borderlands of the Spanish colonial province of *La Florida*. The French and English colonial presence in the American South became widespread only by the late 1600s and early 1700s, by which point the focus of Spanish colonialism in *La Florida* had shifted away from exploration and military installation to missionization and trade. Written accounts of colonial explorations and settlements shed some light on the Native American cultural landscape during these periods, but there are gaps and cultural biases in these forms of documentary evidence. Archaeology is critical towards understanding transformative episodes in Native American and European colonial history in the Americas during these periods.

Archaeological investigations of the Berry site, located east of Asheville and north of Charlotte, North Carolina, concentrate on the nature of early encounters and entanglements between the people of the Native American town of Joara, which dates to the 1400s and 1500s, and Spanish colonists based at the Spanish colonial town of Cuenca and Fort San Juan. The site gives us evidence about the built environment of a colonial outpost and a neighboring Native American “host” community.

Members of expeditions led by Captain Juan Pardo between 1566 and 1568 founded Fort San Juan and Cuenca, as well as five other forts and towns in the Carolinas and eastern Tennessee. But Fort San Juan and Cuenca, located at the edge of the powerful Native American town of Joara, was meant to become a major outpost along an overland trail connecting the Spanish colonial town of Santa Elena, in coastal South Carolina, with New Spain (New Mexico) and the Spanish silver mines near Zacatecas, Mexico. After favorable relations were formed between Pardo and the people of Joara in 1566, those relations soured in 1567, and during the spring of 1568, warriors from Joara attacked Fort San Juan and Cuenca, which were abandoned. Little is written about everyday life at the fort and town, and little is written about how the attacks took place. But our finds indicate that the town and fort were burned down and perhaps covered with earth, and structures were built near the fort to reclaim this space as part of the Native American town and community of Joara.

Funding from the Donor Name Faculty Grant program has supported some of my travel to and from western North Carolina, stipends for two Tulane graduate student research assistants to help conduct excavations at the Berry site, and the purchase of a digital camera and camera accessories for recording archaeological finds. This digital camera is now in use here on campus for artifact photography. Having these funds from your grant program has also enabled me to spend money from other sources on hiring a very promising undergraduate research assistant, on the costs of my lodging while conducting archaeological fieldwork, and on the costs of radiocarbon dates for a conference paper that two Tulane undergraduates and I are coauthoring for an upcoming conference.

Archaeological Excavations

I have been collaborating with Professor David Moore (Warren Wilson College, Asheville, North Carolina) and Professor Robin Beck (University of Michigan) on archaeological excavations at the Berry site since 2001. I helped with directing

our excavations during the summer of 2016 and the summer of 2017, as I have done in most other summers since 2001. I appreciated the support of the Donor Name grant that I received in hiring Tulane graduate assistants as field supervisors in 2017, which was critical to the success of our excavations and which enabled them to further develop their own experience and expertise as field archaeologists. Our field crews typically include students from several universities and colleges, local community colleges, and volunteers from many different places. It is essential to have capable supervisory staff members to help manage the everyday tasks of conducting excavations, recording information about those activities, and managing the artifacts found each day. Every year, we hold a public open house at the Berry site to give site tours and to talk about our recent fieldwork and recent finds, and we typically receive several hundred visitors, in addition to visitors at other points during our excavations.

During the summer of 2016, we conducted excavations in areas at the Berry site where there are remnants of Fort San Juan and a large earthen mound nearby. Excavations inside the fort revealed patterns of posts related to a large structure and a clay surface built with clay brought in from some distance away. Excavations outside the fort uncovered remnants of earthen mound stages as well as posts and hearths associated with structures in the area between the fort and the mound. These structures outside the fort might be associated with the construction of the earthen mound by the people of Joara. They might also or instead represent structures that housed the leaders of Native American towns who periodically visited Cuenca and Fort San Juan in 1567 and 1568 to meet with Captain Juan Pardo and his men.

During the summer of 2017, we continued excavations in these areas, with particular focus on the northern and western edges of the fort, where we uncovered more area associated with a large structure that may predate the fort. We dug an excavation square through the clay surface in an effort to better understand the nature and timing

of this deposit relative to other features of the fort. Hannah Hoover, an undergraduate here at Tulane is writing an honors thesis about Spanish colonial forts in the American South with particular emphasis on the results of the excavations in this area of the site. We exposed more of the ditch surrounding Fort San Juan and found evidence of pit features that intrude the fill inside the ditch (and therefore postdate the abandonment of the fort). We also found evidence that the ditch cut through the clay surface (and therefore probably represents a renovation of the fort and a re-excavation of its moat during the relatively short lifespan of the fort itself. I paid Hannah as a field supervisor in 2017 through another source of funding from here on campus, and Hannah had other funding from Tulane for her participation in our excavations in 2015 and 2016. I hired Tulane graduate students David Watt and Michelle Pigott as field supervisors in 2017 with funding from the Donor Name Faculty Grant.

Artifact Analyses

It is an axiom in archaeology that a great deal more time and effort is needed to study what we have found during the course of excavations than the time we spend excavating it. Our excavation seasons at the Berry site in 2016 and 2017 both took place in June. In July of 2016 and 2017, I drove from New Orleans to North Carolina to record observations about recent artifact finds at the Berry site, with an emphasis on sixteenth-century Spanish goods related to the Spanish domestic presence at the town of Cuenca, Spanish activity in and around Fort San Juan itself, and practices of trade and gifting with the native people of Joara. These trips to North Carolina have also enabled me to meet with colleagues and students to plan further fieldwork and related research in the near future. Funding from the Donor Name Faculty Grant supported my round-trip drive between New Orleans and North Carolina for this artifact analyses. These efforts contribute to writing a paper for which I am lead author with my collaborators and colleagues for a scholarly volume about the material culture of sixteenth-century Spanish Entradas in the American

South (*La Florida*) and the American Southwest (New Spain), and these efforts also contribute to papers presented at scholarly conferences. Some of the most exciting artifact finds that my colleagues and our students and I have made at the Berry site in recent years include iron nails, iron armor fragments, carved soapstone pipes, lead shot, at least one iron crossbow bolt, and soapstone pendants that may have been cut by metal tools (therefore representing craftsmanship by Spaniards rather than Native Americans).

Scholarly Conferences

I have been author and coauthor of six conference papers related to this research in 2016 and 2017, including annual conferences of the American Anthropological Association, the Southeastern Archaeological Conference, and the Society for American Archaeology (SAA). I am author and coauthor of five additional posters and papers scheduled for late 2017 and 2018, including annual meetings of AAA, SAA, and SEAC, as well as the Society for Historical Archaeology (SHA).

Scholarly Publications

I am co-editor of one scholarly book and author or coauthor of two journal articles and chapters in two edited volumes about topics related to this research that have been published in 2016 and 2017, including co-authored articles in *American Antiquity* (the flagship journal of the SAA) and *Historical Archaeology* (the flagship journal of the SHA). I am sole author of a paper about the archaeology of Cherokee religion in a newly released scholarly volume, *Religion and Politics in the Ancient Americas* (edited by Stacy Barber and Arthur Joyce, Routledge, London, 2018). I am lead author with several Tulane graduate students of a chapter about chaos theory as an interpretive framework for studying the cultural dynamics of the contact period in the Native American South for a forthcoming edited volume, *Everyday Matters in Southeast Archaeology* (edited by Philip Carr and Sarah Price, University Press of Florida, Gainesville, 2018). I am lead author for two different papers currently in preparation with Tulane students as coauthors,

for different scholarly edited volumes slated for submission to the University of Alabama Press and the University Press of Florida in 2018, as well as lead author for three additional chapters for two edited volumes that also will be submitted for consideration by the University Press of Florida in 2018.

Summary

Coupled with funding from other sources, the generous support from the Donor Name Faculty Grant Program has promoted archaeological research on the nature of Native American responses to European contact in the American South. It has enabled the participation of three undergraduate students and two graduate students from Tulane in this research, both in the course of fieldwork and in the course of analyses of archaeological finds and scholarly writing about them. It has enabled my participation in several scholarly conferences, and it enabled the purchase of a digital camera and camera accessories that have been useful in these activities, and that is still available for use by Tulane faculty and students here on campus. One of the undergraduate students who has participated in this project—not directly supported by the Donor Name grant, per se, but supported by other Tulane sources and indirectly supported by Donor Name grant support for my own involvement—is now a graduate student in anthropology at Harvard University. Another undergraduate who has graduated to the level of field supervisor status in our project is currently a candidate for Rhodes and Marshall scholarships, and she is one of 20 recipients of the Beinecke Scholarships for 2017 for prospective graduate students in all disciplines. She is also completing an honors thesis at Tulane this year on a topic related to her involvement in our recent seasons of archaeological fieldwork at the Berry site. One of my Tulane graduate assistants from 2017, funded directly from the Donor Name grant, is my co-author for a paper at a digital symposium about global perspectives on Spanish colonialism at the 2018 annual conference of the Society for American Archaeology. My other Tulane graduate assistant from 2017, funded directly from the Donor Name grant,

is my co-author for a paper in preparation for the *Journal of Archaeological Research*, synthesizing the archaeology of the “protohistoric period” (from 1500 to 1700) in the American South. He is also now laying the groundwork for his own dissertation research project on the Natchez Fort site in northeastern Louisiana, dating to the period between the Natchez Revolt against the French outpost in Natchez, Mississippi, in 1729, and the point of retaliation by the French and Native American allies in 1731. My Donor Name grant has directly supported my research and writing on the archaeology of ancestral Catawba and Cherokee towns and early encounters and entanglements. One of the significant “broader impacts” of the Donor Name grant has been the support of undergraduate and graduate students whose participation in this research has led them to involvements in related research projects and their own development as students and aspiring archaeologists.

Future Plans

I have several ongoing writing projects, both on my own and with coauthors from Tulane and elsewhere. During the summer of 2018, I will participate again in directing archaeological excavations at the Berry site. My colleagues and collaborators and I envision reapplying (after our first and second applications in 2015 and 2016) in 2019 to the National Science Foundation to support excavations of Fort San Juan and the Native American earthen mound at the Berry site. NSF supported our excavations in 2007 and 2008 of domestic houses built by Native Americans to house Spanish colonists, as well as technical analyses of our finds, and those excavations and analyses form the principal basis for our recent book, *Fort San Juan and the Limits of Empire: Colonialism and Household Practice at the Berry Site* (2016), as well as our recent co-authored papers in *American Antiquity* (2016) and *Historical Archaeology* (2017). Tulane students will continue to have opportunities to participate in these archaeological investigations, and I plan to pursue further research on Native American responses to European contact and colonialism

in the southern Appalachians, and, ideally, here in coastal environments of the Gulf South as well.

Respectfully submitted,
Chris Rodning, PhD
Paul and Debra Gibbons Professor
Department of Anthropology
School of Liberal Arts

Saifudeen, Zubaida R.

School of Medicine
Department of Pediatrics

RESEARCH BRIDGE FUNDING

The Bridge Funding from the Donor Name Faculty Grant award (awarded Spring 2016) was critical in maintaining my lab’s productivity, as evidenced by our publications.

1. Liu J, Edgington-Giordano F, Dugas C, Abrams A, Katakam P, Satou R, **Saifudeen Z**. “Regulation of Nephron Progenitor Cell Self-Renewal by Intermediary Metabolism.” *J Am Soc Nephrol*. 2017 Jul 28; PubMed PMID: 28754792.

Editorial on this work: “New Insights into Fuel Choices of Nephron Progenitor Cells.” *JASN* ASN.2017070795

2. El-Dahr SS, Li Y, Liu J, Gutierrez E, Hering-Smith KS, Signoretti S, Pignon JC, Sinha S, **Saifudeen Z**. “p63+ ureteric bud tip cells are progenitors of intercalated cells.” *JCI Insight*. 2017 May 4;2(9) PubMed PMID: 28469077; PubMed Central PMCID: PMC5414549.
3. El-Dahr S, Hilliard S and ***Saifudeen Z**. “Regulation of kidney development by the Mdm2/Mdm4-p53 axis.” *J Mol Cell Biol*. 2017 Feb 1; 9(1):26-33. PMID: 28096292

4. **Saifudeen Z.** “Tissue-Specific Functions of p53 During Kidney Development.” Book Chapter in *Kidney Development and Disease: Results and Problems in Cell Differ.* 2017; 60: 111- 136. PMID: 28409344

These publications will greatly strengthen our grant applications to secure state and national level extramural funding.

Pending Grant Applications:

1. **Department of Defense**
FY17PRMRP Discovery Award Application
Funding Opportunity Number: W81XWH-17-PRMRP-DA Topic Area: Diabetes
Title: Targeted Intervention to Rescue Gestational Diabetes-Induced Congenital Nephron Deficit and Consequent Metabolic Disease
Submitted: 8/2/2017
2. **NIH**
NIDDK R01
Title: Intermediary Metabolism Control of Nephron Progenitor Lifespan
Submitted: 10/5/2017
3. **Louisiana Board of Regents Support Fund**
Research Competitiveness Subprogram (RCS)
Letter of Intent submitted 9/9/2017
Title: Regulation of Nephron Progenitor Cell Lifespan by Energy Metabolism
Application due 11/7/2017

Respectfully submitted,
Zubaida Saifudeen, PhD
Associate Professor of Pediatrics – Nephrology
Department of Pediatrics
School of Medicine

Sherry, Thomas W.

School of Science and Engineering
Department of Ecology
and Evolutionary Biology

RESEARCH SUPPORT

Genetic Basis for Population Connectivity in a Migratory Bird: Integrating Ecological and Evolutionary Contributions to Population Processes

I report here on the funded project, “Genetic Basis for Population Connectivity in a Migratory Bird: Integrating Ecological and Evolutionary Contributions to Population Processes.” We were not able to obtain the blood samples described in summer of 2016 but were able to get all the permits in order and get the blood samples in early Spring and Summer, 2017. I was originally planning, and expecting to do all the blood sample collecting myself, but was able instead to tap into a network of collaborators all over the US and in Canada. We collected the following samples from the listed locations:

Tom Sherry (Louisiana): 10
Tim Kita (Pennsylvania): 29
Megan Fyiling (Wisconsin): 14
IBP (Maine): 6
Lori Walewski (Minnesota): 4
Mike Wesbrook and Brenda Shepherd (Alberta, Canada): 10
Total blood samples: 73

We obtained the number of samples we proposed, and they are widespread throughout the geographic range of our study species, American redstart (*Setophaga ruticilla*). We obtained sufficient samples to do the genetic lab analyses on the data. The blood samples have all been sent to the collaborating molecular genetics lab at UCLA. Moreover, because I spent far less of the funding on travel to collect the blood samples (because of the volunteers who collected for me), I was able to shift much of the funding to lab supplies. I recently sent ~\$6,000 in lab

supplies to UCLA to do the DNA extraction work. The collaborators at UCLA are planning to do this work in the next two months. This work will provide us preliminary genetic results on which to base a major NSF grant proposal.

In summary, the fieldwork proposed has been accomplished better than could have been expected, lab work (not proposed) is well underway, and the project is on track for complete success. Without this funding, we would not be in the same place and as ready for an NSF proposal as we are now. We sincerely appreciate the support.

Respectfully submitted,
Thomas W. Sherry, Professor
Department of Ecology and Evolutionary Biology
School of Science and Engineering

Smilde, David

School of Liberal Arts
Department of Sociology

INTERDISCIPLINARY FACULTY WORKGROUP

With the growth of cultural scholarship in the social sciences, and with research increasingly looking at the role of ideas, values, rituals, and practices in social life, the Tulane Culture Workshop helped those less familiar with this scholarship connect to new and exciting new research trajectories. Cultural sociology is not straightforward. It requires discussion and debate to develop nuance of analysis and reflect on one's own assumptions about concepts and methods, which the workshops helped bring to light.

The 2016-17 Tulane Culture Workshop launched during the fall 2016 term with three meetings, followed by four meetings during the spring 2017 term. We used our Donor Name Faculty Grant funds (which paid for three visiting presenters) as seed money for a broader initiative. Beyond our visitors, we had Tulane faculty and graduate students

present. For the visits of Julian Go and Tianna Paschel, we obtained co-funding from the Center for Inter-American Policy Research to add a public lecture.

Workshops achieved the desired purpose of connecting scholarly work-in-progress with audience and peer feedback. Visiting scholars expressed the usefulness of peer to peer discussion of work currently being developed, which they found provided additional thoughts and insights worth considering. Additionally, Tulane social sciences faculty and students expanded and strengthened relationships with the visiting scholars, deepening scholarly networks across universities.

Below is a list of the workshops offered in the 2016-17 academic year at Tulane, with dates, workshop titles, and scholars' names. All workshops took place in Rm. 314 in Newcomb Hall, on Mondays at 3:30 PM (with the exception of one workshop on Wednesday).

Expressions of Right and Wrong: The Emergence of a Cultural Structure of Journalism, by Stephen Ostertag, Tulane University, Department of Sociology, workshop on October 17, 2016

When "Get Information" is heard as "Get in Formation:" Interactions Between Medical Organizational Culture and Gay Black Men, by Christopher Adkins, Tulane University, School of Social Work, workshop on November 7, 2016

The Coercion of Freedom: A New Theory of Moral Socialization, by Jeffrey Guhin, University of California-Los Angeles, Department of Sociology, workshop on December 5, 2016

Moral Boundaries Across Borders, by Steve Hitlin, University of Iowa, Department of Sociology, workshop on February 6, 2011

Globalizing Sociology, Turning South: Perspectival Realism and the Southern Standpoint, by Julian Go, Boston University, Department of Sociology, workshop on February 20, 2017

Racialized Factors in Dominican and Panamanian Black Social Movement Outcomes, by Lucas Díaz, Tulane University, Department of Sociology, workshop on March 15, 2017

Movements and Ethnoracial Rights in Latin America, by Tianna Paschel, UC Berkeley, Department of African American Studies, workshop on May 3, 2017

Respectfully submitted,
David Smilde, PhD
Charles A and Leo M Favrot Professor
of Human Relations
Department of Sociology
School of Liberal Arts

Snow, Richard Searcy

School of Liberal Arts
Department of Music

COURSE/TEACHING SUPPORT

In the spring semester of 2017 the MUSC 4410: Music Performance Systems course enjoyed generous sponsorship from the Donor Name Faculty Grant Program. Due to this support, the course featured its most successful group of students to date. Student final projects were among the most ambitious I have seen in the six years I have been teaching this course. The course also had more engineering physics students enrolled than ever before.

The funding from the grant was used in several ways. First, the funding allowed for course development in the form of coordination with Tim Schuler from the Department of Engineering Physics. Schuler lectured in the course and provided demonstrations on topics such as electronics, DC motors, and digital fabrication. These topics allowed for closer coordination with the new Tulane Maker Space in the development of the students' projects. Students

primarily took advantage of the laser cutters and 3d printers. These tools allowed the students to design digital instrument enclosures in which to house their custom electronics and onto which to mount their custom controls. Each student realized two different projects using the fabrication tools available in the Tulane Maker Space. The funding also allowed students to purchase all the electronics components necessary for both the assigned projects and their own self-directed proposals. This included Arduino micro-controllers, electronics components packs, sensors, slide and knob potentiometers, xy controllers, and speaker and amplifier components. Components not consumed by projects this semester will be saved for student projects in the spring of 2018. Each student created at least two custom instruments (midterm and final projects) utilizing components and materials purchased with grant support. Additionally, each student successfully performed their own composition on their final custom instruments during our May 11-12 concerts. Two students even performed a duet with their custom instruments. The grant funding also allowed for guest lecturer visits from several local instrument designers and performers. Edgar Berdahl (professor of experimental music and digital media, LSU), Jeff Albert (professor of music technology, Loyola New Orleans), Cliff Hines (guitarist and composer), and Sasha Masakowski (vocalist and composer) all gave inspiring and informative lectures and performances for the students about their own work with custom technology in performance situations. Finally, the Donor Name sponsorship facilitated classroom upgrades to room 207 of Dixon Hall in the form of the creation of two workstations for custom musical instrument fabrication and the addition of better storage options for student projects. These workstations attempt to duplicate the workstations in the engineering physics electronics lab so that students will have continuity when moving into the course with prior experience in the engineering physics electronics lab.

The funding from the Donor Name grant fostered a fantastically supportive and creative environment

for the students in MUSC 4410: Performance Systems this spring. The coordination with the engineering physics program and the investment in reusable workstations is sure to encourage more interdepartmental links between music and engineering physics. Several graduating students remarked that they wish they had been able to take this course earlier in their Tulane careers so that their senior design projects could have reflected the knowledge they gained over the course of the semester. I look forward to harvesting the fruits of this grant's investment for many years to come.

Respectfully submitted,
Richard Snow, PhD
Visiting Assistant Professor
Newcomb Department of Music
School of Liberal Arts

Stefflja, Izabela

School of Liberal Arts
Payson Institute

RESEARCH CONFERENCE TRAVEL

The following is a progress report for my Donor Name Faculty Grant (awarded spring 2016), which allowed me to travel for the Central and East European International Studies Association 2016 conference in Ljubljana, Slovenia and present a paper entitled "The War Criminal Cult: Karadzic and Seselj at The Hague." I received a good amount of quality feedback and useful suggestions on my paper from a variety of European and North American specialists at the conference. I then presented the edited version of the paper at a political science workshop at Tulane in the fall and submitted the final version of the paper to *Nationalities Papers: The Journal of Nationalism and Ethnicity* in January 2017. The response from the journal's peer reviewers was extremely positive, and the paper was accepted with minor revisions. I completed the minor revisions,

and the manuscript was approved for publication in May 2017. The published article came out during the summer and is titled, "The production of the war criminal cult: Radovan Karadzic and Vojislav Seselj at The Hague." This article makes a significant contribution to understanding how alleged war criminals can use their trials and appropriate courts of international justice to mobilize extreme nationalism and harm the legitimacy of such courts domestically.

I am currently working on a related project where I focus on female perpetrators of war crimes and analyze how their legal defense strategy differs from the defense strategy that Karadzic and Seselj employed at The Hague.

Please let me know if you have any further questions regarding this project.

Respectfully submitted,
Izabela Steflja, PhD
Professor of Practice
Payson Graduate Program in Global Development

Taylor, Catherine A.

School of Public Health
and Tropical Medicine
Department of Global Community
Health and Behavioral Sciences

RESEARCH SUPPORT

I was extremely grateful to receive a Donor Name Faculty Grant to provide support for my Centers for Disease Control-funded study (R01 CE002327) focused on child abuse prevention. These funds were used to support a graduate level research assistant, catering for a community partner engagement event, and conference travel to disseminate research results. This award has contributed significantly to our abilities to reach our study goals and also remain competitive for future extramural funding.

Research Assistant: Graduate student research assistants (RAs) conduct the majority of the



(Above) Theodore Steffens performs with his custom instrument.



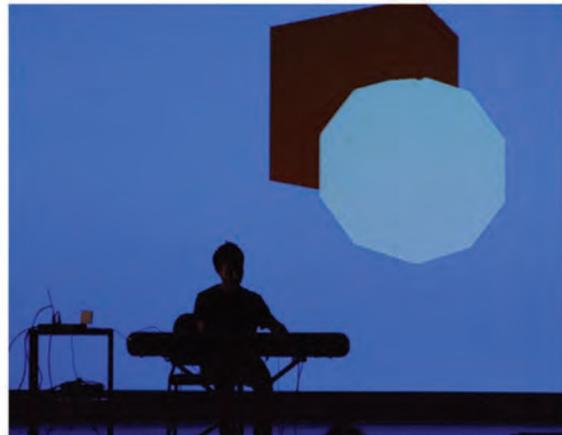
(Above) James Brier and David Kearing perform a duet with their custom instruments.



(Left) John Barret performs with his custom instrument.



(Above) closeup of Theodore Steffens's instrument.



(Above) Jordan Dion performs with his custom audio/visual instrument.

day-to-day activities of this study. Therefore, retaining high-quality RAs is essential to meeting the study's goals. Unfortunately, our research staff needs for this study far exceeded our initial budget. These Donor Name funds allowed me to retain a high performing graduate student. She was volunteering her time with us and would have left the project to seek a paid position had we not paid her with these funds. Her work significantly contributed to helping us achieve our study goals.

Community Partner Engagement Event: As a community-based research study, maintaining good relations with our community partners is an essential part of the project's success. Donor Name funds allowed us to provide our community partners with lunch during an important update and engagement meeting. The event was a huge success. It was enjoyed by all attendees and allowed us to connect with them about study progress as well as how we can better serve their needs. Partner attendees were present from the following organizations: Children's Bureau of New Orleans, Orleans Parish WIC (Women, Infants, and Children), City of New Orleans Health Department, Crescent City WIC Services Inc., Vanderbilt University, and New Orleans Children's Advocacy Center.

Conference Travel Research Support: From July 10-13, 2016, I attended the "International Family Violence and Child Victimization Research Conference" held in Portsmouth, New Hampshire. Attendance at this well-regarded conference allowed the impact of the preliminary study results to extend nationally. By attending and presenting at this conference, I connected with professionals who will help us ensure a broad study impact.

Respectfully submitted,
Cathy Taylor, PhD, MSW, MPH
Associate Professor
Department of Global Community Health
and Behavioral Sciences
School of Public Health and Tropical Medicine

Weiss, Ashley

School of Medicine
Department of Psychiatry
Child Psychiatry

RESEARCH CONFERENCE TRAVEL

I was a recipient of a travel grant that funded my participation in the International Early Psychosis Association biannual meeting in Milan, Italy, in October of 2016. I had a poster accepted for the conference, titled "The Early Psychosis Intervention Clinic, New Orleans (EPIC-NOLA): Paying for care in an underserved area." The poster outlined our cost analysis since starting the first early psychosis intervention clinic in Louisiana. This poster was presented in partnership with my mentor at Yale University, who has been a pioneer in first-episode psychosis research in the United States for the last decade, as well as a supporter of my bringing a model clinic to New Orleans.

Since the conference and the demonstration of positive clinical outcomes, my clinic EPIC- NOLA was granted a partnership with the state of Louisiana to expand services for young people experiencing psychosis associated with emerging severe mental illness. In addition, we have submitted our first paper to a peer-reviewed journal on early intervention in psychiatry, and we have presented on first-episode psychosis at multiple other conferences around the country. We have also launched a community psychosis awareness campaign called CALM-Clear Answers to Louisiana Mental Health, that provides education surrounding psychosis, dispels myths, and outlines a clear path to early treatment.

Going to IEPA in Milan was the most enriching experience I have had in my career, surrounded by the international experts in first-episode psychosis. I learned so much and left inspired to create a true early psychosis intervention program here in New Orleans. I am very appreciative of the opportunity the Donor Name Grant facilitated.

Respectfully submitted,
 Ashley Weiss, DO, MPH
 Director of Medical Student Education in Psychiatry
 School of Medicine

Wenk, Carola Ayyala, Ramesh

School of Science and Engineering
 Department of Computer Science

RESEARCH SUPPORT

Virtual Reality-Based Visual Field Testing

Overview

Glaucoma is a disease of the eye that is the second leading cause of blindness worldwide. It is commonly diagnosed using a visual field test which captures the area of peripheral view of an individual while the eye is fixated on a central target. The standard equipment for visual field testing is bulky and expensive.

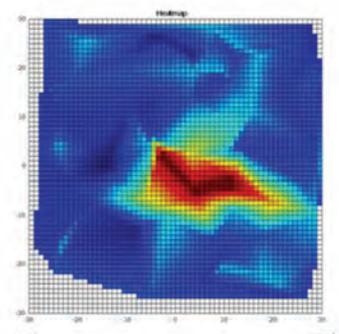
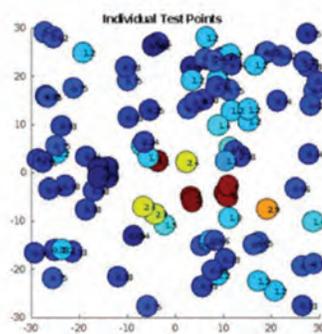
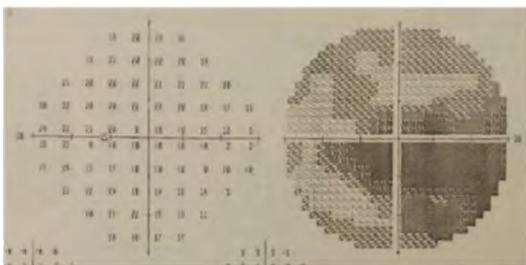
In this project, we implemented a prototype of a visual field analyzer that uses virtual reality (VR) headsets. We envision that such a device would be much more affordable and thus could revolutionize glaucoma detection and make testing more broadly available in developing countries and the US.



Progress

Thanks to the generous funding provided by a Donor Name Faculty Grant, we were able to hire undergraduate student Carolyn Ma to develop a prototype of the system. We also purchased necessary equipment such as laptops to conduct tests, as well as a Fove VR headset, which is the first commercially available headset (in beta stage) with built-in eye tracking.

The team working on this project last year included Carolyn Ma (undergraduate, finance major, computer science coordinate major), Joshua Frenkel (medical resident), Lauren Lim (medical student), Ketaki Panse (medical student), and Phil Brunetti (medical student, LSU). We met regularly to coordinate efforts. Carolyn also worked on this project as part of her capstone project. She implemented the program from scratch, ported it to the newest version of the Unity game engine, developed more advanced logic to run the test, and



created a visualization of the results. From initial tests with patients, our team concluded that there is strong correlation between the gold standard (left) and our output (middle and right) and it improved patient comfort.

Carolyn Ma won an award for best capstone project presentation in computer science, and our project was covered in a New Wave article in February 2017: <https://news.tulane.edu/news/vision-quest-tulane-researchers-use-virtual-reality-fight-glaucoma>

Plans for the Future

In our initial tests, the sensitivity of our test to detect early glaucoma was not as high. We are currently modifying the test (number, location, and size of test points), and we are working on integrating the eye-tracking capabilities of the Fove. Moreover, we have started to develop tests using the VR headset to detect severe concussion (traumatic brain injury). A fast test for traumatic brain injury would be invaluable for football teams, and a team physician from the New Orleans Saints is interested in working with us.

In order to turn our prototype into an affordable visual field analyzer that can be used worldwide, we need to attract funding from investors to be able to hire professional programmers to make our prototypes marketable. We are therefore currently seeking funding.

Respectfully submitted,
Carola Wenk, PhD
Department of Computer Science
School of Science and Engineering

Ramesh Ayyala, MD
Department of Ophthalmology
School of Medicine

Wikström, Toby Erik

School of Liberal Arts
Department of French and Italian

RESEARCH CONFERENCE TRAVEL

I had the honor of receiving a Donor Name Faculty Grant on June 3, 2016, to use towards conference participation.

Progress report

I used the grant to fund my participation in the conference of the Society for Interdisciplinary French Seventeenth-Century Studies (SE-17), held at Dartmouth College in Hanover, New Hampshire, November 10-12, 2016. Instead of giving a paper, I took part in a writers' workshop with colleagues from Princeton, Boston University, the University of Illinois-Chicago and the University of California-Davis. We spent 2.5 hours discussing the group members' texts, which had all been circulated two weeks before the conference. I received detailed, constructive feedback on the proposal for my book manuscript for tenure. The feedback centered on ways to improve my title and to make my manuscript more appealing to readers not familiar with the plays I discuss in it. Crucially, we decided to continue as an online writers' workshop with a new writing deadline for December 15. In the wider conference setting, I attended very illuminating talks, networked with colleagues, and received valuable information about two presses to which I plan to submit my book proposal, Toronto University Press and the University of Pennsylvania Press.

Description of any remaining work to be done and plans for the work in the future

Technically speaking, there is no remaining work, since the conference is over, but the feedback on my project and information about presses will, of course, contribute to my tenure manuscript.

I want to say thank you to Donor Name for your generous support of my research activities.

Respectfully submitted,
Toby Wikström, PhD
Assistant Professor
Department of French and Italian
School of Liberal Arts

Wolfe, Justin

School of Liberal Arts
Department of History

COURSE/TEACHING SUPPORT

Course/Teaching Grant for Course Preparation and
Technology Enhancement

In spring 2017, I offered a new undergraduate course I developed with the support of the Donor Name Faculty Grant. The course, “Historical Documentary Filmmaking” combined the critical review and analysis of historical documentary as a genre of historical narrative and argumentation with a hands-on approach in which the students produced short historical video documentaries themselves.

The funds from the Donor Name Grant, combined with a grant I received from the Center for Engaged Learning and Teaching (CELT), allowed me to attend an intensive workshop in documentary filmmaking at the Center for Documentary Studies at Duke University, the premier center of its kind in the United States. The grant also allowed me to purchase equipment necessary for the students since at the time there was no adequate equipment lending source within the university.

The course was a great success, both in terms of the work produced by the students and in the collaborative learning they achieved. This collaboration became a central learning goal—one that will have value long after the students’ days at Tulane. To see the work produced by the students, visit <https://www.youtube.com/st?list=PLYCWzbMpbwfRePvu6BqfArENT8tomX1xe>

We held a public showing of the documentaries at the end of the spring semester, with attendance of approximately 40 people, including students and faculty. The students’ work has also been featured on the New Orleans-focused online community research portal ViaNolaVie (<http://vianolavie.org>) and in future iterations will likely continue to be published here, and on New Orleans Historical (<http://www.neworleanshistorical.org>), a similar outlet focused on more historical content.

Given the success of the course, I intend to teach the course again in spring 2018 and to include it in my regular rotation after that. I had hoped to develop a service-learning component of the course but realized that doing so in this first iteration was impossible. After this first run-through, however, I expect a service relationship and course pedagogy to be easier the next time around. The course was accepted for credit for the film studies interdisciplinary major, and I hope to have it also accepted into the digital media production program next time.

In addition, teaching the course helped me establish relationships with numerous units across Tulane, including the New Orleans Center for the Study of the Gulf South, the Newcomb College Institute, and the Howard-Tilton Memorial Library, all of which contributed collaboration and resources of various kinds. During the grant period, I also offered two lectures on the use of video in the classroom and on collaborative learning for CELT and was invited to participate in a one-day seminar on the Digital Humanities put on by Xavier University of Louisiana.

Respectfully submitted,
Justin Wolfe, PhD
William Arceneaux Professor
of Latin American History
Associate Professor
Department of History
School of Liberal Arts

You, Zongbing

School of Medicine
Department of Structural
and Cellular Biology

RESEARCH CONFERENCE TRAVEL

I attended the Society for Basic Urological Research (SBUR) Afternoon Breakout Session 1 entitled “Metabolic and Inflammatory Alterations in Urological Diseases” at the American Urological Association (AUA) Annual Meeting (May 6-10, 2016) in San Diego on May 7, 2016. I co-chaired the session and presented a talk entitled “IL-17 in Human Prostate Cancer.” On the same day, I attended and moderated Session 4 entitled “Basic Science in Oncology” of the World Chinese Urological Society (WCUS) Annual Meeting, which is part of the AUA Annual Meeting. I also presented my research work in Plenary Session I entitled “Inflammation and Infection as Modulators of Cell/Niche Function” at the 2016 SBUR Fall Symposium, November 10-13, 2016, at the Scottsdale Plaza Resort in Scottsdale, Arizona. My topic was “Role of Interleukin-17-mediated inflammation in cancer initiation, promotion, and progression.” My presentation at the above two prestigious international conferences promoted the recognition of Tulane University’s research profiles. I am very grateful for the support of the Donor Name Family Foundation.

Respectfully submitted,
Zongbing You, MD, PhD
Associate Professor and Vice Chair for Research
Department of Structural and Cellular Biology
School of Medicine

Zender, Marc U.

School of Liberal Arts
Department of Anthropology

COURSE/TEACHING SUPPORT

Technology Enhancement in a Classroom and Laboratory Setting

In June 2016, I was awarded a Donor Name Faculty Course/Teaching Grant for technology enhancement and innovative use of technology in a classroom setting. The requested funds were intended entirely for the purchase of necessary equipment (detailed below). I proposed to teach a new overload technology-intensive course each semester, to be titled “Digital Epigraphy and Archaeological Illustration,” beginning in the Spring semester of 2017. The new equipment would be housed in the MARI Digital Epigraphy Lab (Dinwiddie Hall 304) and would be available for use outside of class hours by all Tulane students and faculty.

Clear, accurate, and aesthetically-pleasing black-and-white illustrations are an indispensable part of scientific research. ANTH 7092-01 “Digital Epigraphy and Archaeological Illustration” was conceived of as a small, intensive, and hands-on exploration of the history, development, and evolving digital methodologies behind archaeological illustration. Given my own background and training, a particular focus was to be on the creation of facsimile line drawings of relief sculpture, inscriptions, and select three-dimensional objects for publication. Secondary foci would be on more traditional archaeological subject matter, including sitemaps (plan views and elevations of ruined architecture), pottery, and stone tools. Although designed with archaeological/epigraphic illustration in mind, it was intended to be of equal utility to any students hoping to specialize in scientific illustration for publication. The digital media employed translate easily to advertising and design work, for instance.

The MARI Digital Epigraphy Lab was to provide the venue, with critical high-powered computers,

presentation tools, and—not least!—high-end digital tablets to be provided by a Donor Name grant. Supplementing this hyper-modern lab setting, students would gain valuable hands-on experience working directly with ancient objects in the collections of Tulane’s Middle American Research Institute and the New Orleans Museum of Art.

Thanks to the generosity of Donor Name and the Donor Name Faculty Grants initiative, I was able to outfit the MARI Digital Epigraphy Lab with six high-end digital tablets (details below). These supplement the ten high-performance computers (Dell Precision T1700, 16GB, 1600MHz, 1TB storage capacity) and large flat screen intended for presentation purposes, all of which were already in situ, and have been combined with perpetually-updated versions of Adobe Photoshop and Adobe Illustrator (courtesy of Tulane’s Adobe Creative Cloud site license) to create a truly hyper-modern laboratory space that is already achieving its intended goals of facilitating student learning of and practice in digital illustration techniques.

I have now taught ANTH 7092-01 “Digital Epigraphy and Archaeological Illustration” on two different occasions. The first time, in Spring 2017, I had an enrollment of five students, and this semester (Fall 2017) I have an enrollment of three students, all of whom have greatly enjoyed (and are continuing to enjoy) the new multi-purpose classroom/lab space, which has thoroughly met the needs of not only the undergraduate and graduate students taking the course, but also for graduands of the course, and for three faculty members and two additional students, who now have regular access to graduate student lab monitors with training in the use of the equipment, in problem-solving, and in digital illustration techniques. The course and new lab has been an unqualified success in several ways. One of my undergraduate students from the first class session, Mackenzie Walters, was accepted into a graduate program at the University of Texas, Austin, at least in part on the basis of her strong portfolio of digital illustrations produced in ANTH 7092-01. Similarly, one of my graduate students, Emily Davis-Hale, has

just been paid for one of her digital illustrations, produced in ANTH 7092-01, which will appear in the journal *Latin American Antiquity* in Spring 2018.

As we all know, the production of publication-quality illustrations for journal articles and books is a time-consuming and frequently expensive undertaking, but one nonetheless expected of academics at all stages of their career. My students and I would like to personally extend our sincere thanks to Donor Name and the Donor Name Faculty Grants for helping us to build on existing resources and outfit a cutting-edge digital illustration lab, and especially for helping our students to compete in an increasingly evolving digital world. Your assistance has helped to make ANTH 7092-01 and its dedicated classroom/laboratory space a reality.

The new course and dedicated laboratory space have been such an unqualified success that I have begun to investigate possibilities for expansion. In addition to the instructional tablet (mirrored on the large flat screen at the front of the room), we presently have five student tablets, and there are eight student computer stations in the lab. This means that we could comfortably add three tablets without major infrastructural overhaul, and thereby accommodate three more students per semester. With the assistance of Louis Franchina, I have therefore been pursuing an in-kind donation with Wacom Ltd. to outfit the lab with three additional tablets. We have not had any definitive response on the donation as of yet, but we have both been in regular communication with the company, and they have already offered to send a technician to provide my students this semester with a presentation on new Wacom Ltd products and services, and the possibility exists that one or more of my students would be eligible for summer internships with the company in 2018. Should the in-kind gift not materialize, I will pursue other funding opportunities for the project.

In any case, I will be teaching the course again in Spring 2018, and already have more interest than we have capacity (i.e., eight interested students for

five machines). There remains the possibility that we might open additional sections led by graduate students to meet this increased demand, but I would prefer to handle it with expansion if at all possible. In any case, given the importance of 1:1 teaching/learning and a hands-on experience with materials in sensitive Tulane University, MARI, and NOMA collections, I do not feel that expansion beyond eight students per class is in the best interests either of the students or our collections.

An additional initiative that I will be launching early in the Spring semester is a laboratory “open house,” where graduands of the Digital Epigraphy course present their work to visitors and guide them through several exercises demonstrating the versatility of the lab and its equipment. This should increase interest in not only the course, but awareness of the lab and its hours, and hopefully attract students, faculty, and staff who might wish to make use of our facilities.

Respectfully submitted,
 Marc Zender, PhD
 Department of Anthropology
 School of Liberal Arts

Zhang, Haitao

School of Medicine
 Department of Pathology

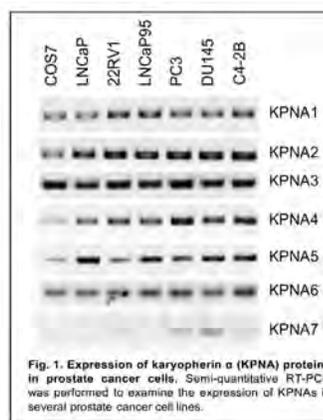
RESEARCH SUPPORT

Androgen receptor splice variants and prostate cancer racial disparity

Our initial plan for this grant consists of two aims: 1) To establish expression profiles for androgen receptor splice variants (AR-Vs) in prostate cancer tissues from a cohort of African American (n=50) and Caucasian American (n=50) patients; and 2) To determine the association between race-specific AR-Vs and metastasis in a cohort of localized (n=50)

and metastatic (n=50) cases. However, we realized that the research plan was too ambitious for the funding level and duration of this support grant. We revised our research plan to focus on the mechanism of nuclear translocation of AR-V7, which is the predominant and clinical-relevant AR-Vs expressed in patient tissues. The results obtained are relevant not only for the study of AR-Vs in prostate cancer racial disparity, but also for future studies focusing on understanding the biological mechanisms for AR-Vs.

1. Results



AR-V7 selectively interacts with a subset of

Karyopherin α proteins.

It is well established that AR-V7 is located predominantly in the nucleus and possesses constitutive transcriptional activity. Our previous data show that the nuclear localization of AR-V7 is reduced by importazole, an inhibitor of importin β (ref). In addition, it has been shown that the splicing of AR-V7 creates a functional bi-partite nuclear localization signal (ref), suggesting the nuclear import of AR-V7 is mediated by the importin α/β nuclear import machinery. Based on these findings, we hypothesize that AR-V7 interacts directly with importin α proteins. We first examined the expression pattern of all seven members of the importin α (also known as karyopherin α , KPNA) family in prostate cancer cell lines. As shown in Fig. 1, KPNA 1-6 proteins are ubiquitously expressed in all cell lines tested. In contrast, KPNA7 was expressed in a few cell lines, and the expression was either not detected (LNCaP95) or at a very low level (22RV1)

in AR-V7-positive cell lines. Based on this result, we decided to focus on the roles of KPNA 1-6 in nuclear import of AR-V7.

We next performed co-immunoprecipitation analysis in COS-7 cells co-transfected with AR-V7 and a flag-tagged KPNA expression plasmids. As shown in Fig. 2, there was a strong interaction between AR-V7 with KPNA 1, 3, and 5. The interaction with KPNA 6 appeared to be weaker but it was reproducible (data not shown). However, no interaction of AR-V7 with KPNA 2 and 4 was detected. These results suggest that AR-V7 selectively interacts with a subset of KPNA proteins.

Knockdown of KPNA1 reduces the nuclear import of AR-V7.

We next employed the knockdown approach to establish the significance of the AR-V7- KPNA interactions identified above. COS-7 or 293T cells were co-transfected with AR-V7 along with a siRNA (control or KPNA-targeting), and the distribution of AR-V7 was detected by immunofluorescence with an anti-AR antibody. The result of KPNA1 knockdown in COS-7 cells is shown in Fig. 3. In summary, we observed a modest but significant increase of cells with cytoplasmic AR-V7 when KPNA1 expression was decreased by ~50% (Fig. 3). Similar observation was made in 293T cells (data not shown). As control experiments, we also knocked down the expression of KPNA2 and KPNA4. Consistent with the co-IP experiment which showed no interaction of AR-V7 with KPNA2 or KPNA4, knockdown of either KPNA had no effect on the distribution of AR-V7 (Fig. 3, D&E).

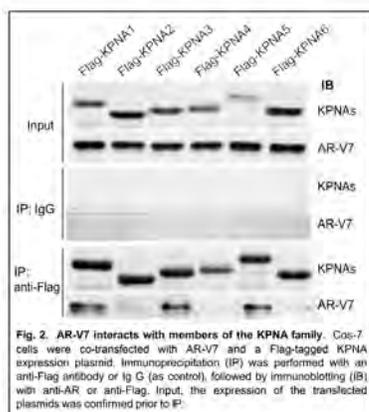


Fig. 2. AR-V7 interacts with members of the KPNA family. Cos-7 cells were co-transfected with AR-V7 and a Flag-tagged KPNA expression plasmid. Immunoprecipitation (IP) was performed with an anti-Flag antibody or IgG (as control), followed by immunoblotting (IB) with anti-AR or anti-Flag. Input, the expression of the transfected plasmids was confirmed prior to IP.

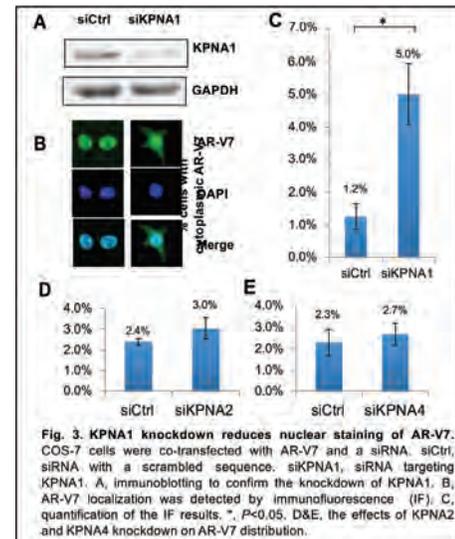


Fig. 3. KPNA1 knockdown reduces nuclear staining of AR-V7. COS-7 cells were co-transfected with AR-V7 and a siRNA. siCtrl, siRNA with a scrambled sequence. siKPNA1, siRNA targeting KPNA1. A, immunoblotting to confirm the knockdown of KPNA1. B, AR-V7 localization was detected by immunofluorescence (IF). C, quantification of the IF results. *, $P < 0.05$. D&E, the effects of KPNA2 and KPNA4 knockdown on AR-V7 distribution.

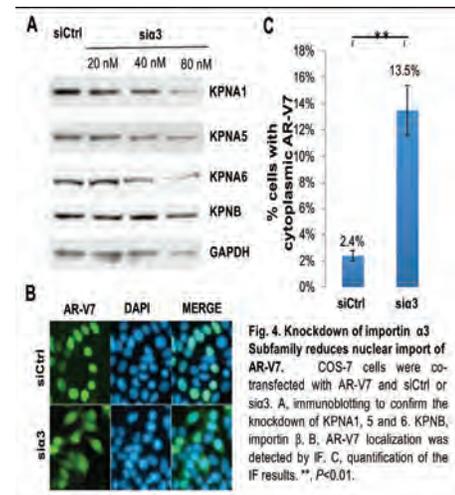


Fig. 4. Knockdown of importin $\alpha 3$ Subfamily reduces nuclear import of AR-V7. COS-7 cells were co-transfected with AR-V7 and siCtrl or si $\alpha 3$. A, immunoblotting to confirm the knockdown of KPNA1, 5 and 6. KPNA8, importin β . B, AR-V7 localization was detected by IF. C, quantification of the IF results. **, $P < 0.01$.

The modest effect of KPNA1 knockdown on AR-V7 distribution was likely due to the ability of AR-V7 to interact with multiple KPNA (Fig. 2).

We hypothesized that knockdown of multiple KPNA would be more efficacious. To test this hypothesis, we designed a siRNA targeting the importin $\alpha 3$ subfamily, which consists of KPNA1, 5 and 6. As shown in Fig. 4A, this siRNA (si $\alpha 3$) was able to decrease the expression of all members of the importin $\alpha 3$ subfamily, whereas having no effect on the expression of importin β . When the intracellular distribution of AR-V7 was examined, we found that

si α 3 significantly increase the percentage of cells with cytoplasmic staining for AR-V7 (Fig. 4 B&C). This results strongly suggest that the importin α 3 subfamily members (KPNA1, 5, 6) play an important role in the nuclear import of AR-V7.

2. Outcome

With the support of the Donor Name Faculty Grant, we have submitted two grant applications:

1. Title: Splicing variants of AR and target genes in prostate cancer racial disparity; Agency: National Institutes of Health; Date: November 2016; Status: Scored in the 36th percentile.
2. Title: Splicing Variants of Androgen Receptor and Target Genes in Prostate Cancer; Racial Disparity Agency: Department of Defense; Date: October 2017; Status: Under review

Respectfully submitted,
Haitao Zhang, PhD
Associate Professor
Department of Pathology and Laboratory Medicine
Tulane School of Medicine



Award Tables

TOTALS AWARDED BY GRANT TYPE

GRANT TYPE	TOTAL AWARDED	# OF FACULTY AWARDED
Research Support	\$000,000.00	46
Course/Teaching	\$000,000.00	9
Research Bridge	\$000,000.00	8
360 Degree Courses	\$00,000.00	1
Other	\$00,000.00	2
Interdisciplinary Faculty	\$00,000.00	5
Research Conference	\$00,000.00	20
Total	\$000,000.00	91

TOTALS AWARDED BY SCHOOL

SCHOOL	TOTAL AMOUNT AWARDED	# OF GRANTS
ARCH	\$00,000.00	2
BUS	\$-	0
LAW	\$00,000.00	1
SLA	\$00,000.00	33
SOM	\$00,000.00	22
SPHTM	\$00,000.00	9
SSE	\$00,000.00	21
SSW	\$00,000.00	3
Total	\$000,000.00	91

Breakdown By Grant Type

360 DEGREE COURSES

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$00,000.00	1
ARCH	
BUS	
LAW	
SLA	
SOM	1
PH	
SSE	
SSW	

RESEARCH CONFERENCE TRAVEL

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$00,000.00	20
ARCH	
BUS	
LAW	
SLA	8
SOM	7
PH	1
SSE	4
SSW	

RESEARCH BRIDGE FUNDING

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$00,000.00	8
ARCH	
BUS	
LAW	
SLA	
SOM	5
PH	
SSE	3
SSW	

INTERDISCIPLINARY FACULTY WORKGROUP

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$00,000.00	5
ARCH	
BUS	
LAW	
SLA	4
SOM	
PH	1
SSE	
SSW	

COURSE/TEACHING SUPPORT

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$00,000.00	8
ARCH	
BUS	
LAW	
SLA	
SOM	5
PH	
SSE	3
SSW	

RESEARCH SUPPORT

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$00,000.00	46
ARCH	1
BUS	
LAW	
SLA	15
SOM	8
PH	7
SSE	12
SSW	3

Breakdown by Grant Type CONTINUED

OTHER

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$00,000.00	2
ARCH	
BUS	
LAW	
SLA	1
SOM	1
PH	
SSE	
SSW	
Other (NTC)	

GRAND TOTAL

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$00,000.00	91
ARCH	2
BUS	0
LAW	2
SLA	28
SOM	22
PH	9
SSE	21
SSW	3
Other (NTC)	0

Breakdown By School

ARCHITECTURE

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$00,000.00	2
360 Degree Courses	
Course/Teaching Support	1
Interdisciplinary Faculty Workgroup	
Other	
Research Bridge Funding	
Research Conf. Travel	
Research Support	1
SSW	

BUSINESS

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$0	0
360 Degree Courses	
Course/Teaching Support	
Interdisciplinary Faculty Workgroup	
Other	
Research Bridge Funding	
Research Conf. Travel	
Research Support	
SSW	

LAW

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$00,000.00	1
360 Degree Courses	
Course/Teaching Support	1
Interdisciplinary Faculty Workgroup	
Other	
Research Bridge Funding	
Research Conf. Travel	
Research Support	
SSW	

Breakdown by School CONTINUED

LIBERAL ARTS

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$00,000.00	33
360 Degree Courses	
Course/Teaching Support	5
Interdisciplinary Faculty Workgroup	4
Other	1
Research Bridge Funding	
Research Conf. Travel	8
Research Support	15
SSW	

SCIENCE AND ENGINEERING

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$00,000.00	21
360 Degree Courses	
Course/Teaching Support	2
Interdisciplinary Faculty Workgroup	
Other	
Research Bridge Funding	3
Research Conf. Travel	4
Research Support	12
SSW	

MEDICINE

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$00,000.00	22
360 Degree Courses	1
Course/Teaching Support	
Interdisciplinary Faculty Workgroup	
Other	1
Research Bridge Funding	5
Research Conf. Travel	7
Research Support	8
SSW	

SOCIAL WORK

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$00,000.00	3
360 Degree Courses	
Course/Teaching Support	
Interdisciplinary Faculty Workgroup	
Other	
Research Bridge Funding	
Research Conf. Travel	
Research Support	3
SSW	

PUBLIC HEALTH

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$00,000.00	9
360 Degree Courses	
Course/Teaching Support	
Interdisciplinary Faculty Workgroup	1
Other	
Research Bridge Funding	
Research Conf. Travel	1
Research Support	7
SSW	

GRAND TOTAL

TOTAL AMOUNT REWARDED	TOTAL FACULTY AWARDED
\$00,000.00	91
360 Degree Courses	1
Course/Teaching Support	9
Interdisciplinary Faculty Workgroup	5
Other	2
Research Bridge Funding	8
Research Conf. Travel	20
Research Support	46
SSW	





OFFICE OF DONOR RELATIONS

6823 ST. CHARLES AVENUE · NEW ORLEANS, LOUISIANA 70118
GIVING.TULANE.EDU · 504.865.5744 · SDR@TULANE.EDU