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# THE ALUMNAE OF NORTHWESTERN UNIVERSITY AWARDS \$125,000 IN GRANTS FOR NORTHWESTERN PROJECTS

**EVANSTON, Ill.** --- After a review of 76 proposals, The Alumnae of Northwestern University has awarded full or partial funding to 26 projects sponsored by Northwestern entities or schools, including Alice Millar Chapel, the Bienen School of Music, Block Museum of Art; Chicago Botanic Garden, School of Communication, McCormick School of Engineering, Medill School of Journalism, Media, Integrated Marketing Communications; Norris University Center, Office for Research, Pritzker School of Law, Public Health Program, and Weinberg College of Arts and Sciences.

"The Grants Committee was impressed by the quality and variety of the proposals submitted – it was quite a challenge to choose recipients from among them," reports Carolyn Krulee, chair of the committee. "The grants provide funding for such worthwhile endeavors as exhibits, stage productions, travel, scientific research, and educational outreach."

The comprehensive range of projects includes full or partial funding to: upgrade the sound system at Alice Millar Chapel; hold a workshop about building resilient democracies; fund and exhibition and publication *Thinking About History* at the Block Museum; study bees' responses to climate change; sponsor a guest director for Sunday in the Park with George at the Wirtz Center; provide resources for people suffering from swallowing disorders; partially sponsor the 89<sup>th</sup> Waa-Mu Show; purchase supplies for the Undergraduate Fluid Mechanics Teaching Laboratory; investigate a mobile imaging device for early stage diagnosis and monitoring of skin cancer; reach out to disadvantaged high school students about mathematics; present a course for students to tackle difficult subjects through children's picture books; promote a documentary film Mission Possible: Chicago's Anti-Apartheid Movement; improve support for hearing impaired individuals at Norris University Center; bring an astronomer to campus for CIERA's annual public lecture; support humanitarian relief for asylum seekers; establish an Accelerated Public Health Program mentorship; support to develop three new courses - Middle Eastern Cities and Their Cultural Influence: Istanbul-Cairo-Jerusalem - based on the newest language learning theories; investigate how infants learn the

communication status of novel auditory signals; funding for a film essay "Inhuman Figures" about the origins and encoded meanings of three science fictional avatars for Asian American representation – the robot, the clone, and the alien; hold a workshop series about the criminal justice system and incarceration; support for a documentary "Garfield Park, USA," which explored ways children explore playgrounds in an urban area; examine black parents' decision-making and advocacy in suburban schools; examine chemoresistance in tumors by using various contrast agents; study biochemical associated with Alzheimer's Disease; purchase teaching microscopes and cameras for archaeological science training; and monitor gene therapy technology.

The projects and sponsors are listed below.

#### ALICE MILLAR CHAPEL

#### ALICE MILLAR CHAPEL SOUND SYSTEM UPGRADE

Rev. Jason O. Mohn, Associate University Chaplain, Division of Student Affairs (Religious and Spiritual Life)

The Office of Religious and Spiritual Life (RSL) needs to replace and improve components of the failing sound system in Alice Millar Chapel through the purchase of wireless microphones, gooseneck microphones, and a sound board with IPad control capabilities for remote operation of the sound system. This request is to cover the equipment costs and a portion of the installation costs while the remaining installation costs will be covered by the current RSL budget.

#### **BIENEN SCHOOL OF MUSIC**

**LISTENING IN DARK TIMES: ARENDT, AESTHETICS, AND POLITICS**Ryan Dohoney, Associate Professor, Musicology and Associate Director of the Program in Critical Theory

This workshop will bring an international group of scholars and artists together with faculty and students from across the University to discuss the role of artistic and political judgment in building resilient democracies in dialog with the political philosophy of Hannah Arendt.

#### **BLOCK MUSEUM OF ART**

#### THINKING ABOUT HISTORY

Lisa Corrin, Ellen Phillips Katz Director, Mary and Leigh Block Museum of Art

In 2020-2021 The Block Museum of Art will celebrate its 40<sup>th</sup> anniversary as the campus art museum at Northwestern University. Leading up to this milestone, the Block has launched an initiative to acquire works of art that encourage critical thinking about the representation of history. This collecting initiative will result in an exhibition and

publication tentatively titled *Thinking about History* in winter and spring 2021, accompanied by a series of public programs.

#### CHICAGO BOTANIC GARDEN AND NORTHWESTERN UNIVERSITY

# DETERMINING THE ABIOTIC DRIVERS OF SOLITARY, GROUND-NESTING BEE PHENOLOGY IN THE CONTEXT OF CLIMATE CHANGE

Amelia Litz, PhD Student, Chicago Botanic Garden and Northwestern University

Solitary ground-nesting bees make up approximately 85% of the 20,000 bee species worldwide, yet little is known about their expected response to global change. One of the primary biological responses to climate change is a shift in an organism's phenology, which is critical for an organism's growth, survival and reproduction. The proposed research aims to fill our knowledge gap of solitary ground-nesting bee phenology by combining an observational field experiment with an experimental field study in a sensitive subalpine ecosystem.

### **SCHOOL OF COMMUNICATION**

#### SUNDAY IN THE PARK WITH GEORGE – GUEST DIRECTOR

Al Heartley, Managing Director, Wirtz Center for the Performing Arts

The Virginia Wadsworth Wirtz Center for the Performing Arts is hiring guest director, Rory Pelsue, an accomplished music theatre director and Sondheim translator to direct and choreograph a production of *Sunday in the Park with George* during its 2020/21 mainstage season in February 2021. The Alumnae grant will pay for the out-of-town costs for Rory's Evanston residencies during design and production meetings, auditions, rehearsals and opening.

### NORTHWESTERN UNIVERSITY SWALLOWING DISORDERS SUPPORT GROUP

Abigail B. Day, CCC-SLP, Clinical Doctoral Candidate, and Cagla Kantarcigil, PhD, Postdoctoral Fellow (mentor), Department of Communication Sciences and Disorders

The proposal initiative would provide us with the opportunity to share our expertise, educational resources and support group for the thousands of people and their caregivers in Chicago and surrounding communities who suffer from problems with swallowing. This initiative will connect the Evanston NU swallowing clinic and research laboratories with patients and providers, create a comfortable platform for sharing their struggles, their stories, and access to resources for rehabilitation and coping.

### THE 89th ANNUAL WAA-MU SHOW: STATE OF THE ART

Patryk Kot and Amanda Sugiharto, Co-directors of Development, Wirtz Center for the Performing Arts

Every year, the Waa-Mu show brings together over 150 students every to create and stage an original musical. This year's show, State of the Art, will focus on pertinent topics including gentrification and climate change.

#### McCORMICK SCHOOL OF ENGINEERING

### 'PUMP CHACTERIZATION' APPARATUS FOR UNDERGRADUATE FLUID MECHANICS TEACHING LABORATORY

Wesley Burghardt, Professor, Chemical and Biological Engineering and Associate Dean, Undergraduate Engineering and Chemical and Biological Engineering

Funds are requested to purchase supplies for construction of two copies of an apparatus to be installed in McCormick's undergraduate fluid mechanics teaching lab, to support a new laboratory exercise to teach students about the operating characteristics of pumps. This experiment will be integrated into ChE 321, a junior-level course taught to 40 students each year. It will also be made available to instructors of other McCormick fluid mechanics courses who may wish to include it among laboratory experiences in their courses.

### MOBILE 3D-DEFLECTOMETRY IN TELEMEDICAL DERMATOLOGIC DIAGNOSIS AND DOCUMENTATION

Florian Shiffers, MSc, PhD student; Yunhao Li, BSc; Merlin Nau (BSc), Department of Computer Science and Electrical Engineering

Imaging techniques in dermatology have been explored from low-cost mobile two-dimensional (2D) RGB images to professional clinical imaging systems measuring additional detailed three-dimensional (3D) data. Nonetheless, a precise 3-D mobile imaging device is not available yet, although it could greatly support early-stage diagnosis and monitoring of skin cancer and other diseases even in vastly populated or developed areas. Therefore, we want to propose the investigation of 'phase measuring deflectometry' using only the hardware of an iPad to obtain detailed depth information, as it has already been proved by Oliver Cossairt and his lab colleagues for stained glass and historical art.

### HIGH-SCHOOL OUTREACH: APPLIED MATH IN ACTION

Alvin Bayliss and Hermann Riecke, Professors, Engineering Sciences and Applied Mathematics

In cooperation with the Schuler Scholar Program, this project introduces predominantly disadvantaged high school students to topics of interest in which mathematics can be applied successfully. The presentations are given by graduate students who receive training and experience in presenting mathematics to a general audience. *Applied Math in Action* outreach program has been operating successfully for a number of years.

### MEDILL SCHOOL OF JOURNALISM

# TEACHING A COURSE ENTITLED TACKLING DIFFICULT SUBJECTS THROUGH RESEARCH AND CHILDREN'S BOOKS

Candy Lee, Professor, Media, Integrated Marketing Communications

Students will read 150 children's picture books on difficult subjects, select one tough subject, research that subject, write a research paper on it, then go to a District 65 school and teach an elementary class on the subject and then write a picture book on the topic. There will be guest speakers from all over the University on diversity issues, child development, media, writing bias, education communication, research methods; the final book will be critiqued by a panel of NYC editors. The class will be aided with a Medill-SESPE listing and measured with School of Communication help, a true interdisciplinary course. Monies are needed for a library of books and other requirements.

#### MISSION POSSIBLE: CHICAGO'S ANTI-APARTHEID MOVEMENT

Ava Thompson Greenwell, Professor, Broadcast/Video Journalism

In 1993, Nelson Mandela visited Chicago calling the city's social justice activism "the source of strength to our liberation movement over decades" and vital to his country's struggle for freedom. *Mission Possible: Chicago's Anti-Apartheid Movement* is a documentary film about the people behind the movement. The project features several Northwestern alumnae and has generated interest from WTTW for broadcast and will be entered in Chicago's 2020 Black Harvest Film Festival and film festivals in South Africa.

#### NORRIS UNIVERSITY CENTER

#### IMPROVING ACCESSIBILITY IN THE NORRIS UNIVERSITY CENTER

Anthony Groce, Technical Specialist; Christopher Burpee, Assistant Director

Norris Technical Services would like to provide appropriate support for hearing impaired individuals and better meet ADA standards in our event spaces. We wish to install modern Assisted Listening Systems in more of our most widely-used spaces.

#### **OFFICE FOR RESEARCH**

### CIERA ANNUAL PUBLIC LECTURE FEATURING ASTRONOMER CAROLYN PORCO

Gretchen Oehlschlager, Communications and Events Coordinator, Center for Interdisciplinary Exploration and Research in Astrophysics.

CIERA's Annual Public Lecture series brings the campus and Chicagoland community together to hear a prominent astronomer give a fascinating, timely lecture. Past speakers have included Nobel laureates and other of utmost renown. These lectures are aimed at audiences of all ages interested in astronomy; they are free and open to all.

#### PRITZKER SCHOOL OF LAW

#### IMMIGRANT YOUTH AND PARENT LITIGATION

Uzoamaka Emeka Nzelibe, Clinical Professor of Law, Bluhm Legal Clinic.

The Immigrant Law Project's (ILP) Litigation Support Fund would provide litigation support assistance to ILP clients (which include children (0-17), emerging adults (18-25), and indigent parents at risk of separation from their children in removal proceedings from the Chicago Immigration Court. The costs associated with seeking humanitarian relief have grown due to recent policy shifts in how the U.S. government determines who qualifies for asylum. Through this project, ILP clients will receive much-needed assistance with the costs associated with seeking humanitarian relief in the United States.

#### PUBLIC HEALTH PROGRAM

### ACCELERATED PUBLIC HEALTH PROGRAM (APHP) MENTORSHIP PROGRAM

William Leonard, Co-Director, Accelerated Public Health Program; Abraham Harris, Professor of Anthropology, Director of Global Health Studies; Leah C. Neubauer, Co-Director, Accelerated Public Health Program, Assistant Professor, Department of Preventative Medicine, Division of Public Health Practice, Director, Accreditation and Assessment, Program in Public Health

The Program in Global Health Studies (GHS) and the Program in Public Health (PPH) are requesting funds to establish and develop a mentorship program for our Accelerated Public Health Program. The APHP, a collaborative effort between Weinberg College of Arts and Sciences, The Graduate School, and Feinberg School of Medicine, will include alumni, Master of Public Health students and undergraduates.

#### WEINBERG COLLEGE OF ARTS AND SCIENCES

#### MIDDLE EASTERN CITIES AND THEIR CULTURAL INFLUENCE:

**ISTANBUL-CAIRO-JERUSALEM** (Developing Three New Intermediate Language Courses with a Shared Pedagogical Model)

Dr. Franziska Lys, professor, German, Director of the MENA Languages Program; Ragy Mikaeel, Associate Professor of Instruction, Arabic; Dr. Oya Topcuoglu, Lecturer, Turkish; Dr. Hanna Tzuker Seltzer, Assistant Professor of Instruction, Hebrew)

We seek support for the development of three new courses: Cairo and the Seven Layers of Civilization (in Arabic), The Four-dimensional Jerusalem (in Hebrew), and Istanbul, Gateway Between the East and the West (in Turkish). The proposers are planning to develop these courses together to design a shared pedagogical model based on the newest language learning theories. They hope that the pedagogical foundational model they develop for the three courses can be successfully shared with language instructors teaching other languages in the college.

# INVESTIGATING THE NEURAL MECHANISMS THAT GUIDE INFANTS TO LINK NOVEL COMMUNICATIVE SIGNALS TO MEANING

Kali Woodruff Carr, PhD Candidate, Psychology Department

This project investigates how infants learn the communication status of novel auditory signals. We will analyze infants' neural activity while they are exposed to these signals and investigate the influence of experience. This work will provide new insights into how infants learn language.

#### INHUMAN FIGURES: ROBOTS, CLONES, & ALIENS

Michelle N. Huang, Assistant Professor, Asian American Studies and English Department; and C. A. Davis, Digital Design Studio

This project, a collaboration between Michelle N. Huang and C. A. Davis, will result in a film essay, "Inhuman Figures," about the origins and encoded meanings of three science fictional avatars for Asian American representation—the robot, the clone, and the alien. The resulting film will contribute to a nascent but growing body of public intellectual work examining how race is embedded in science and technology. This creative-critical project will enable Michelle to circulate the same research and insights she is developing in her book project to a broader audience on digital format that can be used as a popular media object as well as for pedagogical purposes in university classrooms across the country.

# "TRANSFORMING THE CRIMINAL JUSTICE SYSTEM" WORKSHOP SERIES

Jennifer Lackey, Northwestern Prison Education Program, Wayne and Elizabeth Jones Professor of Philosophy; and Sophia Ruark, Undergraduate Prison Education Partnership, Director Prison Education Program, President, Undergraduate Prison Education Partnership

The Northwestern Prison Education Program and the Undergraduate Prison Education Partnership are creating a "Transforming the Criminal Justice System" workshop series. Over the course of three academic workshops during 2020-2021, students and faculty on the Evanston and Chicago campuses will engage in discussion with distinguished keynote speakers on "The History of Mass Incarceration," "Trauma and Trauma-Informed Interventions in the Criminal Justice System," and "Moving Beyond Punishment and Prisons." This series will expose the Northwestern community to cutting-edge research on incarceration, trauma-informed interventions, and the criminal justice system, and will cultivate a community of civic and social engagement.

#### GARFIELD PARK, USA

Domietta Torlasco, Associate Professor, French and Italian/Comparative Literature

GARFIELD PARK, USA is an experimental documentary set in East Garfield Park and North Lawndale, on Chicago's West Side. It explores the ways in which children have

access to and experience playgrounds and other public spaces in an urban area that has long suffered from poverty and racial injustice.

# ADVANCING EDUCATIONAL EQUITY: AN EXAMINATION OF BLACK PARENTS' DECISION MAKING AND ADVOCACY IN SUBURBAN SCHOOLS Gershwin Penn, PhD Student, Department of Sociology

Although research on the racial achievement gap typically examines students and school offices, an important group often gets overlooked in research and policy discussions: parents. This research project seeks to understand the broader implications of the achievement gap by examining how socio-economically diverse black parents make decisions about their children's education, interact with school officials, and advocate for their children in racially diverse school districts with persistent black/white achievement gaps. Using data from interviews with black suburban parents, observation of parent group meetings, and observations of school board meetings, this research will advance our understanding of how black parents navigate the inequalities in the school system to ensure their children receive a high quality education.

# DEVELOPMENT OF Gd(III)-PT(II) MRI CONTRAST AGENTS FOR PREDICTING TUMOR RESPONSE TO Pt (II) CHEMOTHERAPY

Casey Adams, PhD Candidate, Chemistry Department and The Graduate School

Pt(II) drugs are among the most widely used chemotherapeutics, yet there is a high rate of chemoresistance in tumors and there is currently no tool available to predict whether a tumor will respond to chemotherapy. The goal of this project is to use Gd(III)-Pt(II) agents that combine a Gd(III) MZRI contrast agent with a Pt(II) chemotherapeutic to image chemoresistance by MRI. Differences in accumulation of the Gd(III)-Pt(II) agents I Pt(II) sensitive and resistant tumors will result in differences in MRI contrast, providing a way of imaging chemoresistance and predicting whether tumors will respond to Pt(II) therapy.

# TARGETED Co(III)-sb COMPLEXES AS INHIBITORS OF AMYLOID-B AGGREGATION AND TOXICITY

Christopher R. Brue, PhD student, Chemistry Department

The aggregation of amyloid-beta (AB) is believed the key biochemical event in the poorly understood and devastating neurodegenerative disease Alzheimer's Disease (AD). It is believed that metal coordination has a drastic effect on the neurotoxicity of the AB by altering how the protein folds into aggregate prone B-sheets. The Meade lab is developing cobalt(III)-schiff base complex that manipulates this effect to reduce the AB cytotoxicity and inhibit aggregation. The proposed work seeks to screen and develop targeted complexes which are better suited for potential therapeutic use.

#### INCREASING CAPACITY FOR ARCHAEOLOGICAL SCIENCE TRAINING

Amanda L. Logan, Assistant Professor of Anthropology and Melissa S. Rosenzweig, Visiting Assistant Professor, Anthropology Department

The proposers seek funding to improve teaching and mentoring capacity in archaeological science through the purchase of teaching microscopes and cameras. This equipment will be used to provide students with an opportunity to engage in hands-on learning in the classroom and through independent research on food, environment, and archaeology.

### DEVELOPMENT OF A BETA-GALACTOSIDASE RESPONSIVE MR CONTRAST AGENT FOR MONITORING GENE THERAPY

Hao Li, Graduate Student, Chemistry Department.

Gene therapy is making a huge comeback due to newly developed gene-editing and delivery technologies. However, a lack of method to monitor gene therapy efficacy in vivo sets back preclinical and clinical gene therapy development. This proposal aims to address that problem by using "smart" MRI probes that can detect reporting genes.

The Alumnae of Northwestern University is an all-volunteer organization of women that raises funds for a wide range of projects to benefit the University and showcases the University's academic resources with the community through its Continuing Education program. Founded in 1916, and celebrating its centennial in 2016, The Alumnae has given more than \$9 million to the University in the form of grants, fellowships, scholarships, and an endowed professorship, as well as funding special University projects and summer internships. For more information, visit The Alumnae's website (www.nualumnae.org).

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NII GRANTS 2020