

# Office of Research Services

## RESEARCH UPDATE

SPRING 2020



Preparing people to lead extraordinary lives

### RESEARCH SUPPORT GRANT 10K COMPETITION

The Provost's Office and the Office of Research Services would like to congratulate the winners of the RSG 10k competition. We were so impressed by the research and scholarship of all the applications that the committee struggled to make their final selections.

ORS would also like to thank the committee members for their time and hard work reviewing all the applications.

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**Congratulations to the Special Research Support Grant 10K Competition Winners!**

NAME	DEPT	COLLEGE	PROPOSAL TITLE
Amy Bohnert Tu	Psychology	CAS	Fluctuations in Weight-Related Behaviors Across the Adolescent Transition
George Villanueva	Advocacy & Change	SOC	Urban Foodways Culture and Communicative Belonging for Filipino and Mexican Diaspora in Chicago
Marta Werner	English	CAS	Dickinson's Birds: A Public Listening Project
Stefan Kanzok	Biology	CAS	In vivo screening of novel anti-malarial therapeutic compounds in a malaria mouse model system
Jennifer Mierisch	Biology	CAS	Identification of Critical Regulators of Gonad Development
Yoel Stuart	Biology	CAS	Linking short-term and long-term evolution using fossil stickleback fish
Lynne Rooth Golomb	Psychology	CAS	Monitoring parent perceptions of understanding their child's needs in planning for appropriate interventions

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# RECENT NSF CAREER AWARDS

The National Science Foundation (NSF) CAREER award is a prestigious award that supports early-career faculty who have the potential to serve as academic role models in research, education, and advances in the mission of their department or organization. ORS would like to congratulate the three faculty members who have recently received this prestigious award, Dr. Brian Cannon from Physics, Dr. Daniel Cavanaugh from Biology, and Dr. Thomas Sanger from Biology.

## DR. BRIAN CANNON, PHYSICS

### **THE LOCAL AND GLOBAL EFFECTS ON GENOMIC ARCHITECTURE BY DEFECTS INDUCED IN REPETITIVE DNA DOMAINS AND II. DEVELOPMENT OF INTEGRATIVE CURRICULUM IN PHYSICS**

The three-dimensional arrangement of the genome has an integral role in the regulation of its information content, and disruption of this architecture can lead to abnormal patterns of gene expression with grave consequences for the organism. The presence of highly repetitive DNA sequences that can form aberrant structures has been linked to genetic diseases which are a result of a loss of normal regulatory controls. The project seeks to understand how these defects influence the organization of DNA, and thus how these defects might lead to the deleterious protein expression patterns associated with some genetic diseases. The educational component of the work addresses the need to enhance the core scientific competencies of undergraduate science majors and expand access to research experiences. The project will develop a research-oriented curriculum for the introductory physics lab sequence at Loyola University Chicago, initiate research workshops as outreach to Chicago-area community colleges and support a post-baccalaureate training program for promising researchers. The project seeks to provide substantive learning experiences that emphasize interdisciplinary learning, expand opportunities for underrepresented groups in STEM research, and improve the career readiness of promising students for STEM careers.

[https://www.nsf.gov/awardsearch/showAward?AWD\\_ID=1942776&HistoricalAwards=false](https://www.nsf.gov/awardsearch/showAward?AWD_ID=1942776&HistoricalAwards=false)

## DR. DANIEL CAVANAUGH, BIOLOGY

### **CIRCADIAN CONTROL AND INTEGRATION OF FEEDING AND METABOLIC RHYTHMS IN DROSOPHILA.**

Organisms exhibit ~24-hour (circadian) rhythms in behavioral and physiological processes that depend on the presence of dedicated clock cells in the brain that keep time through a molecular clock that maintains daily rhythms of gene expression. In addition, molecular clocks are present in most peripheral tissues, where they serve tissue-specific functions. Together, these make up an extended clock network that synchronizes behavioral and physiological processes with the external environment and organizes them with respect to one another. The experiments outlined in this project will use the powerful model organism of the fruit fly, *Drosophila melanogaster*, to identify neuronal pathways through which clock cells establish circadian rhythms of feeding behavior and to further delineate how feeding rhythms are coordinated with peripheral metabolic rhythms. These experiments will be conducted in collaboration with postdoctoral and undergraduate researchers in the lab who will also serve as mentors for a summer high school internship program that will expand participation to groups traditionally underrepresented in the sciences.

[https://www.nsf.gov/awardsearch/showAward?AWD\\_ID=1942167&HistoricalAwards=false](https://www.nsf.gov/awardsearch/showAward?AWD_ID=1942167&HistoricalAwards=false)

DR. THOMAS SANGER, BIOLOGY

## THE DEVELOPMENTAL REGULATION OF AMNIOTE SKULL DIVERSITY.

As vertebrates moved into new ecological spaces the skull diversified in size, shape, and became adorned with ornaments and weapons. It is no surprise, therefore, that the skull has fascinated researchers across the entirety of Biology over the past century. In recent decades, understanding the developmental bases of craniofacial diversity has been a major goal of Evolutionary-developmental biology. However, a paucity of experimental systems among amniote reptiles, birds, and mammals has made it difficult to create a synthetic understanding of how developmental patterning has changed during the remarkable diversification in skull form. In this research, Dr. Sanger will dissect skull development in an emerging model. Sanger and his team will investigate the expression and function of three core-signaling pathways known to be involved in skull development in other amniote species. Through this research, they will discover whether the diversity in skull form is due to minor or major changes in craniofacial patterning. Capitalizing on the inherent interest in the vertebrate skull, Dr. Sanger will also team with a group of professional educators to develop "Getting Ahead in Life: Investigations into the Vertebrate Skull", cutting-edge, transdisciplinary learning modules targeted to upper level high school and undergraduate biology. Together, Dr. Sanger's efforts will significantly advance the field of craniofacial development and help motivate the next generation of students to pursue education in STEM fields.

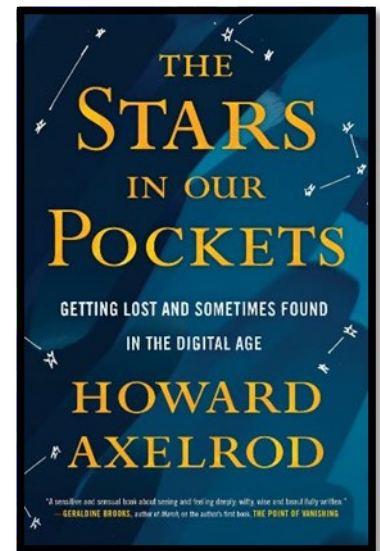
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## BOOK SUBVENTION AWARDS

Book subvention grants are one of the few internal grants offered by ORS. the purpose of this grant is to aid faculty in publishing scholarly works.

**Howard Axelrod**, Lecturer in the English department was awarded the Book Subvention grant in fall 2019 to aid in the publication of his new book titled, **The Stars in our Pockets: Getting Lost and Sometimes Found in the Digital Age**.

<http://www.howardaxelrod.com/#the-point-of-vanishing-1>



**Dr. Pamela Caughie**, Professor in the English department was also awarded the Book Subvention grant in fall 2019. This award was used for indexing services for her work, **Man into Woman: A Comparative Scholarly Edition**. This print edition is paired with the digital edition, **Lili Elbe Digital Archive** ([www.lilielbe.org](http://www.lilielbe.org)).

## ORS INTERNAL FUNDING

IF YOU ARE A FULL-TIME FACULTY MEMBER ON THE LAKESHORE CAMPUSES (LSC OR WTC) YOU ARE ELIGIBLE TO APPLY FOR ONE OF THE INTERNAL GRANTS FROM ORS.

FOR ADDITIONAL INFORMATION AND GUIDELINES, PLEASE CLICK ON

[HTTPS://WWW.LUC.EDU/ORS/INTERNALFUNDING.SHTML](https://www.luc.edu/ors/internalfunding.shtml)

## COMPLIANCE NEWS

Thank you to **Stefan Kanzok**, Associate Professor in the Department of Biology for stepping in as the Institutional Animal Care and Use Committee (IACUC) chair for fall 2019 semester.

ORS hosted another successful Responsible Conduct in Research and Scholarship (RCRS) course in early January 2020 with 38 attendees. The next RCRS course will take place in August 2020 and registration opened in March. The Responsible Conduct in Research and Scholarship program incorporates ethics education into the curriculum for NIH or NSF funded researchers and all students participating in research activities.

## ORS STAFF NEWS

The Office of Research Services is proud to welcome our new(ish) staff member to the team, Ms. Marzena Nowicka.

Marzena came to Loyola from Northwestern University where she worked as an Associate Research Administrator at the Weinberg College of Arts and Sciences and a Graduate Program Assistant at the Department of Psychology. She received her Bachelor of Science in Psychology from Northwestern University. Marzena is bright, enthusiastic, and an overall wonderful team player for ORS. We are overjoyed to have her on our team.



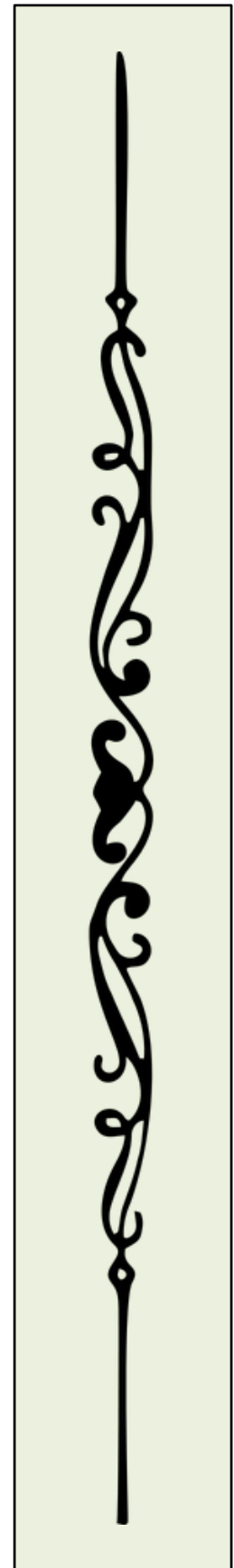
## Angie's Corner

Initially, this space was to be used for a totally different content. The theme was to be one of excitement and enthusiasm as we welcomed our new Provost, Dr. Norberto Grzywacz "Norberto". We wanted to share that we were certain that research had an advocate with our new provost. That in a recent conversation with him, he expressed a great interest in understanding our operations, and without a doubt, recognized that further resources are needed. And then, everything changed. COVID-19 arrived at our door step. Actions were not just needed-they were needed immediately. And so they were taken.

What we are experiencing now is so unreal and unexpected. Our current reality is more like a plot of a movie we would watch from the comfort of our couch, or at the movie theater. But painfully, it is not a movie. Researchers across the globe are working harder than ever to find a vaccine and a cure, as well as others are researching how the pandemic would affect the well-being of all. Understanding how people are psychologically affected by and coping with the COVID-19 crisis.

To say that all types of research are needed now more than ever is an understatement. The Office of Research Services stays committed to our faculty especially during this time. We are working diligently to continue to assist with proposal preparation, grant management and all the compliance needs of our researchers. We understand that there are many questions and concerns regarding how existing research activities can continue as we maintain and follow government guidance. Our website has important information relevant to external funding agencies, so be sure to visit our site regularly as we post the most up to date information when it becomes available. Please visit <http://www.luc.edu/ors>.

In closing, I have always said that, "ORS is here for faculty because of faculty". So, please let us know how we can be of service!



# UPCOMING RESEARCH EVENTS

**The Grant Station** offers free short-form webinars on topics from the world of grantseeking, strategy, and management.

<https://grantstation.com/public-resources/free-recorded-webinars-2>

## National Grants Management Association Webcasts

Webcasts can be viewed anytime, from the comfort of your own computer. Webcasts are FREE for NGMA members. Non-members can purchase webcasts for \$49. (A webcast registration fee is required for each non-member viewer).

[https://www.ngma.org/index.php?option=com\\_content&view=article&id=41:webcasts&catid=20:site-content&Itemid=131](https://www.ngma.org/index.php?option=com_content&view=article&id=41:webcasts&catid=20:site-content&Itemid=131)

## Online Grant Proposal Writing Training

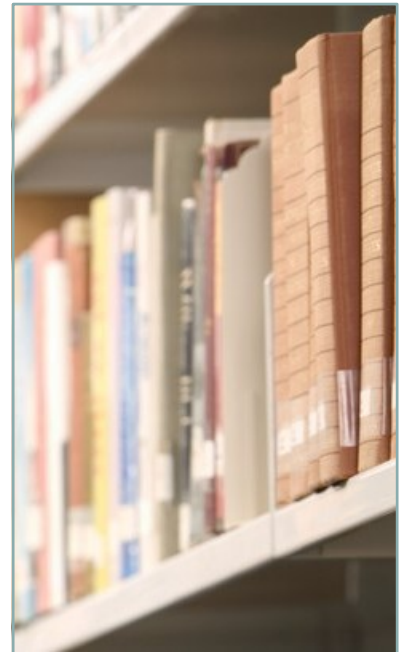
Want to learn more about grants, but short on time? Get a quick boost to your knowledge with our online grant webinars. Follow along and ask questions with our live sessions or watch on your schedule with on demand recordings.

<https://www.tgci.com/training/webinar>

## IMPORTANT INFORMATION FOR ORS INTERNAL GRANTS

- The next deadline for submitting Research Support Grant applications will be **May 1, 2020**.
- Book Subvention awards and Manuscript Publication Assistance grant applications are review once a month.

**(COVID-19 Note):** ORS will continue to provide proposal and grant support during this time. ORS Staff will remain available to assist the research community while observing all necessary safety precautions and government imposed actions. Our compliance meetings will remain on schedule to ensure projects are not delayed, however as everyone's health and well-being is the top priority, ORS will conduct these meetings via Zoom. Please send an email to [ors@luc.edu](mailto:ors@luc.edu) if you need assistance.



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If you have any news or updates that would be appropriate for the next ORS Newsletter, please send your suggestions to Jennifer Rios, ORS Office Manager at [jrios1@luc.edu](mailto:jrios1@luc.edu).