

Stetson Undergraduate Research Committee
Annual Report
May 1, 2021

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Dr. Rosalie Richards, Associate Provost
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Stetson University

Dr. Painter and Dr. Skomp:

On behalf of the Undergraduate Research Committee, I submit to you an appraisal of the Stetson Showcase and the Stetson Undergraduate Research Experience for 2020/21.

The Undergraduate Research Committee that reviewed SURE Grant applications and recommended the successful candidates, as well as organized Showcase on April 13, 2021, consisted of Dr. Kimberly Reiter (Chair), Dr. Melissa Parks, Dr. Chadley Ballantyne, Sidney Johnston, Dr. Randall Croom, Dr. Kevin Riggs, Grace Kaletski, Dr. Michael Eskenazi, Dr. Khushbu Mishra and Dr. Ken McCoy. There was also important assistance from Mary Bernard, administrative assistant in the Department of History, Kim Canup in IT and from the two interns engaged to learn how to run such an event, Noemi Loeza and Carlye Maher.

Showcase

After a hiatus following the Spring 2020 emergency, the Undergraduate Research Committee met several times in the early Fall semester 2020 to craft a workable format that would allow live, hybrid, recorded and virtual concurrent sessions.

1. In the recommendation of Dr. Riggs, Dr. Eskenazi and Dr. Mishra, posters were eliminated this year as being far too unwieldy to manage in a live online format. As these three represent academic fields that normally produce posters, the recommendation was valid, and extra sessions were created for oral presentation of work that would normally have been steered to a poster.
2. Moderators and judges had the option of being at an on-campus venue or in a virtual one. Several alumni judges were used this year as they had no need to travel, and enjoyed the experience of judging very much. Alumnus judges were Dr. Bruce Bigman, MD, Keith Casto, JD, Cooper, White and Cooper Law (unable to come at the last minute), Dr. Bert Gordon Chemist, J.R. Reynolds, Dr. Stephanie Hollis, MD, CEO Solar Stik and Nick Leibee, artist, Nick Leibee Art.

3. Moderators were given training in setting up and operating recorded Zoom venues in full security mode.
4. Virtual links were only given to those who registered. Students who registered with their 800 numbers could receive cultural credit for every 45 minutes of viewing.
5. About 135 students participated, mostly from the STEM fields, where participation was mandated. Music and Honors 102 also filled their normal roster. Participation from the rest of the school was spotty, as students had little incentive or persuasion to participate in such an enervating year.
6. 240 students received one to five cultural credits each, depending on time in attendance.
 - ⇒ As stated in the Program, a student needed 45 minutes to earn one cultural credit.
 - ⇒ Up to five credits could be earned at Showcase.
 - ⇒ Those who presented live at Showcase received at least one cultural credit by virtue of participating.
 - ⇒ Minutes in attendance were determined by sign in sheets at physical locations and Zoom attendance sheets for virtual sessions. Some students gamed the system by logging in and leaving it on, a habit that popped up at several cultural credit events this year. While some cultural credit events have required quizzes before credit is awarded, this was felt to be impractical given the multiple presentations at any Showcase venue, so we accepted there would be cheating. In total, if one went to the longest morning and afternoon sessions, one could log in 320 minutes for the day. I have a few who logged in more minutes than possible, suggesting they were 'attending' concurrent sessions on two programs at once, and leaving their computers running. At the end of each session we had to boot off students who quite obviously had left the program on for the credit. One student logged 710 minutes.
 - ⇒ Some students did not give us 800 numbers, which also complicated the calculation of cultural credit.

It took my interns and I a cumulative eleven hours to comb all the Zoom attendance sheets to total up minutes per person. We hope never to have to use this system again, and the committee will discuss options for reforming cultural credit at our first Fall meeting

Judges:

Dr. Bruce Bigman, MD
 Dr. Martin Blackwell, Adjunct, History
 Dr. Elizabeth Boggs, Director of Career and Professional Development
 Keith Casto, JD, Cooper, White and Cooper Law
 Barbara Costello, Associate Professor/Government Information & Research Librarian
 Dr. Christopher De Bodisco, Assistant Professor of Economics
 Joe Del Rocco, Assistant Professor of Practice, Computer Science
 Dr. Michael Eskenazi, Assistant Professor of Psychology
 Dr. Heather Evans-Anderson, Assistant Professor of Health Science
 Dr. Melissa Gibbs, Professor of Biology and Director of Aquatic and Marine Biology
 Dr. Bert Gordon Chemist, J.R. Reynolds
 Terry Grieb, Assoc. Professor Emeritus of Instructional Media
 Dr. Lua Hancock, Vice President, Campus Life and Student Success

Bud Hanson, Asst. Professor of Practice/Executive Director PACE
Dr. Stephanie Hollis, MD, CEO Solar Stik
Dr. John Horn, Vice-President (ret.) for Research & Development, 3M
Dr. David Johnson, Brown Visiting Assistant Professor of English
Matthew Imes, Associate Professor of Finance
Lyda Kiser, Executive Director & Title IX Coordinator, Campus Life and Student Success
Nick Leibee, artist, Nick Leibee Art
Dr. Delphine Pinet, Assistant Professor of Practice, Chemistry live
Dr. Hari Pulapaka, Associate Professor, Math and Computer Science
Dr. Lisa Robison, Visiting Assistant Professor, Psychology
Dr. Rajni Shankar-Brown, Assoc Professor/Jessie Ball duPont Chair of Social Justice Education
Dr. Matthew Shannon, Assistant Professor of Chemistry
Dr. Jean Smith, Assistant Professor of Biology

The library faculty, visiting faculty, alumni and administrators who volunteered should be applauded and commended for their dedication to the Showcase idea, and their exemplary evaluations.

Showcase was made possible by the contributions from the Department of History Administrative Assistant, Mary Bernard, and the Showcase Interns Noemi Loeza and Carlye. They helped plan session, proofread, and managed virtual sessions (Noemi from California). They worked as a team, creating a smoothly run Showcase, but also learned the pitfalls of virtual conference management. However the indispensable member of the team this year was Kim Canup, who volunteered to manage all the virtual setup, registration, Zoom Training, recordings and troubleshooting. Without Kim, Showcase would have limped to the finish. I am also grateful to Bruce Chong, whose team worked with Kim to establish a home for all the recordings at <https://www.stetson.edu/other/research/showcase-presentations.php>.

The committee discussed a Keynote speaker, but all of us have been to virtual conferences this year with poorly attended keynote addresses. While no doubt we would have had an audience for a well-chosen keynote, we decided not to spend the monies this year for a speaker at the end of what we assumed would be an exhausting and complicated day. In retrospect we would probably have had good attendance for a speaker, but at the time we were still quite unsure how a virtual Showcase would be accomplished, given that we had no planning staff besides ourselves. This is another reason why Kim descended into our midst like a gift. However, we did have a theme. 'New Worlds' seemed appropriate given the challenges we have all faced this year. To celebrate the theme, a current student (Gordon Silva '21) and an alumnus (Michael Johnpoll '17) created artwork that expressed our digital realities.

Ten Maris Prizes were awarded. The full account is at the end of the report. In one session the judges felt so strongly about two students that one of the judges offered to pay for a second Maris Prize in that session. While the offer was gratefully acknowledged, Rick Tysor was able to juggle the funds to accommodate the extra funds needed. In a unique quirk which will probably not be repeated, two brothers in separate majors each won a Maris in their respective sessions.

New Directions:

It is the sincere hope of the Undergraduate Research Committee that we never have to manage a hybrid Showcase again. Despite the benefits of parents being able to watch from home, and off-campus students having the opportunity to present, the atmosphere was what one has come to expect from the virtual conferences we have all attended this year in our professional capacities. Moreover, while there are cogent arguments for having all sessions available on Zoom, I would recommend that (given that we are all on campus in Spring 2022) to receive cultural credit a student must be present on campus and that all presentations be on campus. The Zoom attendance sheets were almost impossible to work with, given that students would log on and off multiple times to catch friends in several sessions.

However, there were positive lessons learned.

- ⇒ We might utilize recorded Zoom sessions next year for the off-campus community of parents, alumni and remote students. However, as I said above, we will not offer cultural credit for online attendance.
- ⇒ We have to rethink the cultural credit allotment system if we are still virtual next year. And in any case we will explore new models for allotting cultural credit for on campus attendance as the current 15 minutes=1/3 credit is becoming unwieldy.
- ⇒ We need to have serious discussions about promotion of Showcase. Despite that fact that this is a yearly event, and even with several months warning, Stetson Today did not pick up on Showcase until the week before the event, and failed to advertise until the day before. The URC sent out several announcements on Faculty and Student Announce, as posters were useless this year, but most went unread.
- ⇒ We may be able to eliminate most of the program printing costs. Students do not use paper programs any longer, even in on-campus sessions. We may be able to limit program printing to copies for moderators, judges and administrators.

Finances:

Showcase was allotted \$5700 by the university, plus a Keynote Honorarium of \$2000 from the CAS Board of Advisors. Rick Tysor should be contacted for the exact expenditure sheet. A precise expenditure cannot be given as at the time of this report (May 1, 2021), but we spent very little of the budget with the exception of the ten Maris Prizes at \$200 each and the publication of fifty short programs (most of them never used).

The Future Goals of Showcase

Some goals from Spring 2019 still remain in our plans for next year:

1. Extend invitations to the graduate and MFA students to present, but in a separate venue and without a cash Maris Prize.
2. Establish a clear timetable at of Maris Prize disbursement following Showcase. Nobody has a clear answer as to who distributes the cleared Maris checks to students.
3. Compile a guidebook for the next generation of undergraduate research leaders to ensure a smooth transition of power after the 2021/22 year to and new chair. I had planned to step down after 2020, but with the challenges we faced in 2020 and 2021, I am grateful to pass on the torch of this exhausting and wonderful service after the 2022 Showcase.

SURE

All students awarded a 2020 SURE Grant completed their research.

Zevi Altus , whose methods of calculating the Kurdish population in Turkey won him a 2021 Maris Prize, will pursue an MA in Quantitative Methods in the Social Sciences at Columbia University, with a full ride scholarship

Damanee Appavoo, who studied portfolio management mathematics, plans to pursue an MSc in Financial Engineering after a gap year.

Rebecca Guerra returned to Italy after graduation in December. She is working as an investment banking intern in Italy, but in the Fall will pursue a MS in Economics at the University of St. Gallen in Switzerland.

Anna Hamilton, who looked into maximizing Stetson student learning through community impact, will pursue a job in data science.

Kathryn Moran, whose research dealt with snake parasites, will be attending Tufts University, where she will study veterinary medicine.

Nelson Quezada-Herrera, who won back-to-back SURE Grants in both Political Science and English as well as a 2021 Maris Runner Up status, has a full ride scholarship to pursue an MA in Political Science at Emory University.

Victoria Crawford, Grace McEllroy and Alyssa Louk continue as seniors next year.

This year fifteen students were awarded a Summer Research Grant. One student declined after receiving an external grant. The names, titles and mentors of the fourteen students who accepted SURE funding are listed in at the end of this report. Total expenditures are in a separate document. The Committee met as a group after reading the applications through shared files and each submitted scores for aggregate totals. The grants were generously funded by Palm Beach Community Trust, the Prat Undergraduate Research and Creativity Fund the Farmer-Hartke Undergraduate Research and Creativity Fund, the College of Arts and Sciences Undergraduate Research Fund and the Frueauff Foundation. The students were awarded \$47,130 in total, including \$7630.00 for faculty mentors. Nine students were awarded an additional \$500 for travel needs. There were five Frueauff scholars. All the students will be required to present at the 2021 Showcase.

The Committee is grateful to the Office of Academic Affairs for finding the funding for the non-Frueauff students. The efforts are much appreciated.

The Future of SURE

The following is quoted nearly verbatim from the 2017/18 repost as little has changed:

There is still a need to raise the amount of the SURE Grants. Because of the smaller number of high quality applicants, the committee was able to recommend additional funds for those students whose research required travel. However, the committee was very concerned about the paucity of applications, despite a growing class and adequate advertising. Our conclusions are as follows:

- a. Despite increased funding, the award amounts will no longer support or interest the science students. The very talented will find external funds well above the SURE amounts of \$2000 plus \$500 for travel needs. This year, for the first time ever, the science proposals were among the lowest scored. While in part this was due to the strong work done by faculty in the Humanities and Social Sciences to work with their students to produce strong proposals, there was also a recognition that most science students and their mentors cannot support the research on these monies,
- b. Even in the non-sciences, there were reports this year that funding could not go far enough. Most of the students now require travel to archives and sites. We are glad to have had an extra \$500 each for those students, but it is still not enough.
- c. We hope that the lack of interest comes from the first two points, but faculty are reporting a decrease in student interest in summer research projects, citing work needs and general aversion to more academic ventures. Many others simply express no intellectual curiosity to take on a project. With an increase of students in the underclasses we had expected a greater competition, and instead had a record low in applications. Indeed, we had fewer applications by half than in the inaugural years, with far fewer eligible students. We are hoping that this year was an anomaly, not a trend.
- d. It is recommended that junior faculty be given orientation on the SURE process, to diversify and widen the applicant pool, and to be assured credit towards Tenure and Promotion by doing so. As for last year, a better method of promoting the grant opportunity has to be found, but the committee is certain that the faculty stipend is a huge factor in faculty interests when it comes to mentoring a summer UR project.

The Future of Undergraduate Research at Stetson

There were several telling moments in the past few years that have prompted discussion for a new model of promoting Undergraduate Research at Stetson. I remain a CUR Councillor, and am currently C0-Chair of the 2021 National URPD Conference in Undergraduate Research. Increasingly I have found that my colleagues at small universities direct an Undergraduate Research Office (URO). While several are run by professionals, others in our comparison groups are directed by faculty who have taken a course release and are granted a dedicated staff member, much in the model of the Brown Center for Teaching Excellence on the Stetson Campus. I believe we may have reached the stage when such a URO should be considered. While the URC should and must continue to plan and organize Showcase, the mechanics have become overwhelming.

- ⇒ With increasing Stetson participation at NCUR and FURC, there has to be a central place for travel scholarships, fundraising, coordination of registrants and payment of invoices. It is to Stetson's advantage to know who is presenting where and when so

- we can better promote it. As it stands, there is no central place for faculty to post information about students invited to conferences, and there is often confusion as to how to obtain reimbursements when the student must register and travel.
- ⇒ We are poorly positioned for promoting external or national UR Grants, like REU's at Research I universities, NSF, Goldwater and the like. Our students are competitive but lack the information about these competitive opportunities that a central URO could provide.
 - ⇒ The faculty on the committee have neither the time nor the connections in Stetson media, marketing, alumni relations or donor relations to promote Showcase and SURE fundraising. A URO with a dedicated staff member would be able to act as a clearinghouse and conduit for these public relations, not the least of which is getting out the word about our success in undergraduate research.

Concluding Remarks and Recommendations

Stetson Showcase met the limited goals we set for it this year. We knew going in that attendance and participation would be much lower, and we anticipated that it would be at 50% of the last Showcase in 2019. We were correct. We also knew that our greatest challenge would be managing a hybrid/virtual mode, but thanks to the willingness of the committee and the faculty moderators to learn, we had things set up and ready to go with a week to spare. We knew that Cultural Credit allotment would be a major challenge, but the interns soldiered through with my help and we got the counting of thousands of minutes done within three days of Showcase. Finally, we managed to convince 135 exhausted students to present. We have asked a lot of our students this year and these 135 pulled their weight. Showcase rests on the solid scholarship and mentorship of our students even in the best of years. This year the judges were enthused and made hopeful by the amount of work these tired, mentally-stress but still committed students put into their research.

On the other hand, we were happily surprised at the quality of work our fifteen SURE applicants put into their proposals. Next year there will be fifteen strong presentations at Showcase to which we look forward, and several faculty who are delighted to work with such promising talent this summer.

However, to rebuild even further next year and to continue the success of the Stetson Showcase and SURE program, the Committee recommends:

1. Examination of Showcase funds to balance the high cost of the banquet and the popular reception. It may be prudent to examine the substitution of a reception for the dinner, although this will bring in complications with the Keynote.
2. A fundraising campaign targeting SURE funding and raising it to levels that can support student research in an ever more expensive research environment.
3. Continued involvement of the Trustees and the DeLand community to spread the word about Showcase's success.
4. **Consideration of a faculty-directed Office of Undergraduate Research on the Brown Center model, with a dedicated staff member to handle advertising, promotion and the budget.**

Respectfully submitted,



Kimberly D. S. Reiter
Chair, SURE/Showcase

Appendices

1. Showcase Maris Prizes 2016
2. SURE Grants 2015/6
3. Showcase 2016 Program (separate sending)
4. SURE Grant expenditure sheet for 2021/22 (separate sending)

APPENDIX 1

MARIS PRIZES 2021

ART AND DIGITAL ARTS PRESENTATIONS AND EXHIBITIONS

Runner-up

Jacob Woods Audio Production for Procedural and Linear Environments

Maris prize

Grace Crandall A Place You Want to Stay

JUNIOR MUSIC RECITALS

Runner-up

Zária Graves, Viola

Maris Prize

Elené Okruashvili, Piano

ORAL PRESENTATIONS

Runners Up

Faith Belflower A Declaration of the Ceramics Status from Craft to Fine Art

Grace Highsmith Nudge Theory Implications on Voter Participation

Cheyenne Mills Investigating TOR Pathway in *Vanessa cardui* Butterflies Treated with Rapamycin

Dante Jones Testing the Einstein Equivalence Principle with the Atacama Cosmology Telescope

Marie Domina *Mus musculus* as an Intermediate Host of a Recently Introduced Snake Parasite in Florida, *Raillietiella orientalis*

Jordan Ogg Amyloid- β -Induced chemotaxis behavior and neuronal morphology in transgenic *Caenorhabditis elegans*

Megan McLean Inhibitors Influence on Hedgehog Signaling Pathway in *Vanessa cardui* Butterflies

Samuel Friedman Exploring mean reversion in relation to quality of life, before, during, and after covid

Steven Kalicharan and Kiara Santiago The Toxicity of Gender in Shakespeare and Its Performance in The Past is Prologue

Nelson Quezada-Herrera Dismantling the Myth of Racial Progress in the United States Through Colson Whitehead's The Underground Railroad

Maris Winners

D. Zevi Altus Estimating Kurdish Population in Turkey: Population modeling with regression and Leslie matrices

Anna Baj Investigating how a Single Point Mutation in FUS1 Alters Yeast Cell Fusion

Matis Fogel Using Molecular Docking to Study Known SINE XPO1 Inhibitors and to Design Novel SINE XPO1 Inhibitors

Shmuel Fogel Ethanol-based extracts from *Alpinia zerumbet* induce apoptosis in CLL cells

Alison Martin Effects of Ibuprofen on Development of Axolotl Embryos

Tahira Perry Impact of light availability and the mutualistic relationship with nitrogen-fixing bacterium, Rhizobium, on above ground growth of *Chamaecrista fasciculata*

Jessica Matilzski Selling Secondhand Concert Tickets: What is your Best Bet?

Aliya Cruise and Caleb Roberts (ACT)ion: Combating Social Justice Issues Through Devised Theatre

APPENDIX 2

SURE Grants 2020

Frueauff

Julia Finver *Evaluation of COVID-19 related public health measures and their effectiveness in infection control in Florida colleges and universities* (Dr. Asal Johnson)

Julia Gray *The Effect of Social Media Usage on Conspiracy Theory Belief* (Dr. Michael Eskenazi)

Emily Keck *Expanding Access to Black History in Volusia County Through Mapping* (Dr. Tony Abbott)

Kristina Mickens *Reservoir Competence of Prairie-Dwelling Rodents for Anaplasma Phagocytophilum* (Dr. Sean Beckmann)

Jake Simmons *Protein-Ligand Interactions Characterized by Complimentary Experimental NMR and Computational Modeling* (Dr. Matthew Shannon)

SURE (PBCT, PRAT and Farmer-Hartke)

Jordan Acosta *The Post-Soviet Mosque: Islamic Revival and Post-Soviet Identity in Contemporary Kyrgyzstan* (Dr. Michael Denner)

Jade Ammones *Equity & Art Institutions: The Hill We Climb* (Dr. Katya Kudryavtseva)

Abigail Arient *Vodou Dance in the Caribbean: From Suppression to the Stage* (Dr. Nicole Mottier)

Mary Caputa *Crimes by American Military Personnel against the Japanese, 1941-1952* (Dr. Emily Mieras)

Ryan Estes *Contra Haereses: Ecclesiastical Responses to the Albigensian Crusade* (Dr. Kimberly Reiter)

Julia Finver *Evaluation of COVID-19 related public health measures and their effectiveness in infection control in Florida colleges and universities* (Dr. Asal Johnson)

Meghan Landsberg The New Era of Misinformation: The Development, Spread, and Effects of Online Misinformation (Dr. Su Young Choi)

Liam Leider Issues With Current Methods of Advertising SNAP - Moving to Social Media (Dr. Kelly Smith)

Shadia Muñoz-Najar Explaining the Correlation between Compulsory Voting and COVID Death Rates in Latin America (Dr. Elizabeth Plantan)

Trenton Ward Abolishment of the army, political culture, and the lack of military coups and repression in Costa Rica after 1948 (Dr. Nicole Mottier)