

RESEARCH @ FSW

Research @ FSW is produced with the goal of updating Florida SouthWestern State College faculty and staff on exciting new developments in faculty research, creative expressions, research publications, and other highlights. The publication is the primary tool for faculty to share research successes with colleagues.



ARC RESEARCH GRANT PRESENTATIONS

The Academic Research Council (ARC) grant has been established at the College to provide faculty with funding to enhance professional expertise, to enhance the student learning experience, and to provide the College learning community with new or enriched student learning experiences. During fall professional development days, grant recipients presented their project summaries and research results. The presentations showcased academic inquiry and engagement across the disciplines. The 2017-2018 ARC recipients along with their project titles are listed below.

Dr. Shawn Moore, professor, English

“The Digital Cavendish Project: A Collaborative Scholarly Repository for the Study of Early Modern Women Writers”

Martha Jenner and Margaret Kruger, professors, Nursing

“Effectiveness of Online Virtual Nursing Leadership Experiences Comparative Analysis”

Dr. Michael Sauer, professor, Biological Science

Dr. Melanie Ulrich, professor, Biology (not pictured)

“Sources of Color to San Carlos Bay: Changes in Dissolved Organic Matter and Chlorophyll a Content in a Shallow Estuary “

Dr. Michael Witty, professor, Microbiology

“Recovery of Useful Nitrogen and Phosphorus From Waste Water”

Dr. Gabriel Gaidos, professor, Biochemistry

“Toxicity Evaluation of Food Additives”



2017-2018 ARC Grant recipients pictured in order of listing on the left.

RESEARCH UPDATE



Dr. Michael Witty

Research Topic: “Recovery of Useful Nitrogen and Phosphorus From Waste Water”

Preliminary NMR analysis of uric acid – anthocyanin cocrystals has been done and analysis is in progress. It has taken some time to optimize the process and this may relate to the methods used to generate the crystals. We may need to improve this process and obtain better crystals for the method.

Methods for harvesting uric acid, including a long time line comparing normal diet, rich diet, and specific sugars including sucrose, glucose and fructose continue. This is important data which will be used to compare with experiments done by undergraduates using chemically synthesized uric acid. Detailed analysis of this data will be done in the Spring semester, when the long term experiment (> three months so far) has been completed. Two students have been identified and will be able to help with uric acid experiments in the spring semester.

Assays to measure the use of struvite in waste water treatment processes have been improved, though they remain problematic and work to make the assays better is also continuing.



Dr. Gabriel Gaidos

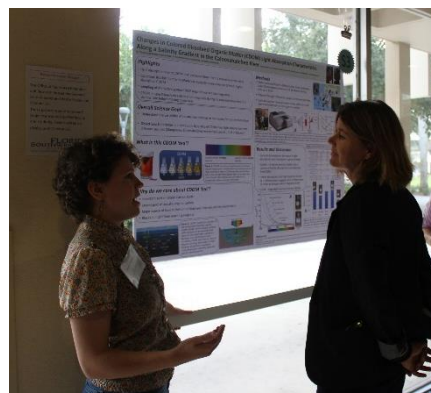
Research Topic: “Toxicity Evaluation of Food Additives”

Our project focuses on additives found in sugary soda drinks and in industrially produced wines. We use the *Ames Test* to study the potential mutagenicity of these additives. The *Ames Test* uses special strains of bacteria (*Salmonella*) that are very susceptible to mutations. By detecting the number of bacterial mutants we can quantify the toxic effect of the food additive.

The two students who worked on this project solved a major technical hurdle: agar plates made with wines and sodas for the *Ames Test* could not be jellyfied, and this was a major blockage in the progression of our project. Thanks to their efforts we gained the know-how on how to produce these special agar plates, and the project is moving on to the next phase. Currently a new student is in the process of joining the project, and she will continue with the testing phase. Finally, we will present our results in the upcoming FSW poster session, and we will explore ways to obtain grant funding to expand our evaluation to other food additives.

FSW RESEARCH EXPO

The fall Research Expo showcased the work of fourteen members of the FSW community. Five students and six faculty shared their research through poster presentations, their names and research topics are listed below. **Dr. Michael Sauer** lectured on the “Variability in Dissolved Organic Matter in San Carlos Bay and Its Impact on Microbial Respiration and Measurements of Microalgal Chlorophyll,” and **Adrian Kerr** presented “Egyptian Pyramids Fact Versus Fiction.”



Student Poster Presenters

Jacqueline Calderwood

“Understanding Food Insecurity and Its Solutions”

Janna Linehan

“Sustaining Mental Health: An Exploration of Integrative Psychiatry and Allopathic Medicine”

Michelle Mcfatridge

“The Reality of Factory Farming”

Jennifer Meader

“Changes in Dissolved Organic Matter Light Absorption Characteristics Along a Salinity Gradient in the Caloosahatchee River and San Carlos Bay”

Omar Zeidan

“Advancements in Hand Transplants and Upper Extremity Prosthetics: Which Is Best for Those Seeking Appendage Replacement?”

Faculty/Staff Poster Presenters

Dr. Brandi George, Professor of English

“Life as Art: Collaboration and Experimentation”

Dr. Renee Hester, Professor of Reading

“The Effects of Motivation on Academic Performance in Traditional and Non-Traditional Freshmen College Students”

Margaret Kruger & Martha Jenner, Professors of Nursing

“Effectiveness of Online Virtual Nursing Leadership Experiences - Comparative Analysis”

Dr. Jennifer Patterson, Professor of Management

“Nurse Supervisors and Certified Nursing Assistants: Leadership Characteristics and Job Satisfaction”

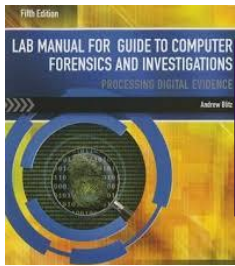
Dr. Amanda Sterk, Director, Accelerated Programs

“Redefining College Readiness: What Institutional and National Research Means for the Future of Accelerated Students”

Dr. Amy Trogan, Professor of English

“Surprised by Maud”

External Presentations and Publications



Andy Blitz, chair and professor of Computer Science, published his book *Lab Manual for Guide to Computer Forensics and Investigations*.



John Cantlon, adjunct professor of Student Life Skills, released three books in 2018. The titles are listed below.

- *Growing up in Southwest Florida in the 1960's*
- *Observations and Poems of Southwest Florida*
- *Thoughts for the Day-They Work for Me*



Dr. Mary Conwell, chair and professor of Paralegal Studies, work titled, "Effectively Teaching Case Briefing" was published in the Fall/Winter 2018 edition of *The Legal Educator*, a scholarly magazine about issues in paralegal education published by the American Association for Paralegal Education (AAfPE).



Ron Feemster, professor of Mass Communications and Journalism, presented "President Trump's Twitter Feed: The Rhetoric of Authoritarian Propaganda" at the Florida College English Association.



Arenthia Herren, faculty librarian, presented "Supporting Curriculum Through Library Collections" at the Association of Florida Colleges Annual Meeting. The presentation showed the importance of ensuring that college's libraries support the college's curriculum.



Doug Magomo, professor of Mathematics, will present his paper "Learning from Students' Errors – College Algebra and Calculus Examples" at the Joint Mathematics Meetings of the American Mathematical Society and the Mathematical Association of America in Baltimore, Maryland this January.



Dr. Michael McGowan, professor of Philosophy, contributed a chapter to Blackwell's *Philosophy and Pop Culture* series; the book is *Saturday Night Live and Philosophy*. Dr. McGowan's chapter is titled, "Dating in Auschwitz: Pushing Boundaries with Offensive Material," the text looks at the justifications for a robust concept of free speech.



Dr. Larry Miller will serve on a panel titled "Dollars Driving Results: Funding Lessons from Higher Ed" at the 2018 National Summit on Education Reform in Washington DC this December.



Michael Mitchell, collegiate high school classroom teacher presented "The Model for Collaborative Evaluations: Creating an Efficient Evaluation Through a Systems Approach" and "Educational Improvement Efforts in Higher Education: An Evaluation Using the Model for Collaborative Evaluations" at the American Evaluation Association Annual Conference.



Dr. Myriam Mompont contributed a chapter to the book *Between Two Worlds: Jean Price-Mars, Haiti and Africa*. The chapter is titled, "Jean Price-Mars's Brazilian Connection: Arthur Ramos Reads Haiti" discussing the correspondence and exchange of ideas between the two ethnographers who were instrumental in the development of pan-Africanism in the 20th century.



Krissy Platt, collegiate high school classroom teacher presented "How My Students Went from 84% EOC Pass Rate to 96% EOC Pass Rate in One Year" at the Florida Council of Teachers of Mathematics Annual State Conference.



Dr. Amanda Sterk's article titled "Shifting the Paradigm on Dual Enrollment" was published in *Link Counselors*, a national magazine for school counselors.



Dr. Les Sutter, professor of Humanities and Psychology, published *Trivia 777 Jackpot Challenge* which provides trivia fun with 777 questions.



Greg Winkler, collegiate high school classroom teacher presented "*Lifting Students up Through a Peer Mentor Program*" at the Florida Charter School Conference.



Barbara Trube, adjunct professor of Education, presented "Fostering Teacher Leadership Skills in Pre-Service Teachers" at the National Association for Early Childhood Teacher Educators in Austin, Texas. Trube has co-authored a chapter of *The Blackwell Book of Mentoring*; the chapter is titled "A Model of Collaborative Mentoring." Trube additionally co-authors an article titled "Early Childhood Education, Care, and Development: Perspectives from Around the Globe" in the *Global Education Review*. She served as the co-editor of the July 2018 edition of the *Global Education Review*.