

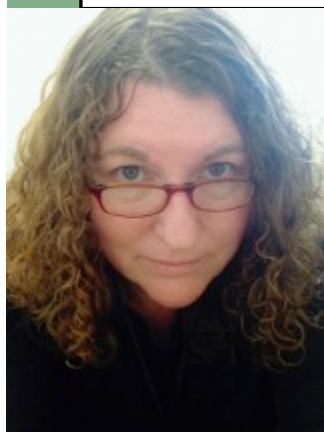
RESEARCH @ EMU

Elevating Communities and Inspiring Generations

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Volume 1 – Fall 2014



From the Director of the Office of Research Development & Administration: One-Stop Shop

The Office of Research Development and Administration (ORDA) serves and supports the EMU community engaged in activities that promote basic and applied research, public service, teaching, learning, scholarship, and artistic expression. This year has been particularly exciting as we have increased our commitment to University research through an expanded infrastructure. This expanded infrastructure is allowing ORDA to establish a full-service, “one-stop shop” for research, from developing research areas to post award management support.

Also in this Edition:

- New Positions, New People at ORDA
- New Research Software Packages
- Four New Patents Received by EMU
- Upcoming External Funding Deadlines, and Events.
- And Internal Research Awards Dates & Timelines

In addition to traditional proposal preparation and submission services, ORDA now provides post award grant management support. ORDA offers **Principal Investigators/Project Directors** direct financial administrative services to help manage and spend out grant funds. These services include preparing PAFs, hiring students, and processing P-Card and travel expense activity through CONCUR. Please contact ORD to learn more about how we can help you manage your post award activity.

ORDA is also increasing its research development activities. These activities include learning more about specific faculty projects, matching funding opportunities to faculty interests, and providing a broader array of workshops and professional development opportunities for faculty, students, and staff. Our newsletter and other communications provide the campus community with information regarding upcoming research development opportunities and activities.

These exciting changes at ORDA synergize with additional developments within Graduate Studies and Research. Two of these developments deserve special mention. Graduate Studies and Research has now established an **Office of Research Compliance**, which oversees University compliance with federal research regulations, the Responsible Conduct in Research training resource, CITI, and which also provides outreach and education to faculty, students, and staff. Additionally, Graduate Studies and Research is working to establish an office (yet to be named) to promote the commercializing of University-owned intellectual property and to support faculty interested in this activity.

Finally, in July, the Office of Research Development and Administration moved to Boone Hall. ORDA is now located in 200 Boone along with the Office of the Associate Provost and Assistant Vice President for Research, the Graduate School, and the Office of Research Compliance. **We invite you to come by and visit us in our new location.** – Caryn Charter



Dr. Sonia
Chawla
Wright,
Research
Compliance
Officer



Claresta Davis,
Post Award
Manager



Brian Moynihan,
Post Award
Manager

New Positions, New People at ORDA

To better support research and grant management, EMU welcomed its new Research Compliance Officer, Dr. Sonia Chawla Wright, and two new ORDA Post Award Managers, Claresta Davis and Brian Moynihan.

Dr. Sonia Chawla Wright, Research Compliance Officer (RCO)

As of June 30, 2014, Dr. Chawla Wright began her tenure in a newly established position of Research Compliance Officer (RCO) where she will lead the Office of Research Compliance. Her responsibilities include ensuring University compliance with federal research regulations and managing the Responsible Conduct in Research training resource, CITI. She will also conduct outreach and education, serving as a resource to faculty, students, and staff. Dr. Chawla Wright holds a PhD in Psychology and has seven years' experience related to research and research compliance, including activities supporting a university Human Subjects Institutional Review Board (IRB) and conducting her own human subjects-based research.

Claresta Davis and Brian Moynihan, Post Award Managers

Two Post Award Manager positions were established and filled at the end of winter semester, 2014. Post Award Managers will provide direct support to Principal Investigators/Project Directors and home departments in post award management of grants and contracts for sponsored activities. Claresta Davis has three years' experience as a grant accountant and six years' experience as a project officer at ORDA, in addition to holding a BBA in accounting from EMU. Brian Moynihan has more than fifteen years' experience in nonprofit management and grants and contracts administration. Brian holds a BSBA in banking and economics from Appalachian State University. At the University of Toledo he supported more than 30 PIs to maximize the institution's ability to appropriately spend grant funds in support of faculty efforts in fulfilling grant goals. Both Claresta and Brian will be invaluable assets to PI/PDs and home departments seeking to manage their awards effectively.

Post Award Manager assignments are made by department. To find out who supports your grant work, please visit the ORDA website:

http://www.emich.edu/ord/about/about_subdir/staff_assignments.html

New Research Software

Over the next several months, ORDA will implement two new electronic, web-based systems to provide better support for developing and submitting researcher-related applications. Evisions Inc.'s **Cayuse Research Suite** will provide EMU with an electronic management of external proposals, streamlining the application process for federal grant proposals to help ensure a successful submission the first time. ORD will also be implementing **CompetitionSpace** to handle the submission and review of internal research award programs, as well as the application, review, and award process for external

National Science Foundation Grant

The National Science Foundation (NSF) awarded \$1.5 M, to Eastern Michigan University under the direction of its colleague Dr. Yichun Xie for the project, "GIS/T Resources and Applications for Career Education (GRACE)." Funding is being provided by the NSF ITEST program, a program designed to build the best practice factors, contexts and processes contribution to k-12 student's motivation and participation in STEM and STEM careers. The GRACE project builds upon an earlier successful ITEST project: Mayors Youth Technology Corps (MYTC). Also directed by Dr. Xie, the MYTC developed a model of purposeful applications of geographic information system and technology (GIS/T)-based education for STEM careers in the workplace that enabled youth in economically disadvantaged communities to have opportunities for determining their own futures.

By utilizing the MYTC model of purposeful applications of geographic information systems, technology based education and its partnership with the Michigan Virtual University (MVU), the project hopes to engage a larger number of students grad 8-12, specifically in disadvantaged communities, by following a three stage learning process: Explorer, Investigator, Intern. The Explorer level introduces students to GIS/T through GIS Online Portal to build students basic understanding of GIS/T as well as pique student curiosity. The Investigator level leverages students curiosity and interest and prepares them to work with GIS/T lesson modules that are designed to enhance the science and engineering practices and align with the Next Generation Science Standards. The Intern level provides students with professional GIS/T training and with opportunities to gain work experiences in local organizations as Interns. The professional development activities for teachers are tightly integrated with this progressive learning process so that adequate instructional support and technical mentoring will be provided. GRACE will create a model to expand and disseminate STEM across Michigan and report on the ensuing challenges and successes, demonstrating how to unite GIS/T organizations and volunteers with schools, students and teachers to integrate authentic GIS/T applications in curricula and provide a "foreseeable" career incentive for students to enthusiastically participate in STEM learning.

GRACE will also be responsible for the study of motivations and hindrances of integrating GIS/T into science and social studies classrooms and developing an effective delivery model -the use of online and blended learning- to transform the speed, ease of replication, and consistency of delivering instruction that is customized to increase motivation and achievement for students.

Participating teachers will be selected in partnership with the Michigan Mathematics and Science Centers Network (MMSCN) through regional math and science centers (RMSC). Interested RMSC's and school districts will then be organized into geographically adjacent learning clusters, focusing mainly on Michigan urban (Detroit, Flint, Grand Rapids, Saginaw) and rural (the Upper Peninsula) areas that lack financial and instructional resources. The nodular RMSC, possessing deep knowledge of regional STEM programs and leadership, can be counted on having direct contact with their school districts, assuring the appropriate teacher will be identified for the area. From there, students will be recruited by the selected the teachers best suited to gage and implement direct technological intervention.

This project will affect and impact: 5000 Explorers, 2500 Investigators, 300 interns, 120 teachers. Its findings will be published in peer-reviewed journals and presented at professional meetings, such as Michigan Science Teachers Association, National Science Teachers Association, and National Association for Research in Science Teaching.



EMU Receives Four New Patents

Bactericidal Composition:

On November 5, 2013, Dr. John Texter, Professor of Polymers and Coatings and member of EMU's Coatings Research Institute, received U.S. Patent 8,574,608 for his invention of a bactericidal composition that can confer biocidal properties in coatings, fibers, and textile products. The human and financial cost associated with infections makes Dr. Texter's invention a solution to an ever-increasing problem. There are many applications in the health care industry, food industry, meat processing industry, and for individual consumers.

Corrosion Resistant Sealant and Coating:

U.S. Patent 8,580,894 was received on November 12, 2013 by Ron Lewarchik, also of the Coatings Institute, along with Simon Palushaj of InCoat LLC in Madison Heights, Michigan. This invention provides a penetrating sealant and coating that can be used to extend the service life of concrete products and impart corrosion resistance to metals. Corrosion is a

nationally recognized problem costing the United States billions of dollars each year. Concrete products such as roads and bridges or residential patio and driveway applications, for example, are very susceptible to weather-induced deterioration.

PAI-1 Molecules:

Dr. Cory Emal, Associate Professor of Chemistry at EMU, along with colleagues from the University of Michigan and the University of Maryland, received U.S. Patent 8,759,327 on June 29, 2014 for their work on the design of molecules linked to controlling the buildup of plaque leading to blood clots and blocked arteries in the circulatory system. These molecules are specifically developed to target high levels of plasminic inhibitor 1 (PAI-1). People with high levels of PAI-1 are at increased risk for blood clots and blocked arteries. Dr. Emal's Patent award recognizes a new method of demonstrating how molecules interact with PAI-1, and could potentially result in a new cholesterol drug

therapy.

Antimicrobial Fabric Spray:

On July 1, 2014, Dr. Subhas Ghosh, Professor of Textiles and member of EMU's Textile Research and Training Institute, and Dr. Vijay Mannari, Professor of Polymers and Coatings and member of the Coatings Research Institute, were awarded U.S. Patent 8,764,851 for their invention of a durable, rechargeable, and antibacterial fabric treatment with medical, residential, and commercial applications. This antimicrobial spray can be applied to a wide variety of fabrics and can withstand repeated washings. The invention of such a product has important implications for the health care industry, for example, in preventing hospital-acquired infections from privacy



Congratulations to all of EMU's U.S. Patent recipients!

Upcoming External Funding Opportunities and Deadlines

Improving Undergraduate STEM Education (IUSE)

Supports projects that build on both fundamental research in undergraduate STEM education and prior research and development that provide theoretical and empirical justification for proposed efforts. **Next Deadlines:** 10/22/14 (Engaged Student Learning: Exploration); 10/24/14 (Institutional and Community Transformation: Exploration); 1/13/15 (Engaged Student Learning: Design and Development I & II and Institutional and Community Transformation: Design and Development)

Link: http://www.nsf.gov/publication/s/pub_summ.jsp?ods_key=nsfl4588
Email: mboylan@nsf.gov

Advancing Informal STEM Learning (AISL)

Supports research on challenges/opportunities in informal education; anticipate radically different structures, functions, and purposes of informal STEM education; challenge existing assumptions about learning and environments; and envision the future needs of diverse learners, educators, and STEM professionals. **Next Deadline: 11/14/14**

Link: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504793

Spencer Foundation

Foundation focuses on education and social opportunity; organizational learning in schools, school systems, and higher education institutions; teaching, learning, and instructional resources; and purposes and values of education. **Next Deadline: 11/18/14**

Link: <http://tinyurl.com/mafffq>

Email: abrinkman@spencer.org

Program: The New Civics. This initiative supports research that deepens our understanding of influences on civic action that attends to social inequalities in civic education and civic action and that has the potential to shape future research and practice in these fields. **Next Deadline: 11/18/14**

Link: http://www.spencer.org/content.cfm/the_new_civics

Email: abrinkman@spencer.org

National Science Foundation

Molecular and Cellular Biosciences: Investigator-Initiated Research Projects. Supports fundamental research and related activities designed to promote understanding of complex living systems at the molecular, subcellular, and cellular levels. Typical research in areas supported by MCB integrates theory and experimentation around four thematic clusters: Molecular Biophysics; Cellular Dynamics and Function; Genetic Mechanisms Systems; and Synthetic Biology. **Next Deadline: 11/17/14**

Link: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503626
Email: bio-mcb-bdsf@nsf.gov

Chemical, Bioengineering, Environmental, and Transport Systems. Supports fundamental research on novel methods and

materials for separation processes for application in the chemical, biochemical, materials, energy, and pharmaceutical industries. Special interests are nanostructured materials for separations, biorenewable resource separation processes, purification of drinking water, field induced separations, and separation of molecular constituents from blood.

Next Deadline: 11/05/2014

Link: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13363
Email: gprentic@nsf.gov

American Honda Foundation

Grants Program (Youth, Prenatal – 21). Supports projects that meet the needs of youth, especially minority students. Emphasis is on broad, innovative, and forward-thinking projects with national scope. **Next Deadline: 11/03/2014**

Link: <http://corporate.honda.com/america/philanthropy.aspx?id=ahf>

Contact:
Donna Hammond,
Senior Program Officer
1919 Torrance Blvd.
Mailstop: 100-1W-5A
Torrance, CA 90501-2746
310.781.4090

National Endowment for the Arts

Art Works: Research. Supports research projects about the impact and value of the American arts sector. Research should focus on how and why Americans participate in the arts and what factors contribute to that participation. **Next Deadline: 10/21/2014**

Link: <http://nea.gov/grants/apply/Research/index.html>
Email: iyengars@arts.gov



Join us for Research Thursdays!

The purpose of Research Thursdays is to provide an opportunity for faculty, researchers, and graduate students at EMU to network with other researchers on campus, talk informally about their research and research interests, and learn more about the research interests of others on campus.

Third Thursdays is an excellent opportunity for faculty across campus to informally meet and discuss their research. The event provides a forum for networking, establishing new and stronger relationships, and building interdisciplinary conversations. We hope you will join us!

Where: Corner Brewery (720 Norris St., Ypsilanti)

When: Third Thursday of each month (Fall 2014 dates are October 23; November 20; and December 11)

Time: 5:00 – 7:00 p.m.

Weill (Kurt) Foundation for Music

Promotes the public appreciation of the music of Kurt Weill, Lotte Lenya, and Marc Blitzstein. **Next deadline: 11/01/14**

Link: <http://www.kwf.org/grants-a-prizes/grant-program>
 Email: jmayer@kwf.org

Ethics and Excellence in Journalism Foundation

Supports creative projects and academic research that promote the pursuit of excellence and adherence to high ethical standards in journalism. **Next deadline: 11/15/14**

Link:
<http://www.journalismfoundation.org/applications.htm>
 Email: nancy.hodgkinson@journalismfoundation.org

Agency for Healthcare Research and Quality

Conference Grant. Provides up to \$35,000 in direct costs for conferences on issues relevant to health services research in the areas of research development, research design and methodology, dissemination and implementation, and research training, infrastructure, and career development. **Next deadline: 11/01/14**

Link: <http://grants.nih.gov/grants/guide/pa-files/PA-13-017.html>

Email: Linda.Franklin@ahrq.hhs.gov

National Endowment for the Humanities

Documenting Endangered Languages. NEH and NSF support projects to develop and advance knowledge concerning endangered human languages. Supports fieldwork and other activities related to recording, documenting, and archiving endangered languages. **Next Deadline: 10/06/14**

Link: <http://tinyurl.com/8xdsrv> and
<http://www.nsf.gov/pubs/2014/nsf14580.htm>
 Email: mdownloads@neh.gov or preservation@neh.gov



Internal Research Awards Dates & Deadlines:

Provost's New Faculty Awards (award period July 1, 2015 through June 30, 2016)

October 15 – Applications due to department heads/school directors.

November 3 - Applications should be submitted to the Associate Provost for Graduate Studies and Research for distribution to the University Research and Sabbatical Leave Committee (URSLC).

December 15 – Application recommendations due to the provost from the URSLC.

January 30 – Provost's Office issues notifications of results to applicants/recipients, deans, and department heads/ school directors.

Sabbatical Leave Awards One and Two Semester (Award period Academic years 2015-2016)

November 3 - Applications due to department heads/ school directors.

November 17- Applications should be submitted to the Associate Provost for Graduate Studies and Research for distribution to the URSLC.

February 2 – Application recommendations due to the provost from the URSLC.

March 13 – Provost's Office issues notification of results to applicants/recipients, deans, and department heads/ school directors.

Faculty Research Fellowships (Award period Academic Year 2015-2016)

November 17 – Application due to department head/ school director.

December 15 – Application due to college deans.

February 2- Application should be submitted to the Associate Provost for Graduate Studies and Research for distribution to the URSLC.

March 6 – Application recommendations due to the provost from the URSLC.

April 1 – Provost's Office issues notification of results to applicants/recipients, deans, and department heads/ school directors.

Undergraduate Research Stimulus Program (Awards for winter and summer 2015)

October 31 – Applications due to Associate Provost for Graduate Studies and Research for winter awards.

February 16 – Applications due to Associate Provost for Graduate Studies and Research for summer awards.

Provost's Research Stimulus Award (Awarded Monthly)

Proposals may be submitted any time to the Associate Provost for Graduate Studies and Research. Proposals received by the 20th of the month will be considered in that month's competitive pool for one award cycle.

The ORDA's Newsletter Staff are:

Caryn Charter – Director of ORDA

Darlene Leifson – Faculty Associate

Lee Schwingamer- Graduate Assistant

Information on Internal Research Awards can be found here:

http://www.emich.edu/aa/internal_research/irhome.html