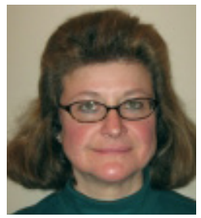
Funding Opportunities & Personal Development

by Helen G. Kiss - Assistant Director & Information Coordinator

"Spring Cleaning and Re-organization of Funding Information"



Greetings. This is the time of the year where I remind faculty and staff that they may need to see me to discuss their current research and scholarship projects so that we can update the grant funding information that is sent to you. As the information will most likely come to you electronically, it would be best if we work together at your office computer. All you need to do is send me an email or call at 529-3600 to set up an appointment. Together we will discuss the type of funding you are looking for. For example you may be interested in curriculum development, travel, research supplies, scholarships, and/or equipment, just to name a few. We will also explore the OARS Website, which has detailed information on how to go about applying for an external grant, and how we can assist you in the prpocess.There are other professiona funding Websites that you may not be aware you have access to to locate funding opportunities. Many of these sites provide electronic funding alerts directly to your email address after you have selected key words or terms fitting your research and scholarship needs. We can show you these sites and assist you in signing up for funding alerts that fit your interests.

Upcoming OARS Events and Deadlines:

03/23/2009	Shoupp Award Proposals Due at OARS (102 Roudebush Hall)
04/10/2009	After the Award Workshop- 201 Gaskill, 3-4 pm
04/15/2009	Undergraduate Research Forum- Shriver Center, Oxford Campus

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OARS Research News
March 2009 Edition
www.muohio.edu/oars

Message from Dr. James Oris, Associate Dean, OARS

Welcome to this edition of our newsletter. Time seems to be flying by as I enter the middle of my second semester as Associate Dean for Research and Scholarship. There is still a lot to learn and I am enjoying the vigorous activity of the position. In the past several months we have worked to expand and improve our services to the University Community.

In October, OARS took over the approval process for contracts and agreements. We feel that this has made the process more efficient and timely. In late 2008, we worked closely with Finance and Business Services and with Grants and Contracts to revise grants budgeting. Specifically, our definition of equipment changes to items of monetary value $5,000 or greater (effective July 1, 2009) and faculty summer salaries will be charged actual benefits at the part time rate of approximately 16% (effective Summer I, 2009) instead of the full time rate. These changes provide for consistent definitions and practice both within the university and funding agencies. Whereas these are positive changes, there are implications to be considered in development of budgets for externally supported projects, especially multi-year projects. I strongly encourage you to discuss these changes with any of the proposal facilitators in OARS.

As part of my duties in OARS I participate in several groups that serve the State of Ohio. One is the University Clean Energy Alliance of Ohio (UCEAO). This is a growing consortium of members who are seeking ways to enhance energy research and technology transfer within Ohio. I have been impressed with the activities we have initiated, and I strongly encourage you to attend the UCEAO annual meeting in Columbus on **April 8-9, 2009**. In fact, if a student submits an abstract to present research at UCEAO in April, OARS will pay for their registration costs! Miami University also supports the activities of the Ohio Innovation Summit. This year's meeting will be in Dayton, **April 20-23, 2009**, with a focus on transitioning nanotechnology and sensor technology to the marketplace. There is a limited number of free registrations available to Miami faculty, students, and staff if you would like to attend. Please contact me about attending either of these events.

You may have noticed that we have a mission statement:

The mission of the Office for the Advancement of Research & Scholarship (OARS) is to encourage, facilitate, and support the Miami University community in its effort to obtain external funding for all forms of research, education, scholarly, creative, service, and outreach activities.

This was developed during strategic planning that went on over the summer and last semester within OARS (note to Douglas Adams fans – there are 42 words in the statement…). The purpose of the statement is to clearly indicate our role at the university – to encourage, facilitate, and support efforts to obtain external funding for all activities. Everyone in OARS takes this statement to heart and is working hard to meet the mission. Hopefully, you have noticed more funding opportunity notices, more workshops and continuing education opportunities offered, more assistance with grant applications, and more general communication with the university. Our measure of success is made from feedback from faculty and staff and from assessing your success in obtaining external funds to support your activities. I am pleased to say that, regardless of the difficult financial times we face, we are on track for another successful year. The credit for this success goes to the faculty and staff who write and submit the grants/fellowships, and it has been a pleasure serving you. These funds help support the research, scholarly, and educational activities at Miami University for students at all levels. Without this support, Miami would be less like Miami.

Regional Campus Grant Development Services

Miami Hamilton and Miami Middletown are pleased that they each have a grant development coordinator on staff. The positions were created to assist the regional campus faculty (who have very high teaching loads) and staff become more involved and aggressive in applying for external funding. The coordinators are available to research funding sources, guide project and proposal development, write proposals, develop budgets, serve as editors, prepare electronic submissions, and shepherd proposals through the OARS office's protocols for submission. The coordinators also offer 7-week grant development trainings on the regional campuses, modeled after the training offered in Oxford, and other shorter training sessions.

The grant development coordinators at the regional campuses work together frequently to develop joint submissions. During this fiscal year, this collaboration has resulted in six applications for more than $2.8 million with projects as varied as expanding the ENT department and providing chamber music in Hamilton, Middletown, and at the new Voice of America Learning Center.

Having grant coordinators on the regional campuses has been a boon to already-busy faculty and staff. Recently, after preparing a joint proposal involving faculty from both regional campuses, one faculty member said to the coordinators "This proposal would have died before submission if it weren't for you!"

The regional campus grant development coordinators are available to work on Oxford campus proposals, as long as a regional campus is a partner in the application. For the Middletown campus, contact Barbara Roberts at 7-3337, and on the Hamilton campus, contact Amy Lamborg at 5-3254.

Compliance Corner: by Dr. Neal Sullivan

Animal Care (IACUC): Researchers submitted their Annual Reports to IACUC electronically using PDF forms that could generate coded email messages to the committee. The process will be evaluated over the coming months to determine what needs to be changed for the reporting process next year. About 80 percent of the submitters did not seem to experience major difficulties. About 10 percent of the submissions arrived in another form (submitters were able to submit otherwise because their software and operating system facilitated that). And the remaining 10 percent experienced difficulties with the email interface (they either did not have a default email client or their default email client did not access their MU account). We will continue with an electronic process, however, given that ~20 percent of the submitters did have problems, we may switch to a process that might be more familiar to users (e.g. an MS-Word form that is completed, attached to a message, and sent to IACUC). On the receiving end, the PDF forms worked quite well producing data that was easily combined all submitted data into a spreadsheet for distribution to the committee.

Human Subjects Research (IRB): One of the issues currently under consideration at MU regarding human

subjects research is "Permission to conduct research." The IRB conducts reviews as prescribed by federal regulations to weigh the risks and benefits of an activity and ensure that adequate provisions for protecting human subjects are employed. MU researchers conduct research on campus and off campus. Outside researchers conduct research on the MU campus. MU researchers collaborate with outside researchers to conduct research both on and off campus. Regardless of the situation, it is MU policy that the researchers have permission from the appropriate authority (owner or owner's representative) to conduct research on that property. On the Miami campus, the IRB is not that authority. These policies will be refined and outlined on the compliance web site over the next few months.

Radiation Safety (RSC): During the last Radiation Safety Committee quarterly meeting, it was announced that during the next few months, improvement of waste receptacle security will be a particular focus during regular inspections. The radiation safety office will collect information and provide technical assistance when enhanced security is warranted.

As always, please contact me with any questions or suggestions regarding compliance issues (neal.sullivan@muohio.edu; 529-2488).

Office for the Advancement of Research and Scholarship

NSF CAREER Program- Internal Competition

The National Science Foundation (NSF), invites applications for The Faculty Early Career Development (CAREER) Program.

The program is a Foundation-wide activity that offers the NSF's most prestigious awards in support of junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research within the context of the mission of their organizations. Such activities should build a firm foundation for a lifetime of leadership in integrating education and research. NSF encourages submission of CAREER proposals from junior faculty members at all CAREER-eligible organizations and especially encourages women, members of underrepresented minority groups, and persons with disabilities to apply. NSF deadlines are from July 21-23, 2009.

If you are interested in the program and amy plan to apply, please contact Dr. James Oris, Associate Dean for Research at OARS, 529-3600.

For more information, go to http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503214.

Undergraduate Research '09 Forum, April 15, 2009, Shriver Center

Miami University undergraduates present results of independent research projects and other creative activities at our annual Undergraduate Research Forum. Miami students choose to present research results in either a 15-minute oral synopsis, in an interactive poster session or in a panel discussion format. This university wide event showcases a Miami strength - learning through undergraduate inquiry and research.

For more information, go to http://www.units.muohio.edu/oars/undergrad_research/ur_forum/index.php.

Ohio Innovation Summit (Formerly Ohio Nanotechnology Summit)

The objectives of 2009 Ohio Innovation Summit are: (1) to provide opportunities to find and network with potential collaborators; (2) to hear how Ohio industry is transitioning nanotechnology and sensor technology to market; (3) to learn about the commercial opportunities that exist; (4) to understand how the Third Frontier investments can assist enhance your company's success; and (5) to discover the cutting edge technology that will provide the commercialization opportunities for the future. For more information, go to http://ohioinnovationsummit.org.

The event will occur on April 20-23, 2009 at the Dayton Convention Center. To register, go to: https://www15.webxess.net/walcom/htdocs/ois/OISreg09.htm.

Miami's sponsorship of the Summit provides up to 10 free registrations. These will be provided on a first-come-first served basis. Please contact Dr. Jim Oris, Associate Dean, for more information.

Dr. Donna Scarborough, Department of Speech Pathology & Audiology

Research to Benefit Children with Feeding Delays

Many people suffer from hypersensitive gag reflex responses, including thousands of children with feeding delays.

Dr. Donna Scarborough (Speech Pathology & Audiology), **Dr. Lori Isaacson** (Zoology), and **Dr. Michael Bailey-Van Kuren** (Mechanical and Manufacturing Engineering) have worked together for four years to solve this problem.

"This project started with children who have hypersensitive gag reflex responses. We are trying to figure out what is going on in the brain with the gag reflex and how we can fix it," Dr. Scarborough said.

Dr. Scarborough brought in Dr. Isaacson and Dr. Bailey-Van Kuren to determine the link between the hypersensitive gag reflex, neurological brain activity, and how it can be prevented using mechanical devices. The solution was a palm pressure mechanism that puts pressure on a specific point in the palm and holds the gag reflex for an extended period of time.

"It is almost like two separate projects. Donna and I are mapping out the neurons, while Michael and Donna are working on the palm pressure mechanism. And part of our grant is to understand the mechanisms that are reducing the hyper-gag, to find what is it about this palm pressure that is suppressing something in the mouth," explained Dr. Isaacson.

Dr. Scarborough and Dr. Isaacson are working to determine the neurological mechanisms of the clinical phenomenon of using a pressure point to alter the gag reflex and suppress the gag, allowing children to receive nutrition through a feeding tube, or even visit the dentist. They are studying this by analyzing rats and hooking them up to a computer-monitoring device to determine the pressure placed on their paws.

"There are so many novel aspects of what we are doing, the hard part is convincing reviewers and outside professionals that it is important," Dr. Scarborough said. "Because of the novelty we have had to "create the wheel" so to speak, which has been time intensive and required us to become very clear in describing hypersensitive gag reflexes and the techniques we are using to study them. People who have never seen it, don't know how much it can impact someone's life."

Many disciplines are very encouraging and enthusiastic about the progress the three professors have made. "Dentists see it everyday . . . they get it. One of our goals is that someone could go to the dentist with the device, and be fine through their whole appointment," Dr. Scarborough said.

Through their years of research, the three educators have received grants and awards and each has published work regarding this study, and much progress has been made on finding a solution.

"We now know there are specific areas in the medulla of the brain that are activated, and we know now the neurochemistry of what some of those neurons are. Knowing where the neurons are is the first step. We don't know where they connect, and what parts of the brain they are going to. We then need to understand how the palm pressure connects in," said Dr. Isaacson.

Dr. Bailey-Van Kuren added, "On the applied side, we have learned the amount of pressure required, where to apply it, and we have developed a realistic mechanism to do so. We have also learned the length of the effect of the pressure."

It is relatively unusual to have many researchers working on the same project, especially from three very different fields and specialties. However, they fully recommend it.

"It is extremely beneficial at a university like Miami to work with people in other departments. For instance, our department is not very large, and I am the only one who is in my area of expertise. Also, from an engineering standpoint, I think engineering is much more valuable when it has real problems from other disciplines to address. The fact that we are doing something that is not just theoretical but it has an application and a population that will benefit from this is great," said Dr. Bailey-Van Kuren.

"We are reaching a new beginning. A lot of what we have done has been pilot work," Dr. Scarborough explained. "My goal is to bring this back to the medically fragile population of kids with feeding and swallowing problems . . . in the end we will be able to provide a phenomenal piece of equipment to help children."

Written by: **Emily R. Kuhn**
2009, Graduating Senior
Major: Strategic Communication

Highlights on Miami Faculty Research

Dr. Yoshi Tomoyasu, Department of Zoology

"Evo-Devo" or Evolutionary Developmental Biology Research

Dr. Yoshi Tomoyasu came to Miami in the fall of 2008 as an assistant professor in the Department of Zoology. He brings with him years of expertise in a rising field of research in what has come to be known as "evo-devo" or evolutionary developmental biology.

"Evo-devo is the field in which we analyze evolution from the developmental biology point of view. We begin by understanding how genes work to make our body," Dr. Tomoyasu said. "One important thing we have learned so far from these studies is that the genes important for development are really well conserved. Looking at the gene that is very important in making the human body, and comparing it to the genes important in making a fly are very similar."

Evo-devo compares the developmental process of different animals and plants in an attempt to determine the ancestral relationship between organisms and how developmental processes have evolved. Dr. Tomoyasu's specific focus is on changes in the developmental systems that have contributed to morphological evolution by using insect wings as a model system.

Dr. Tomoyasu examines the developmental patterns of different insect wings to find what kind of change causes the amazing diversity among species.

"The big question is, 'Why do we look so different?' The answer lies in the interaction between genes, and that is what we are working to try and understand," said Dr. Tomoyasu.

Evo-devo studies are also important for human health. "The same genes that are important to making human bodies are important in other species like flies or beetles. This is a good thing, because we can use the organisms to understand human development better," Dr. Tomoyasu explained.

In his years of learning about the intricacies of evo-devo, Dr. Tomoyasu has faced many roadblocks and issues. "About 90 percent of research is failure. You have to stop and think and figure out how to bypass the problem," Dr. Tomoyasu explained. "Science is like a puzzle —once we find a problem we have to fix it and learn. That's the fun part."

Another major aspect of Dr. Tomoyasu's research has been in understanding how the RNAi technique works. "RNAi, or RNAi interference, is a new technique used to remove gene function without gene mutation," he explained. "By using this we can knock down gene function quickly."

In 2006, two researchers were awarded the Nobel Prize for their work with RNAi in the nematode worm. Dr. Tomoyasu is applying what they have discovered and is using RNAi to work with other insects.

"RNAi works really well in certain insects, such as the beetle I'm using, but not in others. I am trying to understand what is causing this difference," said Dr. Tomoyasu. "RNAi actually has many implications on other fields, including agriculture, controlling pests and mosquitoes, and malaria."

Dr. Tomoyasu's research has been funded in the past by a grant from the Japanese Government, the JSPS (Japanese Society for the Promotion of Science), and international fellowships including HFSP (Human Frontier Science Program). Dr. Tomoyasu is in the process of applying for new grants.

Prior to coming to Miami, Dr. Tomoyasu was a Research Assistant Professor at Kansas State University. He obtained his Bachelor and Master's degrees in pharmaceutical science from Hokkaido University in Japan, and received his Ph.D. in developmental biology from the National Institute for Basic Biology.

Written by: **Emily R. Kuhn**
2009, Graduating Senior
Major: Strategic Communication

Shoupp Award Proposal Deadline: March 23, 2009

For the program guidelines, go to

http://www.units.muohio.edu/oars/mu_research/oars_programs/shoupp.php

Shoupp Award Proposal Request

Faculty members are invited to submit proposals for the 2009-2010 Shoupp Awards to initiate collaborative research projects with business and industry.

The Shoupp Awards program supports initial and exploratory activities involving University faculty and students. These awards are named in honor of the late Dr. William E. Shoupp who was a charter member and Chair of the Miami University Research Advisory Council (MURAC).

The deadline for receipt of proposals in the Office for the Advancement of Research and Scholarship is March 23, 2009.

OARS requests that investigators contact us about your intent to submit a proposal and to schedule a preliminary discussion with Dr. James Oris.

The 2009-10 Shoupp Awards support projects to be conducted from May 15, 2009 through August 15, 2010. The Miami University Research Advisory Council (MURAC) will review these submitted Shoupp proposals at its spring meeting in mid-April 2009. Awards will be announced shortly thereafter.

No-Cost Extension Request

To request an initial 12-month no-cost extension on a federally funded grant, send an email to the OARS staff member assigned to your department (either Anne Schauer, or Tricia Callahan) detailing the "programmatic" reason(s) why this no-cost extension is necessary.

Your email will be reviewed and, if approved, forwarded to Grants and Contracts for processing with the funding agency.

If you are requesting a second no-cost extension, prior approval from the funding agency is required. In this case, a much more comprehensive, detailed rationale for the additional extension must be provided along with the amount of time being requested. This will be submitted to the program officer for his/her approval.

Please note that we are no longer using the OPAS form for this purpose.

University Clean Energy Alliance of Ohio

The University Clean Energy Alliance of Ohio (UCEAO)will present a conference "Putting the Pieces Together: The New Energy Paradigm in Research, Education, Business and Public Policy" on **April 8th-9th** at the Hyatt Regency Columbus, 350 N High Street, Columbus, Ohio (614-463-1234).

Poster session topics will inlcude: Wind; Solar; Biomass/Biofuels; Clean coal; Fuel cells; Nuclear energy; Growing and sustaining energy businesses; Carbon control and management; Transportation fuels; Energy efficiency; Electric generation and transmission; Greening Ohio's economy; Energy policy analyses; and Innovative energy curricular offerings.

OARS will pay the registration fee for any student who submits an abstract and presents a poster at the UCEAO Meeting. Please contact **Dr. James Oris**, Associate Dean, for more information (529-3600).

OARS Research News

American Recovery & Reinvestment Act of 2009

On February 17, President Obama signed the American Recovery and Reinvestment Act of 2009 (ARRA). Among the goals of the ARRA are to preserve and create jobs, promote economic recovery, and provide investments to increase economic efficiency by spurring technological advances in science and health. The following selected Federal Agencies, provide more detail on the approved budgets.

Department of Agriculture (USDA)

$28 billion (3.5%) of ARRA was appropriated to USDA. The Act allows up to 3 percent of the funds provided towards Research and Development (RD) for administrative costs (approximately $130.8 million).

Department of Education (ED)

Direct Funding for Education — $77 Billion includes:

* **$40 billion** in state stabilization funds to help avert education cuts. This will be given to states in exchange for a commitment to begin advancing education reforms.

* **$13 billion** for Title I, including $3 billion for Title I school improvement programs.

* **$12 billion** for IDEA.

* **$5 billion** in incentive grants to be distributed on a competitive basis to states that most aggressively pursue higher standards, quality assessments, robust data systems and teacher quality initiatives. This includes $650 million to fund school systems and non-profits with strong track records of improving student achievement.

* **$5 billion** for Early Childhood, including Head Start, early Head Start, child care block grants, and programs for infants with disabilities.

* **$2 billion** for other education investments, including pay for performance, data systems, teacher quality investments, technology grants, vocational rehab, work study, and Impact Aide.

Department of Justice (DOJ)

DOJ will receive $4 billion in grant funding to include: $2.7 billion to the Office of Justice Programs; $1 billion to the Community Oriented Policing Services (COPS) program; $225 million to the Office on Violence Against Women; and $10 million to the Bureau of Alcohol, Tobacco, Firearms and Explosives.

Environmental Protection Agency (EPA)

The Recovery Act specifically includes $7.22 billion for projects and programs administered by EPA. These programs will protect and promote both "green" jobs and a healthier environment. Areas include: Clean Water State Revolving Fund (4 billion), Brownfields ($100 million), Diesel Emissions Reduction ($300 million), Superfund Hazardous Waste Cleanup ($600 million), and Leaking Underground Storage Tanks ($200 million).

National Aeronautics & Space Agency (NASA)

The Administration's priorities entrust NASA with $1 billion for Recovery investments. Among the purposes for these funds indicated by Congress include: Cross-Agency Support: $50 million, Science: $400 million, Exploration: $400 million, Aeronautics: $150 million, and the Inspector General: $2 million.

National Institutes of Health (NIH)

Statement by Jeremy Berg, Director of the National Institute of General Medical Sciences (NIGMS)

NIH is grateful for the opportunity afforded by the ARRA to provide economic stimulus to the nation while furthering our mission to uncover new knowledge that will lead to better health for everyone. NIH will receive $10 billion through the ARRA for use over the next two years (2009 and 2010). Of this, $1 billion will be invested in extramural construction (administered through the National Center for Research Resources), $0.8 billion will be provided to the Office of the NIH Director for extending and developing appropriate programs, and $7.4 billion will be provided to the NIH institutes and centers (proportional to their appropriations).

National Science Foundation (NSF)

Statement by Arden L. Bement, Jr., Director, National Science Foundation- The National Science Foundation is humbled and honored by the recognition of the Foundation's role in stimulating the American economy with its inclusion in the American Recovery and Reinvestment Act. The $3 billion provided to NSF will go directly into the hands of the nation's best and brightest researchers at the forefront of promising discoveries, to deserving graduate students at the start of their careers, and to developing advanced scientific tools and infrastructure that will be broadly available to the research community. For more information on Federal Agency Recovery Sites, go to **http://www.recovery.gov/?q=content/agencies.**