On April 14, the Office of Research and Sponsored Programs (ORSP) and University Advancement jointly hosted MSU’s Third Annual Grant Recognition Reception. Nearly one hundred MSU faculty and staff were in attendance, joined by the Deans of each College, Provost Willard Gingerich, and Vice President for University Advancement Jack Shannon. The event spotlighted the efforts of MSU’s faculty and staff in securing external sponsorship for their research and other service and scholarly programs in 2014.

As in previous years, the event was held in the Periodicals Reading Room of the Harry A. Sprague Library, and recognized over 95 awards, totaling more than $9.7 million.

In addition to refreshments, attendees received a booklet listing all of 2014’s award winners and proposal submitters. Dr. Gingerich and Vice President Shannon delivered introductory remarks, and awarded special grant recognition certificates to the following faculty and staff: Dennis Bone (SBUS), Julian Brash (CHSS), Jason Dickinson (CHSS), Deborah Galant and Ju-Don Marshall Roberts (CART), Jennifer Robinson and Susan Wray (CEHS), and David Rotella and John Siekierka (CSAM). Each winner is the recipient of the largest new single or multiple-year award in each of their respective schools or divisions.

The Provost’s 2015 Grant Recognition Award went to Bryan Murdock, Director of the Center for Community Engagement, in recognition of his success in securing nearly $1.7 million in ongoing funding since 2012, including a recent $2.5 million five-year award from the U.S. Department of Education. The Provost also commended Bryan for his recent efforts in leading MSU’s application and selection as a Community Engaged Campus by the Carnegie Foundation for the Advancement of Teaching.

ORSP wishes to thank all the staff and attendees who made the Third Annual Grant Recognition Reception such as success. We look forwarding to honoring all the work being done in 2015 at next year’s event!

For pictures of all the recognition award winners, please visit the News section of ORSP’s website.
The last decade has seen a swell of interest and investment in team science from funders, scholars, and grant and university administrators. Consequently, unprecedented innovations and advances are now emerging from collaborations and research teams implementing approaches and perspectives from multiple scientific disciplines and programmatic areas. Team science has the potential to promote a cross-disciplinary approach to scientific inquiry, and to transform independent, small-scale efforts into collaborative centers and groups, with broader impacts. However, team science ventures require collaboration among researchers who work together within a team—something quite novel and demanding for many. A few of the most challenging aspects of team science are:

- formation and function of successful collaborative science teams;
- interdependence, joint ownership, and collective responsibility among scientists; and
- inter-institutional barriers to team science.

Regardless of such challenges, it is increasingly likely that most researchers will find themselves participating in or leading a research team at some point in their careers.

The science of team science (SciTS) field examines the processes by which scientific teams organize, communicate, and conduct research, with the goals understanding and managing circumstances that facilitate and/or hinder the effectiveness of collaborative research, training, and translational initiatives. SciTS uses both qualitative and quantitative methods to evaluate the antecedent conditions, collaborative processes, and outcomes associated with team science, as well as the organizational, social, and political context that influences team science. SciTS initiatives are typically performed in real time, so results can be immediately fed back to, and utilized by, the scientific team.

This nascent field arose from funding agencies’ need to gauge the performance of team science, understand its added value, and determine the return on investment, and inform science policy. The term “science of team science” was coined in October 2006 at the Science of Team Science: Assessing the Value of Transdisciplinary Research conference, hosted by the National Cancer Institute, in Bethesda, Maryland. In 2013, the National Academy of Sciences established a National Research Council Committee on the Science of Team Science to evaluate the current state of knowledge and practice in the field.

Although its terminology, methodologies, and outcomes are still emerging, the SciTS field is using existing knowledge to improve the efficacy and value of team science through evidence-based tools and recommendations. The SciTS community is developing a set of “effective practices” for use in team science training efforts, ensuring the next generation of scientists develops necessary team science skills. Team science “toolkits” are readily available, providing resources to assist researchers with the collaborative science process.

Suck toolkits include:

- tools for assessing team members’ readiness to collaborate
- guidelines for developing a shared “language” for interdisciplinary teams
- identifying collaborative goals and common metrics of success
- curricula for training team members in team science skills
- “team agreements” to establish authorship and patents rights resulting from scientific collaborations

I encourage any of you interested in team science to do a little research, as it will likely go along way is bolstering your scholarship.

References and Further Reading


SciTS on Wikipedia


SciTS Conference

http://www.scienceofteamsceince.org/
Featured Awards

Zoe Burkholder (Educational Foundations, CEHS) was awarded $50,000 by the Spencer Foundation in support of the research and writing of her book, *An African American Dilemma: The Problem of School Integration and Civil Rights in the North*, a social history of northern black debates over school integration.

Gerard Costa (Director, Center for Autism and Early Childhood Mental Health, CEHS) received a $360,000 contract from the NJ Department of Children and Families for the second year of funding on the project "Promoting Early Childhood Mental Health in Counties Affected by Superstorm Sandy," which offers infant and early childhood mental health training and supervision to multidisciplinary professionals in the ten counties affected by Superstorm Sandy.

Jason Dickinson (Director, Robert D. McCormick Center for Child Advocacy and Policy, CHSS) received $246,238 from the NJ Department of Children and Families for "Post BA Certificate in Adolescent Advocacy for 2014–2015." The program, which was the result of a collaboration between Montclair State University and the Department of Children and Families (DCF), has been designed to provide Child Protection and Permanency workers and DCF workers who wish to further their expertise in working with adolescents in the public welfare system with a multidisciplinary understanding of the role of the child advocate as seen through the disciplines of law, psychology, and social work among others. Students gain the necessary knowledge and skills to work effectively with the adolescent population.

Yvonne Gindt (Chemistry and Biochemistry, CSAM) received a $25,887 subaward from Temple University/NASA for the third year of "DNA Repair Under Extreme Conditions," which will study DNA repair by characterizing and comparing photolyases cloned from a hyperthermophile and a psychrophile to investigate the development of key biological processes relevant to the origin of life on Earth and the search for life elsewhere.

David Talaga (Chemistry and Biochemistry, CSAM) was awarded $283,164 by the National Institutes of Health for the project "Interfacially activated aggregation of alpha-synuclein" which will investigate the influence of interfaces on the aggregation of α-synuclein—which has been implicated in the progression of Parkinson’s Disease—into amyloid fibrils.

For More Information on Funding Sources, Submittal Strategies, Awards Management, and Much More, Please Visit ORSP Online at http://www.montclair.edu/orsp
Awardee Profile: Dr. Stefan Robila

Dr. Stefan Robila was the Principal Investigator of “Montclair REU Site in Imaging and Computer Vision (iMagine),” a project that was funded by the National Science Foundation (NSF) from 2007 to 2010 and then renewed from 2010 to March 31, 2014. He submitted his proposal to NSF’s Research Experiences for Undergraduates (REU) Sites and Supplements program, which focuses on supporting participation by undergraduate students in ongoing research programs or in research projects specifically designed for the REU program. Dr. Robila recently talked with us in detail about his project, the proposal submission process, and the challenges of being funded.

What were some of the challenges involved in a project like yours? How did you tackle them?
Unlike a regular research project, REU requires significant effort on the logistics. In a short period of time I had to learn not only general grant management, but also who on campus deals with each aspect of student life, including housing, recreational services, food, ID cards, parking, and reimbursements. Selecting the participating students was also a challenge as this involved a national applicant pool. It involved advertising, peer networking, travel arrangements, post-site follow up, etc. Of course, having students live on campus for the summer also required organization of social events, shopping trips, and so on. To tackle all, I had tremendous support from the faculty mentors on the project, my department staff, and ORSP and Grant Accounting. My strategy was to keep an open line of communication and to start each task well in advance.

How would you advise colleagues interested in submitting a grant application?
I think the best approach is to first understand what is the state of the art in the field you propose to work on. Next, look at MSU’s research, educational, and administrative resources and draw from their strengths. This should be done while working closely with ORSP to understand the funding specifics.

What, if anything, do you believe MSU can do to make grant submission and management more appealing and less intimidating?
The competition for funding continues to get stronger and stronger. The federal and private funding agencies are also becoming more and more specific in assessing the value of proposed projects and the outcomes of the funded ones. Continuing to provide support in the structure of the proposals and the reports and assisting in the budget creation are all activities that ORSP provides which I found quite helpful.
If you are concerned with the fact that both you and your collaborator will have to submit your study to two separate IRBs, then we have a potential solution for that! The MSU IRB has adopted the use of an IRB Authorization Agreement (IAA) to allow PIs to either establish the MSU IRB as the primary IRB or have the MSU IRB relinquish the reviewing authority to another established IRB at the collaborating site.

This can potentially reduce burden on the PIs and eliminate the redundancy in multiple reviews. You could avoid having to submit two initial reviews, two sets of amendments, and two annual reviews during the lifecycle of your study. While it is not always possible and may depend on restrictions set by the funding agency, we are strongly encouraging our collaborating faculty to consider exploring this option.

**How does it work?**

The federal Office of Human Research Protections allows for two IRBs to sign an IAA that contractually binds each IRB to certain roles of review. For example, the contract may state that the IRB at the collaborating Institution X is responsible for all aspects of IRB review. Therefore, the MSU IRB application will no longer be required.

The initial step is to contact the IRB office or Hila Berger at the very early stages of planning your collaborative project. Information we will ask you to provide includes, but is not limited to:

- Your collaborators information
- Contact name at the external IRB
- Protocol summary
- List of MSU research team members and their roles and responsibilities in the project

Once it is agreed that MSU’s IRB office can proceed with an IAA, we will work directly with the collaborating IRB to establish the terms of the agreement and finalize the IAA.

**Is an IAA always possible in collaborative research?**

Unfortunately, certain circumstances may preclude us from entering into an agreement with another IRB. Some IRBs do not engage in authorization agreements or are not willing to negotiate the terms of the agreement. The decision on which IRB will be reviewing is based on who might be the recipient of any funding, or the expertise of each IRB and who is best suited to conduct the review. Furthermore, student-led research (i.e., a masters thesis project) is generally not eligible for an IAA.

The IRB at the collaborating site must have a human subject’s research protections program (including documented procedures) that aligns with all federal regulations on IRB review.

**Has the MSU IRB already done some of these agreements?**

Yes. We already have completed several IAAs with other institutions such as Kessler Foundation, UPenn and Allied Health. MSU’s IRB has already served as the primary IRB, as well as relinquishing the reviewing authority to another institution’s IRB.

**How long does it take to complete the IAA?**

Generally the timeframe for an IAA is shorter than that of a full IRB review. However, since this is a contract signed by the Institutional Officials at both organizations, it may take a few weeks for a final contract to be signed and research to begin. Remember that you or your collaborator will still need to have IRB approval completed at the reviewing site to start the research.

**Where can I find more information?**

Contact us at reviewboard@mail.montclair.edu or Hila Berger extension 7781 and bergerh@mail.montclair.edu. Please put “IAA” in the subject line.
Steve Shapiro, Electronic Resources Librarian at MSU, has received two consecutive grants for projects funded by the New Jersey Council for the Humanities (NJCH): Commemorative Program for the 75th Anniversary of Kristallnacht and Rescue in Budapest: The 70th Anniversary of Raoul Wallenberg’s Mission to Save the Last Jews of Europe. The realization of both programs involved a large number of collaborators from many disciplines, including history, culture, film studies, religion, philosophy, art, and music history. Having attended a few of his programs, and appreciating the collaborative nature of his work, I was curious to hear more about his ideas and process in cultivating such successful and complicated programs.

The desire to create programming developed from thoughts about an academic library’s role within the University. In these changing times, including distance learning, Steve thinks that “programming is a natural fit, helping libraries build closer relationships with their communities... a good way for the library to get more connected on campus... and be considered a physical place, not just a source of electronic resources.” Steve continues that programs are a good way for the library to reconnect with the campus.

Inspiration comes from his love of reading, says Steve, which sparks an idea when intersecting with subjects of personal interest, such as the Holocaust. Also, Steve’s work at the library involves him in projects with various faculty and staff, which allows him to delve deeply into areas of study he would otherwise not be exposed to. For example, in 2013, he was involved in the group effort to bring the Israel Birnbaum art and book collection to MSU and helped to plan the Warsaw Ghetto Uprising commemoration, which sparked his deeper interest in both the 75th Kristallnacht Commemoration and Rescue in Budapest programs.

Steve notes that even developing ideas is a collaborative process: Talking with colleagues will give you ideas for programming. He explains that collaborative projects are “not the kind of thing that you can plan, it just happens. You read something, you talk to someone, and all of a sudden you get a burst of creativity—the light bulb goes off and you run with it and you develop a program.”

He also remarks that collaboration is not just for planning and putting together a program; it also plants the seeds for the ideas that lead to programs. His background as a librarian has helped with building bridges across campus, and he describes the library as “neutral territory and multidisciplinary,” connecting to every department on campus by serving them all on some level.

When I asked Steve how he chooses his collaborators, he began by explaining that, based on the subject, he reaches out to topic and programming experts on campus, following up with any leads they suggest. “Programs, in general, are a wonderful way of bringing people together,” he says, “and that’s all part of collaboration.” Since NJCH funds are awarded with the goal of expanding interest in the humanities, he tries to make the programs as multidisciplinary as possible.

“It’s a wonderful opportunity to get to know the faculty, and to get them involved,” he continues, “and I think it’s important to get them involved [in this program] because we have so many accomplished people in our faculty and [I think] that the campus and the community at large should know about what’s going on here on campus, and this is a way for the University to reach out to the community.”

In asking how Steve gets people he does not know to collaborate with him, he expresses that most people are drawn in by his genuine interest in their subject areas and
that they want to share their expertise with others in similar fields. They are mostly flattered by his invitations to lecture and present their work. Steve also notes that he applies his well-honed relationship-building skills, developed from negotiating contracts with vendors, to his program development.

Lastly, we talked about Steve’s favorite and most difficult part of creating collaborative programs. With Steve’s curiosity and love of learning, it was not a surprise to hear that meeting new people, building relationships, and connecting to scholars in such a wonderful way were all the best parts of developing programs. The difficult part? “Well,” he laughs, “there’s a lot of challenges. One of the biggest is scheduling and organizing... and then you remind yourself, when it’s all finished and done, it’s worth the effort.... Building awareness of the library and what we do, holocaust awareness and education, publicizing what faculty are doing on campus, and what the university is doing, is very important.”

MSU Internal Award Collaborators

Researchers are familiar with the term “collaborate”: to work jointly with others on an activity, especially to produce or create something. At MSU, faculty are provided with an annual opportunity to submit proposals for Separately Budgeted Research (SBR) and Summer Grant Proposal Development (SGPD) Awards for their scholarly, creative, and research efforts. Given the benefits of the collaborative process, it is no surprise that we find several pairs of collaborators among Internal Awards applicants in the SBR and SGPD categories.

To get a better picture of what collaboration looks like for MSU researchers, we asked Associate Professors Yeon Bai and Soyoung Lee to share their thoughts on their joint efforts under the SBR award.

What were some of the challenges in finding a collaborator?

Bai: It is a challenge to find a collaborator who has expertise that complements the project. One should have different expertise [than the other] so that they can benefit and advance the project.

Lee: Indeed, it [is] hard to find a collaborator that has special expertise in a different subject. Although we are both Korean immigrants, Yeon studies breastfeeding, nutrition and health habits, and she has done research on ethnic groups other than Korean immigrants; whereas in my field of Family Studies, I focus on family relationships and well-being among Korean immigrants in the contexts of diverse communities. So, fortunately, we could combine our expertise interest and present a proposal last year.

Lee: We both have a background in nutrition sciences, but Yeon has a Health and Nutrition Sciences background so her perspective is in experiments, whereas my field is Family Studies and my strength is doing exploratory work.

How were you able to divide the work?

Bai: In the beginning, [we would] periodically have meetings (face to face, email, phones) to delegate and check each other’s progress. Of course, having deadlines helped us.

Lee: We would meet to discuss who should go as PI and so on.

What are some of the advantages to collaborating? Do you think effective research is possible without collaboration?

Bai: We can conduct more effective study by collaborative research but not necessarily applying for grant together.

Lee: In research, using a different approach acts as a catalyst in the outcomes. It enhances the understanding and also helps in designing better studies. To answer the second part of the question: No. If you have impact-oriented studies/research, you need collaboration at all times.

What is your advice to researchers at the University who are thinking of finding collaborators for their research?

Bai: Team dynamic is important. Always check in with each other for major decisions. Transparency is important.

Lee: I agree with Yeon’s points and would like to add that communication is vital.
The Structures of Collaboration

Collaboration is often a key component of grant writing. A collaborative proposal can provide an excellent mentoring experience for younger faculty, enable efficient use of limited resources, and, in some cases, provide a competitive advantage for certain funding programs. Many federal agencies clearly state in their Funding Opportunity Announcements that they are seeking projects that foster collaborations.

There are two types of research project structures that depend on collaboration: Interdisciplinary and Community-Based Participatory Research (CBPR). When working with colleagues in other disciplines, collaboration can facilitate interaction and integration that allows for a larger and stronger foundation to build the research project. When using CBPR to work with defined communities in addressing a concern (i.e., health, social justice, or environmental issues), collaboration can enable multi-partner participation and the development of projects that allow access to deeper levels of community engagement and the building of strong bonds of trust.

To get feedback on participating in research collaborations, I turned to two of CEHS’s faculty members. Dr. Douglas Larkin (Secondary and Special Education) works with Dr. Sandra Adams (Biology & Molecular Biology, CSAM) on the NSF-funded “Montclair State University Noyce Teacher Scholarship Program.” Dr. Ndidiamaka Amutah (Health and Nutrition Sciences) collaborates with Yale University on the NIH-funded “Community-based HIV Education Research Program for Diverse Racial & Ethnic Groups.”

My question to Dr. Larkin and Dr. Amutah was: “If you were approached by a faculty colleague and they expressed an interest in collaborating on an Interdisciplinary or CBPR project, how would you respond to their questions?”

**Will I benefit by participating in this group?**

“It depends on what sorts of benefits you are seeking,” explains Dr. Larkin. “Engaging in collaboration across departments and colleges entails thinking realistically about what criteria are important to you, and honestly assessing whether a collaboration makes sense for you personally.” In his work as a science education teacher, he sees value in working with other departments that interact with elementary teachers and school leaders. “My colleagues across the departments in the College of Science and Mathematics also share interests in science teacher education, and come from a perspective different from my own that is quite valuable in approaching problems from multiple angles.”

Dr. Amutah concurs with the value of collaboration: “CBPR is a very rewarding, collaborative approach to research for people with an interest in working with communities. It allows community members and gatekeepers to work with academic institutions and researchers on a topic of shared importance.”

**Can I satisfy the group’s requirements?**

Dr. Larkin believes that “One of the benefits of collaboration across disciplinary areas is that we help each other think about and reframe our work. Sometimes, figuring out if you can satisfy a group’s requirement is very straightforward. But just as often, the group’s requirements arise out of an effort to solve a problem prior to your involvement, and being asked to join a group doesn’t just mean that you are a sub-contractor of sorts. It means that you have the opportunity to discuss the goals of the project as part of the collaboration, and rethink particular requirements or elements of a project altogether.” Dr. Larkin feels that this can be especially true if it allows new insights or approaches that enrich the research effort.

“This is the hallmark of CBPR, that the community and the academician work together to develop and implement the research study or project,” explains Dr. Amutah. “Thus, as CBPR is a truly collaborative process, the group’s requirements are identified and refined from the inception to the conclusion of the project by both the academic and the community partners.”

**Are the benefits offered for my participation worth the effort?**

Dr. Larkin states that “It is useful to think about participation in terms of workload and overall fit. If a project takes you out of your field entirely for long periods of time, the benefits
ought to be fairly substantial to compensate for the time it takes away from other areas of your scholarship. If, however, the project closely aligns with the work you are currently doing, the opportunity cost might not be as high as you anticipate, especially if the outcomes have the potential to enrich the breadth of your scholarship.”

Regarding CBPR, Dr. Amutah explains, “As a faculty member that is interested in community-based research, the contributions that you make to the research project (technical assistance, grant writing, data collection and analysis, program evaluation, etc.) not only improve the sustainability and the health of the community, but can add to your academic profile as well. Specifically, journals such as Progress in Community Health and Partnerships publish research from academic and community partners, and there are an increasingly larger number of grant announcements from NIH that focus on academic/community collaborations.”

The choice of research structure is also, in some ways, based on preferences and personalities. Recognizing this, allow yourself enough time to get to know the other team members. Determine your place in the organizational structure of a collaborative project. Define the extent of your role in the decision making process. And, finally, consider if being part of a collaboration is beneficial to answering your own research question. Collaboration can be a rewarding experience for the individual researcher, leading to richer results by offering multiple perspectives on a solution to a research question.

Revolutionizing the Biographical Sketch

Science Experts Network Curriculum Vitae (SciENcv) is a new electronic system that helps researchers assemble the professional information needed for participation in federally funded research. SciENcv gathers and compiles information on expertise, employment, education and professional accomplishments. Researchers can use SciENcv to create and maintain biosketches that are submitted with grant applications and annual reports. SciENcv allows researchers to describe and highlight their scientific contributions in their own words.

What SciENcv Does:
- Eliminates the need to repeatedly enter biosketch information
- Reduces the administrative burden associated with federal grant submission and reporting requirements
- Provides access to a researcher-claimed data repository with information on expertise, employment, education, and professional accomplishments
- Allow researchers to describe their scientific contributions in their own language

Who Developed SciENcv
The SciENcv utility is a cooperative project requested by the Federal Demonstration Partnership (FDP), which is an association of academic research institutions and federal agencies. In collaboration with the FDP, SciENcv is being built by the National Center for Biotechnology Information (NCBI) at the National Institutes of Health under the aegis of an interagency workgroup composed of members from the Department of Defense, the Department of Energy, the Environmental Protection Agency, the National Institutes of Health, the National Science Foundation, The Smithsonian, and the United States Department of Agriculture. The interagency workgroup operates under the National Science and Technology Council’s (NSTC) Research Business Models and Science of Science Policy Committees.

Principles of SciENcv
- Any researcher may register
- Leverages data from existing systems
- Data are owned by the researcher
- Researcher controls what data are public
- Researcher edits and maintains information
- Researcher provides own data to describe research outcomes
- Researcher has ultimate control over data in biosketch

A YouTube video provides instructions for using SciENcv.
Finding Collaborators with Pivot

**Sam Wolverton**  
Sponsored Programs Coordinator, ORSP

Since Pivot’s arrival on campus last summer, the Office of Research and Sponsored Programs has made sure that faculty and staff know about the extensive database of funding opportunities that are now available. However, Pivot actually encompasses two databases, the second of which is a collection of over three million faculty profiles—or, as we in ORSP like to say, over three million potential collaborators.

When an institution subscribes to Pivot, the company’s editorial team creates profiles for all faculty members listed on University academic department websites. Each profile contains, at the very least, a faculty member’s name, address, phone number, and email address. Many profiles will contain information regarding research interests and publication details. Pivot uses these profiles for two purposes. The first is to match faculty members to relevant funding opportunities. The second is to provide anyone looking at a funding opportunity to find a collaborator with one click.

For example, the screenshot in this article shows what a Pivot user would see after clicking on a promising opportunity, but do not overlook that red-highlighted area, called Profile Matches: This is where the funding opportunities database meets the faculty profiles. Information in the profiles that is used to recommend funding opportunities to the user are also used here to identify faculty members who are a potential match for this opportunity.

Pivot gives you the option of exploring matches at your institution as well as those in other institutions with subscriptions to Pivot. Both lists can be sorted by faculty member’s name or by the relevance of their expertise, but clicking on the outside institutions link can return a very lengthy list: in this specific example, the system brought back 242,653 results! Fortunately, Pivot provides the capability to filter the results by field of study—many of which include subfields—as well as the ability to narrow the list based on geographic location.

The website also offers a direct link at the top of the page so a user can directly access the profile database, in much the same way as the funding opportunities section. However, when one considers the competition to obtain external sponsorship and the fact that many opportunities are designed for collaboration, having the ability to go from a promising source of funding to a list of potential collaborators within a couple of clicks can be a powerful and time-saving tool.

If you are interested in learning more about Pivot, please contact Sam Wolverton at wolvertons@mail.montclair.edu or extension 3223.

**THE OFFICE OF RESEARCH AND SPONSORED PROGRAMS**  
Ted Russo, Director  
Marina Savransky, Assistant Director  
Catherine Bruno, Post-Award Officer  
Dana Natale, Research Development Specialist  
Geetha Sampathkumar, Sponsored Programs Administrator  
Sam Wolverton, Sponsored Programs Coordinator

**E-mail:** orsp@mail.montclair.edu  
**Telephone:** 973-655-4128  
**College Hall 309**