

Minutes of the
NIU Board of Trustees
**AD HOC COMMITTEE ON SPONSORED RESEARCH ACTIVITY
AND TECHNOLOGY TRANSFER**

February 24, 2014

CALL TO ORDER

The meeting was called to order by Chair Cheryl Murer at 9:01 a.m. at NIU Naperville in Room 101A. Recording Secretary Sharon Banks-Wilkins conducted a roll call of Trustees. Members present were Trustees John Butler, Robert Marshall, Marc Strauss and Chair Murer. Trustee Robert Boey joined the meeting in progress. Also present were President Douglas Baker, Committee Liaison Lisa Freeman and General Counsel Jerry Blakemore. With a quorum present, the meeting proceeded.

VERIFICATION OF APPROPRIATE NOTICE OF PUBLIC MEETING

Confirmation of Open Meetings Act notification compliance was given by Board General Counsel Jerry Blakemore.

MEETING AGENDA APPROVAL

Trustee Butler made a motion to approve the agenda. The motion was seconded by Trustee Marshall. The motion was approved.

PUBLIC COMMENT

The Chair asked General Counsel Jerry Blakemore if any members of the public had registered a written request to address the Board in accordance with state law and the Board of Trustees *Bylaws*. Mr. Blakemore noted that no timely requests had been received to address this Board Committee meeting.

UNIVERSITY REPORT

Agenda Item 6.a. – Introduction and Announcement of Division Name Change

The Division of Research and Graduate Studies was recently renamed the Division of Research and Innovation Partnerships. Dr. Lesley Rigg opened the meeting by introducing the name change within the Division and sharing her enthusiasm in being named Interim Vice President for Research and Innovation Partnerships. Under this name and structure, the Vice President for Research and Innovation Partnerships reports directly to the President and is empowered not only to enhance NIU's research portfolio, but also to develop partnerships that drive entrepreneurial opportunity. The Dean of the Graduate School, Bradley Bond, who formerly reported under the division, now reports to the Provost and retains a strong relationship with the Division of Research and Innovation Partnerships. All of these changes serve to align the names and units with the way they have been functioning and will continue to function.

Agenda Item 6.b. – Drilling Down into the Research Enterprise

a. Process

When I talk about startup packages, Dr. Freeman said, we are not talking about small change. Data taken from the 2004-5 cohort of Burroughs Wellcome Career awardees shows life scientists who have received prestigious awards for being hired by high activity research universities, and their average startup packages, minus their salaries, hover between \$400,000 and \$500,000 in the years 2004-2005. At NIU, between 2011 and 2014, our cash investment in startup, exclusive of faculty salaries was on

average \$200,000 an investigator in the science field. So we are providing investigators with less cash startup because of our limited resources. However, what you do not see in that \$200,000 that we can actually calculate is how good we are at taking advantage of infrastructure through regional collaboration. Our strong research programs attract extremely high quality investigators, not only because of the services we provide them on campus and our startup investment, but because of access to the facilities at national labs such as Argonne National Lab and Fermi National Lab.

Our WIZZARD team in the Antarctic has much of their infrastructure logistics provided through the NSF Office of Polar Programs. So, again, we are not paying for all of the sleds and the Antarctic logistics, and we did not build the science substation at the South Pole, but we are taking advantage of that infrastructure. In departments like Geography, many of our scientists work at local assets like the Nachusa Grasslands where the nature conservancy has purchased equipment that is used to create science sites. Though our investment may not be as large as some other universities, we have a good many assets that we leverage to give our investigators and NIU a proprietary advantage.

Dr. Freeman stated that the new UI lab grant will not only bring scientists to Illinois, but it will also provide a place for innovation and collaboration across industry and academic institutions with different strengths. NIU has pledged \$1.5 million over five years, and that will be leveraged in a project specific fashion. As projects are proposed and accepted, we will be matched dollar for dollar with our investment, she said. Note what NIU brought to the digital manufacturing lab proposal which is widely appreciated by our colleagues at Northwestern, University of Illinois, and the Illinois Science and Technology Coalition, is a strong history of technology transition, strong relationships with industry, especially defense industry in areas like Rockford. This creates a 21st Century version of a place where industry and universities plan innovation and research from the very basic to the very applied together from the beginning.

When we talk about what we support, how we support faculty research and scholarship on our campus, we have four programs of nonfinancial or noncash resources, and the programs that actually provide a cash investment in competitive fashion for faculty. The Office of Sponsored Research is the office we speak about when we talk to you about the awards we have submitted. They offer proposal development assistance to faculty, help them develop proposals in all aspects, help submit proposals and coordinate the awards. The PI Academy is a faculty professional development academy that is two years old. It was started with an investment fund from the Great Journeys Strategic Plan. It was a brainchild of Associate Vice President David Stone and mine. It is based on a model of mentorship called POD (Peer On-Site and Distance). It unites young faculty and early career investigators in an on-campus peer network of support. There are monthly training sessions for faculty and NIU experts are utilized at these sessions to provide information about navigating our campus. Most importantly, and probably the best part of the PI Academy, is that we match our faculty with national experts in their discipline in order to provide mentorship. These mentors are invited to NIU as distinguished lecturers. Mentors are introduced to someone at the college or department level, someone at the university level and the early career investigator. We ask mentors to do one project, either a grant, a paper or information for equipment exchange with the investigator and take that investigator under their wing and make sure they have the right network of external contacts. It is very beneficial to the university, because when those people come here, they see that we are serious. They see our facilities, they see our fabulous undergraduates and when they are sitting on that study section that evaluates grants and NIU's name comes up, they can say, I have been there, they are serious, they are an institution that wants their investigators assisting its researchers.

Other services offered include research methodology services, which provides fundamental design and statistical assistance to faculty who request it, and the 81 Program gets external reviewers for amended applications in the grant submission process. The Great Journeys Graduate Assistantship program is a competitive process, where graduate assistantships are awarded to faculty members who are trying to balance their teaching responsibilities with the submission of external grants. The graduate assistants can help them get data to develop their proposals and can also assist with the teaching component during that proposal development phase. The graduate assistants model what it is like to be a faculty

member, to balance and integrate teaching and research. The faculty member is not only mentoring the graduate student but also getting assistance with proposal development and teaching as they try to navigate their responsibilities.

In intramural grants programs, the largest is our Research and Artistry Program which invests somewhere between \$280,000 and \$400,000 a year in faculty research and seed money for external funding. We have also partnered with the NIU Foundation to provide a competitive venture Grant process. Venture grants are awarded for technology transfer innovations. Travel awards are provided to facilitate faculty presentations of their data at national/international conventions. Our collaboration with the Illinois Manufacturing Excellence Center (IMEC) allows NIU and the NIST extension arm in Illinois to fund faculty who collaborate with industry. Again, we were the first university in Illinois to have a joint IMEC research program run through the Sponsored Projects Office for the benefit of campus faculty, and this type of partnership was featured in the proposal just funded by the Department of Defense as evidence of our post-collaborations within the state.

The university has continuing engagement with other universities around the country that began through the proton project such as Loma Linda University and Louisiana State University. Our lead contact at MD Anderson recently moved and we have followed that collaboration and maintained contacts to MD Anderson. We are looking at building relationships with other universities to support our work not only in high energy physics and accelerated physics, across disciplines. You will see the monetary importance of our collaborative efforts to the external funding we receive later in my presentation. The types of relationships we are seeded and the proof of concept that we got with the proton accelerator project has laid a foundation for many groups on campus to seek external partners at prestigious academic health centers so that research can move forward in the most effective and efficient fashion. It adds complexity, but it also adds a chance of success, both at the funding stage and the translation to societies' stage that we would not have if we did not have those types of partnerships.

We have been recognized on an international platform not only for our advocacy in research, but our NSF funding has been recognized on a national platform through an award from APLU for the type of K-12 engagement that the physics group started. It was money from the Physics Department that started our massive STEM outreach program. Another aspect of the way in which that particular program and its collaborations and investments have raised us to national attention is that we are recognized as an excellent collaborator and as excellent project managers. Jerry Blazey would not have been in the Office of Science and Technology Policy in the White House, where he was revered for his project management skills, if he had not set that example working at NIU through our physics collaborations involving Fermi, CERN and other universities.

We talk about getting grants, and we talk to the Board of Trustees about grants that are submitted and awarded, but we have never actually talked about what it is like from the view of an investigator at this level of detail. I want to show you what it is like in terms of timeline and effort to be awarded a grant. The most important thing you need to get external funding is a good idea. Good grantsmanship, good contacts, good politics, all of those things can help a good idea get funded, but they cannot make up for a bad idea. So, if you are not innovative and you do not have a good idea, you are not going to be funded, no matter who you know or who advocates for your grant. Once you have a good idea, it is important to think about who else is going to think this is a good idea, that it is aligned with their mission, what agency (e.g., a federal agency, a foundation, or corporation) is going to be available to give funding. At this point, you can engage the Office of Sponsored Projects because they will help give you ideas. They have databases they can search, they have colleagues they can reach out to. So an investigator can come to their research development specialist in the Office of Sponsored Projects and say, this is what I am thinking of doing, who might have money for me? As they make those introductions and give them those ideas, there will be a program officer at that agency who is also available to offer feedback on whether or not this idea might or might not be good for my agency.

Then, through this process, you prepare to submit a proposal to that agency. When we talk about preparing a proposal or an application, it is not one page with blanks that you fill out. It is a pretty

extensive process consisting of somewhere between a 5- and 15-page research plan that has technical elements; a separate budget and budget justification; biosketches so that the credentials, the potential and the track record of all of the people who contribute to the proposal can be evaluated; a statement about the available facilities, either onsite at the university or through the sites of collaborators. Then there is research compliance issues, approval and data sharing plans, things that show that you know the logistics and mechanics of conducting research in an ethical fashion as well as having a good idea and having the people, the team and the place to do it. Once the proposal is drafted, the idea is put together, our faculty work with colleagues in their departments at other universities within the Office of Sponsored Projects to review the science, the clarity, the coherence, the compliance, the grammar and spelling, and the NIU commitment to the proposal until we are all happy with it. So there is a lot of iterative process that goes on between these two, and the Office of Sponsored Projects, the statistical consulting entity, the folks involved in the PI Academy, both external and internal mentors, all contribute to helping the faculty member develop a proposal. It is then submitted. The days of having large stacks of paper that were Xeroxed and FedExed to D.C. are gone. Pretty much everything is done through a pretty complex electronic system. Sponsored Projects has people who understand how to navigate that system because it is just too hard and not reasonable for our faculty members, because if a mistake is made, your proposal does not go in.

We are very lucky when proposals are funded the first time, but that is not typical. After you have suffered through developing the proposal, been inspired by the good idea, and filled out all the paperwork, you submit the proposal. Two or three weeks later, the agency –roughly based on either NSF or NIH – will tell you, we have received the proposal and it has been assigned to a peer review group. Then you can tell which scientists from outside your institution will be reviewing your proposal. Four months later, they will have completed their meeting and review of the proposal and you will get an initial peer review summary statement that basically says, this is what we liked, this is what we hated, this is roughly where you measured up with the other proposals in the section. At that point, you know if it is encouraging or if it is unfundable, but you do not know whether or not it is funded. If it's unfundable, you can immediately start this process again for resubmission. If it is encouraging, you can celebrate that you have made it this far, but you cannot quite relax. You have to wait another three months for a second level review because all of the agencies have review by peers and then it goes to council. Council consists of the people who know how much money is in the budget for that cycle of funding and where the pay line is. They have the ability to move proposals up and down and sometimes partner across agencies to find extra money. Until council has met, you do not really know if you are funded or not. After council meets, if you are funded, we can celebrate, and you can engage the Sponsored Projects Office to receive your award and coordinate the start of your work.

Sometimes after you get an encouraging score, they will ask you for more information, for more compliance information and to clarify points. That is usually a good sign, but it is not necessarily good news. If you get through second level review and are not funded, or if it is clear after initial review that you are not going to be funded, then you start to figure out why and how you can do better. You go back to the program officer and ask them for any insights, do they encourage revision and resubmission, do they think you need to go to another agency. You engage Sponsored Projects to let them know that you haven't been funded and to start the process over. You regroup, you review, you address criticisms, you seek feedback and you pretty much go back and start this all over again.

If you count preparing the proposal, the best outcome from submitting the proposal to being funded is about a year for the proposal to go through the entire process. If you are not successful the first time, you can go back in as short as 30 days for a proposal to be considered in an amended submission by NIH where you actually address specific criticisms, but it has to go in within a maximum of 37 months. That seems really long, but sometimes what they ask you for is to publish another paper or do a whole other series of experiments, and if those involve live animals or important incubation times, it can take a year or more to address the criticisms of a study section.

For many years have we had reports from the Provost regarding grants, Chair Murer commented, and I asked Drs. Freeman and Rigg to show us the process so that we understood the complexity of requesting

grant funding. There is also another complexity here that may not be as highlighted and that is the legal element of this. Dr. Freeman indicated that the legal department has been involved in various areas, such as animal research, regarding any and all ramifications that might be involved.

The research in our history program, which I am familiar with, Chair Butler remarked, all happens on campus and it is like a grant that supports the faculty member's time. He asked how we encourage the activity during that period of time to eventually make it into this process.

The research and artistry program has evolved over the four years that I have been at NIU, Dr. Freeman replied. It was originally a program focused on summer support for faculty, and the amounts were relatively small, less than \$10,000 in general. We have three categories of research and artistry grants, one of which is specifically focused on seeding external funding. The facilitation subcategory of research and artistry favors encouraging artistry and scholarship in disciplines where there is not external funding. The completion category is there to help anybody who starts a project and hits a snag because something did not work. Those two are at the \$10,000 level. But the opportunity grants, at the \$15,000 level, are specifically designed so that you are writing your proposal to show how getting this \$15,000 (to support pretty much anything except conference travel, but including equipment, travel to a research site, faculty time, graduate student time, a new antibody, a new piece of measurement equipment) will help you get funded and how it will help you submit a competitive proposal, and that is what the faculty are evaluated on when they submit those grants.

The external grant review process is the same whether someone is seeking to renew existing grant funding or whether it is a new request. One of the things about peer review is that the second submission of a grant is more likely to be successful than the first submission, but for renewals, you go right back in with everyone else. In a way, it is almost harder because you are no longer the person who has potential and a good idea. You have to show that you delivered, and you still have another new good idea that can compete with the new ideas of people who have potential. It is quite an arduous process.

This slide shows NIU research and development expenditures as reported to the National Science Foundation database. Awards are the money that comes in, expenditures reflect the money as it is used by investigators to support their research. The sources of funding for different types of research and scholarship vary in ways that you would expect. If you look at all research and development fields in 2012, our research expenditures were about \$22,000. Looking at what was funded by what type of entity, as you might expect, science, meaning life science, physical science, the social science of psychology which has a strong life science, neuroscience component, were largely funded by the federal government. Social science and especially humanistic social sciences and nonscience and engineering activities on our campus are largely funded from institutional funds like research and artistry. Although those institutional funds do not reflect our State appropriation, they are the indirect costs that were recovered. These grants are used in part to support research in the disciplines that do not attract as much external funding. Engineering has a strong federal component, but it also has a strong industry component, business is the NSF term for a corporate partnership or industrial funding. Humanities competes for foundation and not-for-profit funding.

Referring to the amount of state investment in research, Dr. Freeman said, the State number could grow and we would benefit from it. There are other states, for example, that put in matching funds for small business grants or have state-level equipment support grants and, in those states, this number is higher.

As I mentioned before, Chair Murer commented, as we look at funding for the university, especially philanthropic funding, our Development Office and our Foundation have done extraordinary work, but more as it relates to individuals. A proportional ratio of the monies raised through the Foundation have been through gifts by individuals as opposed to corporations. Again, as I keep seeing this watershed period for the State of Illinois, it is imperative that we capitalize on this and realize there are all sorts of opportunities, not only in the strict research and technology transfer areas and getting grants in this way, but it would seem collaboration with our Vice President of Development, our Alumni Association and our

Foundation to really get within the culture of this research orientation. This is really important, and there are monies not only through the grantsmanship, but there may be monies that we have not tapped in our Foundation, our philanthropic dollars that may be enhanced through this process. I would like to see more integration, Dr. Baker, between and among our researchers and our Foundation, the Chair concluded.

When asked by Trustee Butler why the National Science Foundation cares about NIU's humanities research, Dr. Freeman stated that the National Endowment for the Humanities is the federal funding agency and the National Science Foundation is federally charged with tracking the investment of all of the universities and creates this clearinghouse. People who serve on study sections or legislators, who are considering appropriating funding or businesses, who are considering investment, can go to a data warehouse and see what is going on at a specific institution. That is why it is really important that we report accurate numbers here so people can draw the right conclusions about what is going on with our institution.

If I could just follow up on Chair Murer's comment as well, Dr. Baker said, we do need to do more with the corporate and Foundation side, and a few steps are underway. We recently hired a corporate and foundation person. We have consultants looking at our portfolio of opportunities, our staffing, our structure, etc, to see what we need to do to adjust as we prepare for another campaign. Last Thursday afternoon, there was an Executive Leadership Forum, which is part of the Alumni Association, and they had a number of people who spoke about their successes to other high powered executives. At the end, I had dialogue with those assembled, which included about 15 students, and we talked about how we can build these bridges between the university and these large organizations, particularly these folks that have significant positions in these organizations. We were talking a lot about internships and mentoring and what the university can do in partnership with them, their HR departments, etc., and then we brainstormed beyond that. As we get more and more ties with faculty, students and then our alumni and organizations that can open up doors not only to internships and mentoring, but to these kinds of research activities, I see a brighter future in this and believe we have a game plan to build on.

When an inquiry was made on what is included in research expenditures, Dr. Freeman stated that the NSF HERD (Higher Education Research and Development) Survey has very strict definitions of what can and cannot be reported. All of our sponsored research dollars that are spent are reported as well as the state and local investments. When it comes to the institutional column, no university captures a hundred percent of its institutional investment. If the researcher's time is purchased by a grant, it is captured here or in the federal. If it is captured by the institution or the startup investment, whether or not they are allowed to report that to the NSF survey for inclusion here depends on how it is accounted for within our accounting system. It has to be labeled as research in a distinguishable way that meets the NSF definition. What we captured here is obviously reported that way. There is a significant amount of institutional investment that we do not get credit for, and we are working very hard with Grants Fiscal and Sponsored Projects to do a better job of that.

When we talk about sponsored research overhead or facilities and administrative costs, Dr. Freeman said, we negotiate a rate with the federal government. Our negotiated rate is 47 percent when we fully recover those costs. We fully recover those costs from the National Institutes of Health and the National Science Foundation on other than training grants. We do not recover that in full from any state contract. We do not recover that in full from the Department of Education. We generally do not recover that from foundations because they report to donors and will not pay more than X percent. So, even though our negotiated rate is 47 percent, as you know from reading our Sponsored Projects report every year, what we actually recover is between 10 and 15 percent, and part of that reflects the type of research we do working with State agencies and education. We are aggressive in trying to recover as much of that as possible because it reimburses the university for monies spent supporting the research reflected here.

That reinforces what we have been talking about, Chair Murer stated, in investments, you want a balanced portfolio of federal monies, state monies, whatever that might be. But federal, corporate and

foundation are really three major sectors. You have to have a balanced portfolio, because a foundation may allow you to be more innovative and do more cutting edge activities than the federal government.

That is a very perceptive comment from the standpoint of fiscal sustainability and the ability to grow your research enterprise, Dr. Freeman said. It is the way to support the true mission of the university because if you have a balanced portfolio, it suggests that you are doing a good job of supporting applied science and engineering, nonscience and engineering, and science. That is what student career success should be based on, and that is how we would give the appropriate baccalaureate in graduate education to the students within the institution.

To a query from Trustee Marshall regarding in-kind contributions, Dr. Freeman responded that accounting for in-kind contributions in a Sponsored Projects environment would be considered either a voluntary or an involuntary cost share because, essentially, you are saying my faculty member is giving 20 percent of their time to this project, but they are drawing only 10 percent of their salary from the project. Federal agencies differ in whether or not that is even allowed and how it should be accounted for, and the reason for that is because, otherwise, more affluent institutions (Harvard, for example) could put in a cost share that would look like NIU's entire research expenditure budget in every proposal. If that were the major criteria for review, they would get all the money in the country. This area is very heavily regulated now to try to create a level playing field that actually benefits us.

Here we see a trend over 10 years in research expenditures shows the effect of the stimulus, particularly in science, between 2007 and 2010, and it shows the general trend that science will always create more R&D expenditures than the humanities and engineering. In a comparison with Kent State University and the University of North Texas, two institutions that are our peers in a number of national instruments and because we not only have similar research histories, we also have similar doctoral program profiles. For example, all three of these universities offer doctoral programs in physics, biology, engineering and geology. There are two interesting points on this slide. The first is where we start to see this dip and the leveling off in research expenditures at NIU. You know from looking at our award data year after year that actually we were pretty flat in terms of awards. What makes expenditures drop when awards are staying constant is that the awards are not being spent as quickly as they possibly could, and that is multifactorial, but here there are two overriding contributors. One was the federal government shutdown, the sequester, the government was taking back unused funds whenever they could. The second contributing factor is recruitment at NIU, the faculty and staff turnover that Dr. Cunningham has spoken to the group about often and in great detail. We had money awarded and then we had retirements that required new hiring, which slowed our ability to use the money as it came in. Here we are leveling off and will probably start to go back up.

At North Texas, there is an incredible point of inflection in their research expenditures. They made strategic investments in research clusters. Certainly, this was facilitated by an investment at the state level, but the principles they used to decide the investment and management of their resources are principles that can be used by any institution. They dedicated themselves to facilitating and maximizing the success of current and future faculty at all levels, expanded their research infrastructure space and funding, and enhanced collaboration of partnerships. These three things say let us try to get people on the campus aimed in the same direction, assistant, associate and full professors who work on common problems, using similar equipment, and do that where we have historic strength. That was their cluster strategy and they saw increased philanthropic funds, something that has already been suggested as a strategy for NIU and Texas. These are matched by the state, but it is a good strategy. Increasing the number and the quality of the students both undergraduate and graduate is something that you would expect not only to enhance research, but you expect research to enhance enrollment of those types of students.

We do have opportunities with the federal government, Chair Murer said, so for NIU and other universities in Illinois, we have to capitalize on any opportunities we have in the federal government until we get through this boondoggle for however long it takes in terms of the State, because the State is not talking about things in an aggressive, futuristic way. We can accomplish the same things that the

University of Texas has done. The whole University of Texas System is very oriented to research, understanding that research drives business, understanding that business drives economics and that the economics are going to make the state thrive so that they can replenish all of these activities. We also have that opportunity when we manage our own resources, Dr. Freeman added, to adopt a similar filter of how we align our institutional resources when we are investing in research, and I am thinking about doing all of the things on this slide, especially the top four.

I absolutely agree with what Lisa is saying, Dr. Baker said. She and Nancy Suttentfield, our Interim CFO, have been working on budget principles to allow us to put our money to the highest priorities. We have some potential state investment in building. We are number three on the capital list and it looks like that is going to be some kind of technology, maybe healthcare informatics building. And we know we just have the iFiber at work in the ground, we can start putting some pieces together and build some strength there. We also have just a few miles down the road, Fermilab, which is an amazing opportunity for us to build on. There are few universities that have access to one, let alone two national labs. So, we have faculty working there and Lisa, Lesley and I are all thinking about what can we do strategically to hire in strong clusters there and be nationally or globally competitive.

It was important today to have dialogue, and we can continue this discussion in the next meeting. Right now, I would like us to segue to how we really have integrated here at NIU from a research perspective. After that presentation, if we have time, we can look at accountability.

b. Program Content (Example: Center for the Study of Family Violence and Sexual Assault)

I will not go into detail about any of the centers here other than to show that we have very successful integrated research centers that are the foundation for cluster research at NIU, Dr. Freeman said. Dr. Julie Crouch is here to talk about her historically, extremely successful center. I also want to recognize Dr. Greg Waas, Chair of the Psychology Department, who is with us today, and Dean Chris McCord from the College of Liberal Arts and Sciences for their strategic investment, guidance and thinking about the succession of this center over time.

Just from listening to the reports this morning reminds me of all the many tremendous research endeavors going on across campus, Dr. Crouch commented, and it makes me all the more appreciative to have this opportunity to be here today to tell you a little bit more about our center. The mission of the Center for the Study of Family Violence is to advance our understanding of diverse causes and consequences of a variety of forms of interpersonal violence, including various forms of traumatic treatment in partner violence, elder mental treatment, sexual assault, this includes all sorts of trauma and other related topics. By conducting basic research, we perform in advance foundational research that will lead to more accurate assessment as well as effective prevention and treatment of family violence and sexual assault.

Before going on, I would like to comment on my time here at NIU. I first arrived at NIU back in the early nineties as a graduate student in the Department of Psychology. At that time, there was no center, no center mission, no center director, so all that I am about to tell you has come to fruition since the early nineties. We can look at most of our collaborative efforts and recognize a champion for the center's cause in Dr. Joel S. Milner. Dr. Milner came to NIU back in 1986, joining the faculty in the clinical area in Psychology. He had and continues to have many of the characteristics that make for a strong leader. He has a very deep love for the empirical process, is hardworking and has a persistence that, quite honestly, at times can become rather annoying, but it has led to great success for him.

Joel was my mentor on my dissertation and through my graduate years, and his recipe for success from the beginning remains the same today. Conduct rigorous research, establish a strong publication record, use those two ingredients to garner support through external funding for additional research. Once you have accomplished all of that, do it again, and then do it again, and then do it again. It is a fairly simple recipe, but it is one that takes incredible persistence and a great deal of hard work. The other thing that has given Joel's work staying power is the fact that a couple of his early accomplishments have proven to be paradigm shifting ideas, both in practice as well as in research. The first idea that Joel put forward

was the child abuse potential inventory, which is a screening tool for child physical abuse risk. It is now used worldwide and has been translated into 20 different languages. Not only has it pushed forward clinical practice, but it has also revolutionized the way we do research on child physical abuse. Instead of having to go out and get actual samples of physical abusers, we can now use his scale to get samples of high and low risk parents, and that has really made a huge difference in the volume of research that has been conducted on child physical abuse risk. Joel has also put forward a theoretical model, the social information processing model on child physical abuse, which suggests that the way we can understand why parents are aggressive towards their children is by understanding the way they process information during parent-child interactions.

Joel recognized that in order to expand his program of research, he needed colleagues and he needed collaborators. In order to accomplish that, he worked with the clinical area and they decided to set up a special emphasis on family violence within that area. This led to several spots within the clinical that are designated for family violence researchers. With this growing momentum, Joel applied for and received IBHE approval for the center in 1999.

In 2002, the center received a \$2.7 million federal grant to fund the construction of its research facility. This was, through the support of NIU's President's Office and the assistance of Kathy Buettner, in particular, helping to facilitate this opportunity. A second federal grant was obtained in 2004 for the purpose of finishing and furnishing the facility. We had an observations lab that had yet to be equipped and, as a result of support from the Office of Research, we received internal funding in conjunction with support from the College of Liberal Arts and Sciences, as well as the Psychology Department, to finish that observation lab. Dr. Crouch then presented a virtual tour of the center. She thanked Media Services personnel for all their help in putting together this presentation.

Video: The audio portion of a video that Dr. Crouch showed as part of her presentation follows.

Welcome to the Center for the Study of Family Violence at Northern Illinois University. The center's mission is to promote research on family violence, sexual assault, trauma and related topics. The center's 21,000 square foot facility boasts a range of meeting and training spaces, including a 95-seat auditorium. The center's children's room provides a safe and stimulating place for children to play while their parents participate in center sponsored research. The center also houses a spacious apartment designed to promote extended exchanges with international scholars and students. Specialized laboratory facilities include a behavioral observation lab which equipped with state-of-the-art systems for observing interactions and recording ambulatory readings of physiological measures. The center also houses two separate physiology labs complete with sound shields and chambers and systems designed to record physiological data such as heart rate, skin conductance and brain activity.

A number of additional rooms are designed to provide quiet, controlled settings for data collection. Meeting and office spaces within the center are made available to students and faculty working on research that relates to the center's mission. A break room and reading lounges are conveniently located to promote comfort and collaboration. To learn more about the center's research and training opportunities, please visit our web page on the Northern Illinois University website.

I would like to talk a little about the funding that supports the center. I put together a couple of tables to give you an idea of the funded projects that have occurred within the center over the last 20 years, which have been broken into four categories: federal, state, military and other. Instead of talking about each individual project there, I would like to just highlight the relevance and the importance of federal and each of the other funding categories for the center's operations. Federal funds are obviously generative with respect to the generation of rigorous research and scholarly products, such as peer review publications, which are central to our center's mission. Federal awards typically also afford us numerous high quality opportunities to engage students in the research process, which is very important to us. One aspect of federal funding we looked into earlier that is not apparent from the chart is the

typically very long lead times on these projects. Federal funding does not turn on a dime, so it takes long and intense efforts to maintain sustained funding in this area.

Looking at our state funding here, depicted are 15 different grants and contracts totaling over \$15 million in state grant awards. The largest chunk of that, \$12 million, is accounted for by the bottom bar in Illinois, the Integrated Assessment Program funded by the Department of Children and Family Services. The PI on that is Dr. Greg Waas, who is one of our center associates. The other \$3 million is accounted for by the remaining green bars. For the center, state funding has its ups and its downs. On the up side, state funding allows our center associates to remain involved in regional activities to stay connected with the real world activities of people that we are exploring in research – working with victims, working with families, talking with perpetrators. They also provide us with opportunities connected with agencies that we can use as collaborators when we go to write our federal grants. Or we can use these opportunities to work with people here in the state to demonstrate that we have the ability to get access to the populations we refer to in our federal proposals. Another plus to state funded projects is that the up-front time for development is typically less than you find in federal projects, plus the turnaround time is often far quicker on the state funded projects as well. On the down side, state funded projects are not as generative with respect to scholarship, the evaluation designs in these projects tend to be less rigorous in obtaining permissions, and published findings from state funded work can be very difficult. So, although state funded projects have their ups and downs, we value them greatly in terms of maintaining stability of funding across the years and promoting stability in the center's operations.

The military funding depicted here represents over 40 grants and contracts totaling over \$6 million in military awards. Joel, the center director, has been a much sought after consultant by the military, including the various branches of the Department of Defense – the Navy, Air Force, Marines and he has done some work with the Army. The scope of these projects has ranged all the way from just providing consultation and evaluation services to designing rigorous empirical studies that are of interest to the military. As with the state contracts, military contracts tend to have less up-front investment in terms of the proposal development, and the turnaround time for funding decisions there can be variable depending on the mechanism of the decision. If it is out for peer review, it takes much longer; if it simply has to go up the chain of command for approval, that can be done much more quickly.

The final area of funding I would like to point out is other funding. These are smaller grants and contracts we engage in with local entities or regional entities. They are like state funding in that they allow us to get access to potential collaborators, populations of interest to some of our other areas of research. The bars depicted here present about a half million dollars in other support from various regional and local entities.

While the center started out as sort of a one-man operation, it currently hosts 14 faculty who are recognized as associates. For associate status, we ask that faculty have engaged in some level of research that falls within the purview of the center's mission. Our associates include faculty from a number of different disciplines. For some of the center faculty, the work they do at the center is actually core to their primary research interest. So, a PTSD (Post-Traumatic Stress Disorder) researcher would be doing their new PTSD research in conjunction with the center and we would be supporting that with various resources, consultation on grants and other such activities. For other associates of the center, the stretch has been a little greater and the ideas here are that we have brought together people from very different domains to focus their expertise on family violence and sexual assault.

The center also values collaboration at an international level. Within our center, you saw that we have an apartment which we designed specifically to promote international exchanges. We have hosted students and scholars from a number of different countries. The woman on the sofa in this video is actually a graduate student from Brazil and her husband is there in the chair. She spent five months with us translating Joel's child abuse potential inventory into Portuguese and investigating its application in Brazil.

Much of the research going on at the center hosts a number of different research training opportunities, both for graduate students and for undergraduate students. Graduate student research training opportunities include research assistantships, all are not funded projects. We also have a special program that is sponsored jointly by the center of the College of Liberal Arts and Sciences as well as the Psychology Department, which we refer to as the Family Violence Scholarships. We use these scholarships to afford a select few students to focus all of their time on their primary lines of research. These opportunities have made some of our best and brightest students competitive as they venture into the workforce.

In terms of our undergraduate research training opportunities, a number of our funded grants actually emphasize the importance of incorporating undergraduates into research, so these grants have created special opportunities for students to engage in research. With faculty at the center, we have also enjoyed reaching out and working with the Office of Student Engagement and Experiential Learning to host some of their training opportunities, including the Research Rookies Program and other graduate research assistantships.

In looking at some of our outcomes, from the beginning we said that a strong publication record was paramount to the center's wellbeing. In a review conducted by Gordon, Maly and Holmes in 1999, NIU ranked first nationally with respect to experimental research publication in the three family violence journals. More recently, we have taken a look at our center faculty's productivity and compared that to the productivity of faculty at other similar centers around the region. One was a UI center and another was a UIC center, and we found that our center faculty matched or exceeded the productivity of faculty at similar centers with respect to the overall rate of publication, publication in peer review journals and generation of technical reports.

Our external funding continues to run strong. As Lisa noted, our center was ranked first among interdisciplinary units with respect to external funding awards in FY13 as well as FY12 and FY11. The overall ratio of external funding to internal support for the period from 2007 to 2011 was 17.5 to 1.

Moving to some real world implications of our work, I would like to talk about some of the public health significance of some of the outcomes of the work going on at the center. As I mentioned before, the child abuse potential inventory has revolutionized the way that people assess and screen for the potential for child physical abuse. There have been over 1,000 published studies on using the cap and those have appeared worldwide.

Joel has also been working on a spousal physical abuse scale. This is a screening tool to assess and predict future injury among victims of partner violence. Joel has done this in conjunction with the Air Force, and they are looking to release the scale worldwide at all of their military installations.

I have been working over the years on a program that we refer to as the Volatile Parenting Program. It was developed as a small group intervention to reduce risk for child physical abuse from parents. It has been the subject of two randomized clinical trials and is showing promise. Another of our colleagues, Holly Orcutt, has been working on research that seeks to identify genetic biomarkers for PTSD. This research will prove important in terms of identifying those who are most likely to develop PTSD after traumatic exposure, as well as basic drug interventions that might be useful in reducing risk for PTSD. Another of our colleagues, Michelle Lilly, has been researching Post-Traumatic Stress Disorder and its development among 911 telecommunicators, demonstrating that exposure to traumatic events, such as that experienced by 911 dispatchers, may increase the risk for PTSD.

Finally, in terms of our public health significance, we have been doing some work under the direction of Dr. Greg Waas with the Integrated Assessment Program. This is a statewide program, one tenth of which is administered through NIU. Through our partnership with Dr. Waas, we have been developing an information management system to track the program performance of the Integrated Assessment workers, and this work is now being emulated across the state in the other Integrated Assessment Programs. We have also been exploring the use of the child abuse potential inventory as a tool for

assessing parental risk for the integrated assessment cases. For future directions, we would like to continue to expand opportunities for collaboration, to expand our federally funded research opportunities, to maintain involvement in military funded research opportunities, to increase opportunities for student involvement in research and, of course, we would also like to continue to obtain resources to upgrade and replace equipment in our facility.

We accomplished what we wanted today, Chair Murer said, which was to make sure that we are touching upon research and technology transfer in a pragmatic way. How it touches NIU and what the opportunities are. The drilldown on grants shows the complexity of the process, but it is not daunting and overwhelming, but just what we do. I thought also the orientation to this center was outstanding because we think of research so often as the hard sciences, but to talk about the extraordinary work that has been done in collaborations in psychology, social sciences and foreign languages. When you talked about having a national impact, what you have done for this center is given NIU a global impact and an international platform. We are going to follow up with the accountability portion of the agenda at our next meeting.

c. Accountability

This item was deferred until the next meeting.

NEXT MEETING DATE

The next meeting of the Ad Hoc Committee on Sponsored Research Activity and Technology Transfer is scheduled for Tuesday, May 27, in Naperville.*

ADJOURNMENT

Chair Murer asked for a motion to adjourn. Trustee Butler so moved, seconded by Trustee Boey. The meeting was adjourned at 10:30 a.m.

Respectfully submitted,

Sharon M. Banks-Wilkins
Recording Secretary

**This meeting was later rescheduled for 1:30 p.m., Thursday, May 29, on the DeKalb campus.*

In compliance with Illinois Open Meetings Act 5 ILCS 120/1, et seq, a verbatim record of all Northern Illinois University Board of Trustees meetings is maintained by the Board Recording Secretary and is available for review upon request. The minutes contained herein represent a true and accurate summary of the Board proceedings.