

RESEARCH STRATEGIC PLAN FINAL WORKING GROUP REPORT ON **CORPORATE RELATIONS**

February 15, 2017

Corporate Relations Working Group Members:

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Goals

The broad goal of this group was to examine the current range of industrial interactions at UNM and propose new ways in which UNM can dramatically increase corporate-sponsored research. The group focused specifically on enhancing sponsored research agreements and gifts directly from corporate partners. It did *not* focus on enhancing SBIR/STTR funding, IP licensing and start-up formation, industrial service agreements, nor clinical trial agreements. Means to achieve the broad goal included: (i) reviewing academic corporate relations initiatives nationally and at selected exemplar institutions; (ii) identifying and assessing current mechanisms by which UNM is successful in securing industrially funded research, as well as barriers to such success; and (iii) reviewing institutional infrastructure at UNM (specifically OVPR, STC.UNM, UNM Foundation, OSP and OUC) for effectively engaging with corporate sponsors of research and identify best practices for approaching corporations, intellectual property agreements, publication agreements and contracting.

Methods

The members of the Corporate Relations Working Group used a variety of methods to collect relevant data. Group members documented current activity in corporate-funded research at UNM and reviewed 13 different articles, papers, and other documents related to corporate relations in universities (see Appendix A). Group members identified seven universities that UNM aspires to emulate and reviewed their corporate relations websites to gather pertinent information (see Appendix B). Members also identified six universities, some of which were included in the first list of seven universities, and interviewed faculty members or administrators at those universities regarding their corporate relations offices and their corporate-engagement procedures (see Appendix C). An interview protocol was developed and used for consistency of questions and information being solicited (see Appendix D). Finally, the members conducted an analysis of strengths, weakness, opportunities, and threats (SWOT) facing enhancement of corporate-funded research at UNM.

Findings

Current and historical corporate funded research at UNM Main Campus.

Investigators at UNM have secured funding through, and executed research in, a range of types of corporate interactions. Funding mechanisms have included, for example, (i) direct sponsored research agreements (SRAs), (ii) industry sponsored research consortia (memberships) in particular subject areas (iii) SBIR and STTR partnerships with corporations for joint federal funding in which UNM is a subcontractor, (iv) other federally funded projects in which UNM is a subcontractor to larger corporations, (v) direct contract for service agreements, and (vi) research performed through patent royalties, gifts and endowments. As many of the national laboratories are managed by private corporations, research contracts from national laboratories can also be considered a form of corporate-funded research (for more details see report of Working Group on Federal and State Government Relations).

In total, research expenditures from corporate sources (including the national labs) over the last five years at UNM have varied from a low of \$8.3M to a high of \$10.2M (see

Figure 1 below). During FY2016, this represented 6.9% of the overall research expenditures. The dominant source of these funds to UNM is from federal agencies, which UNM receives through subcontracts either from the national labs, small corporations (e.g., SBIR/STTR programs) or large corporations (e.g., defense contractors). Direct funding from private industry is a relative minor source, with expenditures ranging from \$1.3M to a high of \$3.2M. Appendix F provides a list of all corporate-sponsored sources for FY 2016.

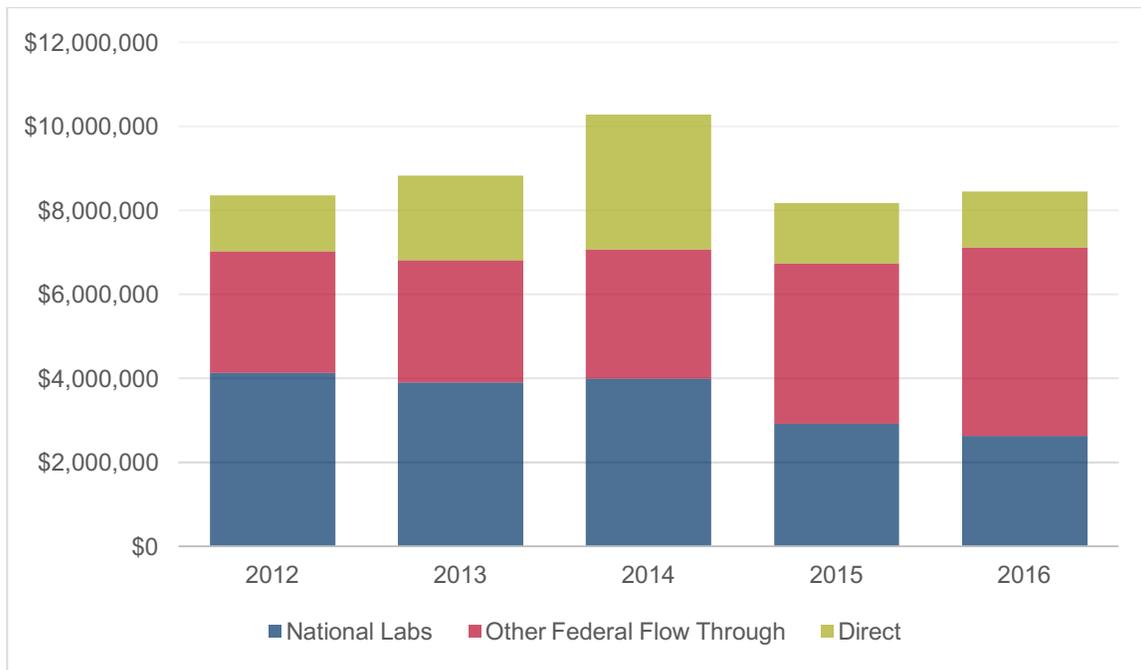


Figure 1: Annual Research Expenditures from Corporate Sources

Findings of the Environmental Scan

While it is currently a relatively minor funding source for UNM, industry plays a substantial role in research in the US. Industry funding for research in constant dollars increased by more than 300% during the period 1992-2012 while the other sources have remained relatively flat (see Environmental Scan, Fig. 5, p. 19). The data provided in the Environmental Scan suggest that research funding from industry is more focused on applied research than on basic research. Industry-sponsored research focused on development appears centered in specific areas that are advantageous to industry and often change rapidly. For example, a 2012 news article reported that in 2008, 70% of industry-sponsored research in the US was from the manufacturing sector. The National Science Board's 2016 Science and Engineering Indicators report found that manufacturing now accounts for 84% of total industry-sponsored research. Another recent news article reported that almost 75% of all clinical trials are funded by industry. This suggests universities that have specializations matching industry needs are better positioned to receive industry funding.

Interviews

As mentioned above the members of the Working Group conducted interviews with individuals at six selected universities regarding their corporation relations activities. Summaries of interviews are available in the Appendix. The key findings and action plan below have been informed by findings from the interviews.

SWOT Analysis

Strengths

A major strength is our research faculty and research centers that perform a substantial amount of funded work with corporations. As mentioned above, these interactions take place through several mechanisms. STC.UNM and the UNM Foundation provide routine conduits for research-active faculty members to gain access to corporations, and Innovate NM is an emerging venue for routine interactions between faculty and industrial personnel interested in developing collaborations. Moreover, the diversity of our student body and workforce is also an important strength, as is our proximity to and relationships with the federal laboratories.

Weaknesses

The university does not currently have an office or individual solely dedicated to developing relationships with corporations. This limits UNM's ability to attract corporate sponsors because the industrial base of New Mexico is relatively small compared to those of our peer institutions, and so reliance on chance encounters between investigators and potential corporate sponsors is of limited effectiveness. Another weakness is that processes and services for funded research are largely focused on working with federal government and UNM infrastructural research resources in general have not been well developed for working with corporations. There are no clear guidelines for developing contracts and grants with corporations; nor is there a grants and contract administrator familiar with, or dedicated to, executing contracts with corporations. This represents a barrier and the progress of interactions with potential corporate partners and contract negotiations often stall before fully executed.

Opportunities

There is substantial untapped potential for the OVPR to work more effectively with STC.UNM and the UNM Foundation, as well as OSP, OUC and Career Services to coordinate, streamline and synergize efforts. Together, these offices can provide a facile, full service interface between investigators and potential corporate funders in a manner that is efficient and optimally responsive. Our alumni in corporations across the country represent a substantial opportunity that can be systematically engaged.

Threats

The data presented herein suggest that other universities (both some of UNM's peer institutions and "exemplar" institutions) are attracting much higher levels of corporate-funded research. This may be because New Mexico has a relatively small industrial base and UNM lacks human resources dedicated toward the task of generating and maintaining corporate relations. The relatively low current level of industrial research funding compared to other sources (e.g., federal) also suggests that investment of new

human resources in corporate relations may not be as profitable as investment in other areas. Finally, a significant threat associated with SBIR and STTR sub-awards has been that default on such contracts by small businesses can result in so-called unreimbursed costs (“bad debt”) that the OVPR must cover.

Key takeaways

The key findings and takeaways from the Working Group’s deliberations are as follows:

- There is substantial and growing opportunity nationwide to tap corporations to fund university research and UNM can emulate at least some of the mechanisms that other top universities are using successfully.
- Currently, corporate funding is a small piece of UNM’s sponsored research pie, but it is one with significant growth potential. Given the limited resources available for investment in research infrastructure, it is imperative that efficiencies be identified in current operations that can be dedicated to growing corporate-sponsored research.
- UNM already has resources in place that routinely interact successfully with corporations to result in sponsored research and thus enhance UNM’s research mission. These include STC.UNM, the UNM Foundation and a variety of university wide and college-based research centers. Successful partnerships and coordination between these organizations can result in synergies leading to enhanced corporate engagement and suitable incentives can encourage cooperation and result in win-win opportunities.
- In the past, OVPR has been more proactive in engaging with corporations, including maintaining a web infrastructure which targeted industries that might be interested in - “Doing Business with UNM.” Such a web portal should be reinstated and linked to all relevant UNM organizations. It should go beyond the previous version (which provided links to important forms, e.g., NDAs, and policies) and provide links to all units that engage corporations across the UNM campus. It can also provide, in a user-friendly, easily searchable manner, a guide to particular expertise of faculty members that are likely to attract industry business. For example, profiles of faculty members with particular expertise in manufacturing could be one part of such an “Experts Registry.”
- Currently OSP (Pre-award and Post-award) does not have personnel that are tasked with engaging, negotiating and executing agreements, grants and contracts with corporations. Instead, their personnel are generally assigned to particular university units and are expected to handle all sponsored research for their assigned units. Because the majority of OSP’s business is with governmental funding agencies, personnel tend to focus on building expertise in working with these sources. OSP could enhance UNM’s ability to work with corporate sponsors of research by making sure at least some personnel develop facility and expertise in engaging businesses and negotiating corporate contracts in a streamlined fashion. These “corporate-interaction-trained” personnel should be available to all units as the need arises.
- UNM should marshal and coordinate all the above-mentioned units and resources to optimize, synergize and maximize corporate-funding of research.

Best practices can be learned from the interviews and data provided in the Appendices.

Action Plan

The above findings suggest that UNM embark on the following three strategic objectives and their associated tactics to achieve the goal of dramatically increasing corporate-sponsored research.

Objective 1: Establish a Cross-Campus Roundtable for Corporate-Sponsored Research.

Task 1.A. Convene a Roundtable (i) to optimize current campus infrastructure to maximize effectiveness of corporate relations and corporate-sponsored research, and (ii) to provide a regular forum for informational exchange regarding corporate relations. The Roundtable should include representation from OVPR, STC, UNM Foundation, OUC, OSP (pre-award and post-award), Career Services and ADRs for relevant colleges (e.g., SOE and A&S). The Roundtable will have a formal charge and regular meetings (e.g., at minimum monthly) as well as a listserv for communications as needed between meetings.

Metrics: For continuation, establishment of the Roundtable should increase corporate-sponsored research 10% per year, on average, over the next 4 years.

Timeline: The Roundtable will be established no later than July 1, 2017 and continue operations at least through June 30, 2018. Performance will be evaluated by June 30, 2018 by an Executive Board comprised of the leadership of the participating units.

Task 1.B. The Roundtable will transition into a formal Internal Advisory Committee (IAC) for a virtual Office of Corporate-Sponsored Research. The virtual Office will help develop and take full advantage of the UNM Web Portal for Corporate-Sponsored Research (see Objective 2). The virtual Office will be led by a Director who will be chosen by the Roundtable.

Metrics: Traffic to the virtual Office will be monitored and analyzed for potential correlations to increases in corporate-sponsored research. Specific functions and components of the virtual office that are particularly effective will be bolstered.

Timeline: The virtual Office will be in place and fully operational by June 30, 2018 and will operate at least through June 30, 2021 (unless funding for a non-virtual Center is secured). Its performance will be evaluated annually by the Executive Board described in Task 1. A.

Task 1.C. Secure funding for dedicated personnel for the Office of Corporate-Sponsored Research. The Roundtable / IAC of the Office of Corporate-Sponsored Research will seek funding (internal and external) to provide staff support for the Office's functions.

Metrics: Proposals and grants for internal and external funding to support the mission of the Roundtable/IAC will be monitored and fostered. These proposals can be from any of the units supporting the Roundtable/IAC.

Timeline: The virtual Office will secure funding for the Director (e.g., a SAC) and two staff positions by June 30, 2020.

Objective 2: Establish a comprehensive UNM Web Portal for Corporate-Sponsored Research

Task A. The Roundtable/IAC will construct a user-friendly, easily searchable web portal that will form the basis of a virtual UNM Office of Corporate-Sponsored Research. The homepage will provide a comprehensive compendium of possible UNM-corporate interactions and provide a means to facilitate the spectrum of such interactions. For each type of interaction, the homepage should provide links to the appropriate, cognizant UNM resources/units (e.g. OSP, STC, UNM Foundation, OUC, OSA). The Portal should also include an updated list of current and past corporate partners, so that such partners (especially big corporations) can gain confidence in UNM as a productive partner.

Metrics: Traffic to the UNM Web Portal will be monitored and analyzed for potential correlations to increases in corporate-sponsored research. Specific functions and components of the virtual office that are particularly effective will be bolstered.

Timeline: The Web Portal will begin as soon as possible and will be fully operational by June 30, 2018 and will operate at least through June 30, 2021. Performance will be evaluated annually by the Executive Board described in Task 1. A.

Task B. Add to the Web Portal easy access to UNM policies (e.g., IP policies, indemnification policies, F&A policies) so that industrial sponsors can have easy access to the basic conditions by which UNM can engage in sponsored research and clear explanations of the reasons for these policies. A closely related part for each type of industrial interaction will be PDFs of the standard versions of the various contracts/forms (e.g. NDAs, SRAs, MTAs) that UNM uses.

Metrics: Traffic and downloads to these parts of the UNM Web Portal will be monitored and analyzed for potential correlations to increases in corporate-sponsored research. Specific functions and components of the virtual office that are particularly effective will be made more prominent on the Portal's homepage.

Timeline: The Web Portal will begin as soon as possible and will be fully operational by June 30, 2018 and will operate at least until June 30, 2021. Performance will be evaluated annually by the Executive Board described in Task 1.A.

Task C. Add to the Web Portal an Experts Registry that will allow prospective industry sponsors to easily gain knowledge about the capabilities of UNM investigators and infrastructure facilities that are of potential benefit to their business mission.

Metrics: Traffic to this part of the UNM Web Portal will be monitored and analyzed for potential correlations to increases in corporate-sponsored research. Participating investigators and infrastructure facilities will be surveyed to obtain their views of the effectiveness of the Experts Registry.

Timeline: Gathering of data from campus constituents will begin on July 1, 2017. A fully functioning Experts Registry will be operational by June 30, 2018 and will operate at least until June 30, 2021. Performance will be evaluated annually by the Executive Board described in Task 1.A.

Objective 3. Establish new model for OSP (Pre-Award and Post-Award) to facilitate Corporate-Sponsored Research.

Task A. The Roundtable/IAC will work with OSP to identify CGAs in Pre-Award that are (or will be trained to become) expert in engaging with industry and negotiating corporate funded research contracts. Depending on increase in demand, 1 or 2 CGAs will be given explicit job duties that allow them to facilitate corporate-funded research across the main campus. These duties will include interfacing with OUC as necessary on complex contract negotiations.

Metrics: Turnaround time for completion of negotiations with corporate research funders will be monitored and correlations with increases in corporate funding rates will be sought.

Timeline: Conversation with OSP management on this task will begin as soon as the Research Strategic Plan is completed. New job duties should be in place by July 1, 2017. New CGA duties will be in place by July 1, 2017 and depending on effectiveness of this tactic, will operate at least through June 30, 2021. Its performance will be evaluated annually by the Executive Board described above.

Metrics: A set of principal investigators who routinely secure corporate-funded research contracts will be chosen as a “focus group” and will be surveyed as to their satisfaction in new processes implemented and their recommendations for further improvements.

Timeline: By June 2018, at least 5 corporate-funded PI’s will be identified and surveyed to determine satisfaction with the new processes implemented and additional information for improvement will be solicited. Recommendations for improvement will be evaluated and implemented as soon as possible.

Task B. The Roundtable/IAC will work with OSP to identify contract fiscal monitors (accountants) in Post-Award who are expert in regulations regarding corporate-sponsored research including fixed price contracts. Depending on increase in demand, 1 or 2 CGAs will be given explicit job duties that allow them to facilitate corporate-funded research across the main campus. These duties will include interfacing with Purchasing, HR and other UNM departments as necessary to implement nonstandard contracts.

Metrics: A set of principal investigators who routinely secure corporate-funded research contracts will be chosen as a “focus group” and will be surveyed as to their satisfaction in new processes implemented and their recommendations for further improvement.

Timeline: Conversation with OSP Management on this task will begin as soon as the RSP is completed. New job duties should be in place by 07/01/2017 and depending on effectiveness of this tactic, will operate at least through

06/30/2021. Its performance will be evaluated annually by the Executive Board described in Task 1.A.

Task C. The Roundtable/IAC will work with OSP (Pre-Award and Post-Award) to minimize and mitigate instances when companies default on payments for services in subcontracts (e.g., in SBIR and STTR Programs). In Pre-Award, such subcontracts can be negotiated to be either fixed price, or so that a minimum amount of the subcontract is provided up-front (e.g., 50%) to minimize the threat of default on the subcontract. In Post-Award, billing for services rendered can be expedited on a monthly basis and, if payment is not made within a specified number of days (e.g., 15 days), performance of the contract can be stopped.

Metrics: A set of principal investigators and contract managers who routinely secure and administer corporate-funded research contracts will be chosen as a “focus group” and will be surveyed as to their satisfaction in new processes implemented and their recommendations for further improvement.

Timeline: Conversation between OVPR and OSP management on this task will begin by July 1, 2017 and new policies will be in place by July 1, 2018.

Depending on effectiveness of this tactic, it will operate at least through June 30, 2021. Its performance will be evaluated annually by the Executive Board described in Task 1. A.

Further Recommendations

New Mexico and UNM’s current economic climate prevents full implementation of all of the action plans considered by the Working Group. As our financial situation improves, the following Objectives should be executed to fully realize the mission of optimizing productive relationships with corporate partners. Another option is to begin a development campaign to identify donors who understand the importance of UNM’s research to the industrial community and who can provide seed or matching funds for the following objectives.

Based on the success of the above plan the UNM should establish a (non-virtual) Office of Corporate-Sponsored Research with permanent staff. This Office will employ staff dedicated to maintaining and strengthening productive relationships with industry as well as working strategically with other stakeholders on campus (e.g., OVPR, STC, UNM Foundation, ISS) to establish new corporate relationships.

Future Directions

None at this time.

Appendices

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Appendix A: List of Articles, Papers and Other Documents

5 Essential Elements of a Successful 21 Century University Corporate Relations Program, August 2011. Network of Academic Corporate Relations Officers.
<http://web.mac.com/nacro/NACRO/Welcome.html>.

Elevating Corporate Relations through Institutional Commitment, July 2016. Network of Academic Corporate Relations Officers. 2015-2016 NACRO Benchmarking Committee Position Paper.

Engagement of Academic Corporate Relations Officers in Centers of Excellence, July 2015. Network of Academic Corporate Relations Officers. NACRO Benchmarking Committee White Paper.

Enhancing Univ. Research thru Corporate Engagement & Collaboration,
https://provost.ku.edu/sites/provost.ku.edu/files/docs/Vitter_NagelMerrill2014Publication.pdf

Guiding Principles for University-Industry Endeavors, April 2006. Report of a Joint Project of the National Council of University Research Administrators and the Industrial Research Institute.

Metrics for a Successful 21 Century Academic Corporate Relations Program, August 2012. Network of Academic Corporate Relations Officers. NACRO Benchmarking Committee White Paper.

Partnering with the professor. *Nature Biotechnology*, October 2012, Vol 30(10) pp944-952.

Principles to Guide Academy-Industry Engagement, American Association of University Professors.

Researcher-Guidebook. 2012. University-Industry Demonstration Partnership. National Academies and Government-University-Industry Research Roundtable.

Researcher-Quick-Guide, Date? University-Industry Demonstration Partnership. National Academies and Government-University-Industry Research Roundtable.

Survey of Sponsored Research Agreements between Private Sector and Higher Education, 2014. Primary Research Group Inc.

University Industry Demonstration Partnership, 2016. Government-University-Industry Research Roundtable, National Academies of Sciences, Engineering and Medicine.

White Paper on Corporate Engagement, December 2010. Research Infrastructure Task Force Report, Kansas State University Foundation Office of Research and Sponsored Programs.

Appendix B: Information on Corporate Relations at 7 Selected Universities from Their Websites

University of California, Irvine

Thomas Antunez, Executive Director of Corporate Relations, University Advancement
<http://www.ucifuture.com/give/corporate-relations-index.php>

School of Engineering has a Corporate Relations Office

Shana Chance, Director of Corporate Relations, schance@uci.edu, (949) 824-3977

Business and industry partners play a significant role in UC Irvine success. Corporations provide financial resources for everything from scholarships faculty and student research to facility improvements. In addition, corporations provide opportunities for students and faculty through post-graduate employment, internships, faculty grants and sponsored research. In return for their support, corporations gain many competitive advantages, such as these:

Strengthening ties to one of the top nationally ranked public research universities

Supporting and accessing pertinent research and technology

Working with students and faculty

Playing a lead role in the Orange Counties economic development

Gaining a head start in attracting UC Irvine graduates to their workforce.

The Corporate Relations staff serves as the liaison between UC Irvine and corporate leaders. We become a point of entry into the university community, helping you to identify areas of need and interest; to establish and develop relationships with faculty, researchers, students and staff; and to build partnerships based on mutually beneficial opportunities.

University of Wisconsin

Richelle Martin, JD Assistant Director and Contracts Specialist
<https://research.wisc.edu/projectagreementsip/oip/>

College of Engineering has a Corporate Engagement Office

Justin Hines, corporate relations manager, (608) 262-0578 or jhines3@wisc.edu.

Industry-sponsored research at the University of Wisconsin–Madison comprises an important component of our research portfolio. Of the more than \$1 billion in annually received research funding, business sponsorship accounts for \$34 million. Nevertheless, significant potential for increasing the number and value of industrial partnerships exists. To foster this growth, the university established the Office of Industrial Partnerships (OIP) in 2012. OIP works with companies whose interests range from access to cutting-edge basic research to technology commercialization. OIP provides institutional review and negotiation of agreements supporting these relationships, and serves as a point of contact for UW investigators and industry partners. We offer a flexible and individualized approach to establish industry partnerships while upholding the university’s missions related to education, research, and public service.

OIP is guided by an Advisory Committee that includes UW–Madison faculty and industry representatives and works closely with other campus offices, including the offices of Research and Sponsored Programs, Administrative Legal Services, Corporate Relations, and Research Compliance, as well as the UW–Madison Law School’s Law & Entrepreneurship Clinic and the university’s designated patent management organization, the Wisconsin Alumni Research Foundation (WARF).

OIP also provides a variety of outreach options. Please refer to the Outreach & Events topic page for more information, or to the Find Your OIP Contact page for individual questions.

University of Maryland

Brian Darmody Associate vice president for corporate and foundation relations

<http://www.umaryland.edu/development/corporate-and-foundation-relations>

School of Engineering has a Corporate Relations Office

Associate Director, Corporate & Foundation Relations

3216 Jeong H. Kim Engineering Building

Email: kpalumbo@umd.edu

Phone: (301) 405-2150

Brain Darmody is charged with leading essential university-wide efforts to develop strategic partnerships between the University of Maryland and the corporate and foundation community.

Darmody will steer the efforts to better align UMD's internal resources for corporate partnerships, expand outreach to corporations and foundations across the country, and

magnify UMD's external visibility to provide an integrated 'One Stop Shop' for corporate and foundation connections.

University of Minnesota

Erik Thurman, Vice President

<http://give.umn.edu/giving/cfr/staff>

School of Engineering has a Corporate Relations Staff

Brenna Sonke, Director of Corporate and Foundation Relations
612-625-6874 • sonke@umn.edu

Corporate engagement

The Corporate and Foundation Relations (CFR) team at the University of Minnesota Foundation serve as relationship managers for corporations and manages system-wide partnerships. Working collaboratively with all key stakeholders, CFR aligns University and industry priorities to yield mutually beneficial results.

Because many companies have multiple interests and activities campus- and system-wide, CFR partners with the President's office, Office of Vice President of Research, Provost's office, Sponsored Project Administration, Office of Technology Commercialization, and University Economic Development to provide coordinated industry relationships.

The U of M Foundation's CFR team can help you:

Connect

Match industry interests and needs to University expertise that will help facilitate research, education, outreach, and workforce partnerships.

Connect you with campus-wide talent recruitment resources.

Engage students through K-12 workforce development, mentoring, and internships.

Engage corporate leadership and employees through executive and continuing education and collegiate advisory boards.

Facilitate corporate giving recognition opportunities.

Convene

Plan and execute corporate visits and events.

Advise and coordinate corporate giving opportunities in conjunction with development professionals, deans, and directors.

Link public and private stakeholders interested in partnering in global challenges.

Collaborate

Partner with the following offices at the University of Minnesota.

- Career Services
- Office for Equity and Diversity
- Office for Public Engagement
- Office for Technology and Commercialization
- Office for Economic Development
- Office of the Vice President for Research
- Sponsored Projects Administration

Massachusetts Institute of Technology

Karl Koster, Executive Director, Office of Corporate Relations

<http://web.mit.edu/industry/ocr.html>

MIT's Office of Corporate Relations aids and directs companies interested in pursuing significant, multi-year, multi-disciplinary involvement with the Institute. OCR's expert staff works with MIT senior administration, faculty, and company executives to structure and define individualized alliances that mutually benefit the company and MIT. The result is a holistic industry/university relationship that addresses broad needs and interests, from specific research projects and initiatives, to executive education, technology licensing, and recruitment.

OCR, the organizational parent of the Industrial Liaison Program at MIT, can be instrumental in providing connections to MIT faculty, departments, labs, and centers. It serves companies across the globe and is organized both geographically and by industry. In addition to corporate partners, OCR also helps regional governmental organizations who look to the unique, entrepreneurial MIT/Cambridge environment as they begin to develop their own regional innovation eco-systems.

Stanford University

Kathy Veit, Senior Director

<https://cfr.stanford.edu/>

Services We Provide

Facilitate interactions and manage relationships with a broad range of companies and foundations

Work with school-based development officers to coordinate activities that advance institutional priorities

Research and identify prospective funders

Compile RFPs and disseminate targeted opportunities to relevant schools and departments

Assess a project's funding viability and advise on strategies

Prepare briefings in advance of corporate and foundation visits

Review and provide feedback on letters of inquiry, proposals, and budgets

Assist with applications and awards, including supply institutional information, provide required attachments, and help obtain signatures

Support stewardship efforts, including major recognition opportunities and grant reports

Produce monthly newsletter on philanthropy and foundation news for Stanford community

How to Contact Us

Individual contact information is available under "Staff" and "Related Offices"

Please direct general inquiries to Katherine Kaiser at kmkaiser@Stanford.edu

University of Michigan

<http://bec.umich.edu/about/bec-overview/>

Nell Dority, Senior Director, ndority@umich.edu

Engineering has a Corporate and Governmental Relations Staff

John McLaughlin, Director, Corporate and Foundation Relations

jmmclaug@umich.edu, (734) 936-2106

The corporate engagement office reports to the VP for Research and VP for Development (Fundraising). In addition to the main office staff there are corporate engagement staff in the units. Engineering - 3 corporate staff, Business School - 1 corporate person and Health System has 3. These staff members do not report directly to the corporate engagement office, they report to their respective Deans - but they have month meetings to discuss who is working with what companies and how to best leverage relationships.

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Appendix C: List of Interviews of Faculty Members and Administrators At Six Selected Universities

1. University of California – Davis. Dushyant Pathak, Ph.D., MBA, Associate Vice Chancellor Technology Management & Corporate Relations and Executive Director, Venture Catalyst.

UC Davis campus has a strong foundational IP & Licensing system in place with over 3,000 active contracts currently under management. This has generated over \$140M in gross licensing revenue and executed 953 licenses. The campus has received 2,284 invention disclosures and filed over 1,500 U.S. patents applications. Over 375 U.S. patents have been granted since 2004.

Additionally, UC Davis has a Venture Catalyst unit which works closely with other campus units. Venture Catalyst is catalyzing the translation of University research and technology into the marketplace by driving the successful development of new ventures based on UC Davis intellectual property. Two key elements of this mission are: 1. Direct support of campus entrepreneurs developing university technology, and 2. Effective collaboration with internal & external stakeholders & resources. This has resulted in UC Davis launching 79 companies, of which over 60% still active. UC Davis startups have raised over \$160 million in investment capital and these startups have created over 220 jobs.

2. University of Maryland, College Park. Steven Anlage, Director, Center for Nanophysics and Advanced Materials Physics Department and Faculty Affiliate of the Department of Electrical and Computer Engineering and Member of the Maryland NanoCenter, University of Maryland.

At the University of Maryland (UMD), working with industry is a pretty smooth, straightforward process. It simply works. The University is aggressive about marketing IP. However, they will only support avenues that they feel will bring in a lot of money.

Non-Disclosure Agreements take a long time because it is two groups of busy people trying working on the agreement. Average time is approximately 3 months. Contracts are typically done through OTC (Office of Technology Commercialization). If contracts are done via the Foundation grant, overhead is free, which basically means you cut out OTC and the University. Many companies do not want to pay overhead to the University. It is recommended that the University let the companies get the IP in return for stock in the company.

UMD does not have a person that specializes with industrial contracts. Each Department has their own dedicated pre-award person and they handle all types of grants and contracts. OTC handles IP negotiations exclusively with companies, the pre-

award does not get involved. And it typically takes an inordinate amount time to negotiate.

At UMD, the Foundation is used to bring industry fund, but they do not actively help researchers. They tend to focus on philanthropy, but if researchers can steer industry to go through the Foundation they are happy to facilitate.

3. University of Michigan, Ann Arbor. Mark Kushner, Director of the Computational Plasma Science and Engineering Group (CPSEG), [Department of Electrical and Computer Engineering](#), and Director of [MIPSE](#) (Michigan Institute for Plasma Science and Engineering) and of the [DOE Plasma Science Center](#).

At the University of Michigan (UM) in the beginning, Intellectual Property agreements were always a stumbling block. The University has become much more reasonable in developing the IP agreements. In the past the University wanted 100% IP if work done on campus. Now the UM seeks middle ground with companies. However, UM still insists on filing patent and maintains 100% of the patent rights. However, UM will give exclusive fee-free use of IP to the company.

Non-Disclosure Agreements are almost instantaneous. Companies send a 2-way NDA. And they are almost never renegotiated. This is a 2-step process. We need to be able to talk before we decide to work on a proposal together. With research proposals, if our IP staff are able to respond quickly IP's would typically go through 3-4 iterations, which take 4-6 weeks. Also, there are dedicated staff in pre-award that focus on industry contracts.

The UM Foundation focuses solely on Philanthropy. That foundations position is that connecting industry with researchers would violate tax rules for Foundation.

4. University of Minnesota. Rick Huebsch, Office for Technology Commercialization

The University of Minnesota interviewed industry representative and faculty to determine how to improve industry relations and contact negotiations. Both industry and faculty recommend that the university need to make it easier to do business with each other by eliminating protracted negotiations about IP terms and eliminating uncertainty in future financial obligations, and by eliminating confusion through more and better information online. Industry wanted exclusive rights to the IP by eliminating concerns that competitors will license the IP that results from research company funded. Industry also wanted the university to make it easier to evaluate and license IP by minimizing financial risks for licensing unproven technologies.

Additionally, faculty wanted more marketing of more of their technologies, instead of focus on only direct marketing a few technologies. They also wanted greater use of

online methods and help with transfer of copyrighted IP, which they viewed as different from classic patent licensing.

The resulted in the creating of “MN-IP Create” for new IP’s via sponsored research, with 3 options: 1. remove IP and financial uncertainty that often surrounds industry funded research projects in a university setting, 2. Created for those sponsors who do not wish to pay an upfront fee and wish to await creation of IP before negotiating terms – with a 6 month exclusive option period, and 3. For those sponsors who simply need freedom-to-operate and want no future royalty commitments – with a 6 month exclusive option period.

This resulted in sponsored research commitments growing from \$2.6M to \$10.8 over a five-year period. Invention disclosures, new licenses, Patent filings and patent issued as well as IP agreements and new startups grew dramatically over the same five-year period.

From Conversation with Jay Schrankler, Executive Director, Office of Technology Commercialization, University of Minnesota

UMN has completed a total of 261 agreements under the program, 81 of which were completed in the last fiscal year.

Of the various options, Option A has 63 agreements, Option B has 188 agreements, and Option C, which is new, has 1 agreement.

25% of the companies pick Option A, which is the pre-paid exclusive license option (10% of cost of sponsored research or \$15K, whichever is greater).

Of the agreements entered into since FY2012, UMN has entered into 9 Master Research Agreements. A total of 159 companies entered into the 261 agreements. Sixty-two of the companies entered into agreements in the last FY.

Over the past 4 years, \$32.9 million has been secured from industry research; in the past FY the amount was \$12.2 million.

As a result of MN-IP Create, the Office of Technology Commercialization has received \$1.6 million in option fees over the past 4 years related to MN-IP Create. This has mostly been from revenues from Option A (10% of research funding amount).

Jay was not a fan of adding Option C into the mix, a royalty-free nonexclusive license, for an upfront payment of 10% of the sponsored research cost, or \$10K, whichever is greater. He thinks it will be a deterrent for other companies to take a license. He is planning to try some innovative techniques to license other companies.

5. University of Wisconsin, Madison. John Booske, Duane H. and Dorothy M. Bluemke Professor, Vilas Distinguished Achievement Professor, Department of

Electrical and Computer Engineering and Richelle Martin, JD, Assistant Director and Contracts Specialist.

University of Wisconsin has a NDA template it ideally takes 3-4 days to complete. The slowest part of the process is the administrative side (WSPR – the Wisconsin version of Cayuse). This can add 1-2 weeks of delay for everyone to submit their approval.

Research agreements take a week or two if the company starts with the Wisconsin research agreement template. The NDA template is on their website and staff are working to get a research template on their website.

Wisconsin negotiates approximately 2000 agreements with industry annually. If they are approached by a company with whom they have had an agreement previously then they go back and use the previously negotiated agreement. They also make sure that the person on the Wisconsin side who negotiated that earlier agreement is the one who negotiates the new one.

When it comes to Intellectual Property, the university bases the IP on inventorship and US patent law. They offer exclusive licensing options to industry in cases where IP is within Wisconsin. Negotiations take longer when you deal with large companies. Subcontracts from industry (say where the prime contract might be from government) take longer because of the flow through requirements.

Below is the url that faculty point industry to for the templates:

<https://research.wisc.edu/projectagreementsip/agreements/>

Data on research at Wisconsin can be found at this url: <https://www.rsp.wisc.edu/>

6. Stanford University. Marty Fejer - Department of Applied Physics, Stanford University.

At Stanford University (SU) there are many ways to structure the relationship thru sponsored research, gift money, industrial affiliates, and large scale centers. All contracts are negotiated by the Office of Sponsored Research (OSR). However, the Office of Technology Licensing (OTL) is involved in corporate agreements and provides the dedicated experience with industry needs and capabilities that is essential for coming to an agreement.

Soliciting philanthropic money is an industry at Stanford. In one year Stanford had in excess of \$4B in donations. The Development office also handles foundations that have limited competitions for sponsored research funds, and seeks out additional opportunities for nonprofit sponsored research.

Stanford has had multiple experiences with industry consortia supporting specific research areas. A typical arrangement was for industry to pay a membership fee of ~\$200K/year into a consortium. In return for membership, industry got reports, preprints,

notice of IP, on-site meetings and interactions with students and faculty. All of the center members had equal access to the IP generated from the sponsored research. Nonmember companies were offered less attractive IP terms.

DRAFT

Appendix D: Interview Protocol

Interview Protocol

The University of New Mexico is undertaking the development of a research strategic plan. One important component of the strategic plan is to determine relationships that exist between university researchers and corporations. I would like to ask you several questions about such relationships and how they are developed on your campus.

What is your experience in working with industry?

How long does it take on your campus to negotiate an NDA with industry? A contract with industry?

Operationally, how does it work? Who is responsible for the negotiation; is the same group responsible for both federal grants/contracts and industry interactions? Is there a specific person/group responsible for industry interactions?

How long does it take to negotiate to an IP agreement? Does your sponsored projects office handle this or do you have a separate commercialization entity?

How well does the university Foundation on your campus work with researchers?

Does the Foundation identify corporate research opportunities? Or do they focus solely on philanthropy?

What additional comments do you have?

Do you have any questions for me?

Thank you for your time. The information you have provided will be very helpful as we move forward in developing a strategic plan.

Appendix E: 2016 Corporations and Research Expenditures (UNM Main Campus)

Corporation	Federal Expenditures
Applied Technology Associates	109,948.45
ASR Corporation	24,158.68
Atmospheric & Space Technology Research Associates, LLC	96,538.15
BAE Systems	159,546.77
Ballard Power Systems Inc.	-
Battelle Memorial Institute	558,658.17
Bechtel Marino Propulsion Corporation	23,432.22
Bluecom Systems and Consulting LLC	39,500.64
Brookhaven Science Associates LLC	172,633.34
Buecher Biological Consulting	6,210.09
Centrillion Biosciences Inc	52,763.13
Ceramatec, Inc.	55,224.90
CFD Research Corporation	37,219.67
Charles River Analytics, Inc.	-
GATR Technologies, Inc.	30,710.97
GE Global Research	106,113.81
Glacier Technical Solutions, LLC	61,809.07
Hexpoint Technologies	153,091.29
High Performance Technologies Inc	30,362.74
Higher Performance Technologies Inc	72,477.56
Honeywell Corporation	302,218.12
HRL Laboratories, LLC	162,653.31
HyperV Technologies Corp	60,474.49
International Business Machines Corporation	1,398.84
J.T. McGraw and Associates, LLC	35,940.51
John Tiller Software	4,017.55
K&A Wireless LLC	22,423.77

Klein Buendel Inc	80,616.49
Lawrence Livermore National Laboratory	131,250.21
Leidos Inc	-
Lenzner Research LLC	37,000.00
Los Alamos National Laboratory	571,083.95
Los Alamos National Security, LLC	642,462.71
Modus Operandi, Inc.	53,380.34
North Pacific Research Board	12,691.90
North Wind Services, LLC	(3,747.10)
Northrop Grumman Corporation	208,078.63
ODMR Technologies, Inc	50,690.96
OptumHealth New Mexico	2,259.91
Proton OnSite	103,994.84
Redondo Optics Inc	47,714.25
Sandia National Laboratories	1,294,454.86
Scientific Simulation Systems, INC	57,130.61
Sienna Technologies Inc	34,856.67
Silicon Space Technology Corp	36,908.95
Southwest Sciences	266,082.03
Tanner Research Inc.	35,322.61
Tau Technologies LLC	3,413.56
The Cadmus Group, Inc.	358,511.35
Thermo Dynamic Films	457,975.61
UT-Battelle LLC	63,830.19
VisionQuest Biomedical, LLC	21,089.30
Wyle Laboratories, Inc.	140,206.50
XL Scientific, LLC	23,034.98
Total Federal Expenditures	\$7,109,820.55

Corporation	Non-Federal Expenditures
American Educational Research Association	117.28
AquaGuidance Inc.	1,854.10
Buecher Biological Consulting	166.27
Cray, Inc.	269,252.48
ElectroSeq LLC	18,558.70
EPCO Holdings	621,744.04
Esparza	23,128.88
Global Hydrologic Solutions, LLC	7,726.58
GMA Hydrology, Inc	28.90
Gulf Coast Mining Group, LLC	1,288.08
HRL Compliance Solutions Inc	33,524.88
MillerCoors, LLC	3,785.42
Murphy Exploration Production Company-USA	3,643.98
National Agricultural Genotyping Center	9,378.13
Oncothyreon Inc.	246,036.83
Raytheon	1.73
Sandia National Laboratories	28,552.65
Southern Nuclear Operating Company, Inc.	1,999.52
Sprint Nextel Corp	15,630.90
T&E, Inc.	443.49
Thirteen	8,500.00
Vision Maker Media Inc	-
VIZZIA Technologies	20,015.96
Welltec, LLC	14,999.67
Total Non-Federal Expenditures	\$1,330,378.47

2016 Grand Total of Federal and Non-Federal Expenditures

\$8,440,199.02