

Major factors contributing to stagnant corporate sponsored research at UW-Madison

This is a summary of the opinions of the staff at the Office of Corporate Relations and is not a comprehensive or objective list of the issues that have contributed to a situation where UW-Madison ranks highly in overall research funding, but around 37th in corporate sponsored research.

Perceived lack of top administration support for sponsored research

I am not aware of any directive or statement from either the Chancellor or VCRGE to increase focus on corporate sponsored research at UW-Madison. Presidents and Chancellors at other universities have been publically outspoken about increasing their sponsored research. For example, 3 years ago, President Daniels at Purdue announced a goal of doubling sponsored research in 18 months. In addition to achieving that goal, Purdue recently announced a 5 year, \$50 million research deal with Lilly. Purdue, which does not have a medical school, is receiving an amount equivalent to almost one third of UW total annual sponsored research funding from one pharmaceutical company. They have a long-standing relationship with Lilly and it is a local company, but that simply reinforces the importance of making sponsored research a priority as part of an overall relationship. Before accounting for the impact of the Lilly deal, Purdue (NSF 2015 data) had \$42 million in business research expenditures, more than 7% of their total research expenditures (\$558 million). Business sponsored research expenditures are 2% of UW overall research expenditures.

The deans of our major schools/colleges appreciate the importance of sponsored research. They have expressed frustration at what they perceive to be the inflexibility of the VCRGE office as well as their lack of access to the VCRGE to discuss these issues.

Contributing to the perception:

- Lack of sufficient experienced staff in OIP, leading to backlogs of as many as 500 contracts earlier this year
- Being dismissive of company feedback on the difficulty of working with UW-Madison: "Companies tell every university they are the worst"
- Resistance to learning from other top universities approaches and dismissing their reported successes
- Lack of clarity about our process and rules. "It depends" is the most frequent, but unsatisfactory answer to the question "What are the rules for engaging with UW-Madison?"

In the past, OIP has claimed they finalize over 90% of the contracts they work on. The relevant question is how many companies walk away before they even start negotiating a contract.

Faculty members in at least one department tell companies to gift money to their labs rather than sponsoring research in order to reduce complexity, get started faster (and save overhead). The gifts help to fund their labs, give graduate students experience with real world problems and provide a link between the students and companies for future employment. We know companies do some level of “gifting” of this sort at other schools as well, so we are not unique, but the university should be interested understanding the magnitude of this practice and developing a clearer/simpler/faster process to avoid this work-around that costs UW overhead dollars.

Well-respected research faculty have taken on projects as individual consulting projects even when their initial interest was in sponsored research because of the complexity and time involved in getting an agreement done. They pay their graduate students out of their consulting fees in order to provide them the work experience.

When I joined the university, I asked about our rules for engaging companies and heard from OIP that WARF was the problem and from WARF that OIP was the problem. The suggestion from both organizations was that OCR should get the other party to define the rules of engagement. Since WARF has withdrawn from the initial contract process, the deans now view the issue as falling within OIP/VCRGE.

Lack of clear entry point for engagement with companies confuses them and contributes to delays in the process

Central corporate relations, WFAA CFR, school/college based CR, employer relations, external relations, OIP, school/college based contracting offices, WARF, etc. confuses companies.

In May, Baxter contacted OIP with a list of research project areas of interest. Baxter wants to collaborate with universities to help them launch 100 new products in the next few years. OIP is the name some other universities use for their OCR-like function, so Baxter assumed they had reached the right office. OCR learned of the inquiry in July when OIP reached out to SMPH for help identifying faculty and SMPH in turn notified OCR. Almost 6 weeks had passed without any response from UW to the company. The delay was frustrating because we work closely with OIP. Why would OIP try to address this request when they had a 500-contract backlog? The answer from OIP was that because the company contacted them first, they thought they should work on it.

OCR was able to make the right connections and arranged the initial Baxter visit to campus within weeks. That meeting resulted in multiple project proposals submitted to Baxter. While it has worked out well, we lost considerable time working with this company due to confusion about entry points. Baxter wants to fund research by the end of this year and I am not hopeful that we will be able to get an agreement in place by then.

Our structure for technology transfer inherently complicates working with UW compared to other universities. The WARF decision to step out of the upfront contract process has made this easier. However, companies still contact WARF to start conversations that do not involve licensing. WARF obviously will continue to function independently, but it presents one more opportunity for companies to be confused.

Here are a few examples of how universities have made it easier for companies to engage.

Penn State launched their Innovation Gateway website last year. It provides companies with a simple way to post RFPs/RFIs and for interested faculty to submit their responses. They have aggressively promoted this site and presented it as a best practice.

<http://news.psu.edu/story/423496/2016/08/30/research/new-innovation-gateway-connects-researchers-industry-funding>

Ohio State reconfigured their corporate relations/economic development functions after realizing that some of their best partner companies had as many as 15 contact points on campus. After talking with several other peer institutions (including UW), they elected to institute a central campus office (Corporate Engagement) modeled after the Business Engagement Office at the University of Michigan. At both Michigan and Ohio State, the central model of business engagement acknowledges that companies want a more centralized and holistic approach when working with universities rather than having to contact separate offices for recruiting, research, philanthropy, executive education, and other engagements. Both Ohio State and Michigan have links to their central business engagement offices under “research” on their university home page. OCR is under public service at the top of the UW-Madison home page. There is a direct link at the bottom of the home page under “business and industry”.

Resistance to campus-wide master service agreements

We are unique among major research universities due to the breadth of disciplines represented on one campus and the subsequent focus on collaborative research through our 200+ research centers and intuitions as well as through informal faculty collaborations. Companies find this breadth and collaborative nature attractive for their research interests. However, we have historically discouraged campus-wide master agreements which would make it easier for companies to work with us by reducing the time spent negotiating terms and increasing the focus on working with faculty to define specific projects and outcomes.

John Deere was initially interested in executing a master agreement with Engineering and now wants to include CALS. This means two separate agreements and complicates the potential opportunity to include researchers from other disciplines who do not have appointments in these two schools.

Ford wanted a campus-wide master agreement for simplicity. We eventually proposed to Ford that we limit the agreement to engineering to get started, but after 3 years, we still do not have an agreement with Ford.

The University of Colorado Boulder (#54 in total research expenditures at \$420M) recently started pursuing master service agreements. Their corporate sponsored research contracts grew 59% to \$24 million in one year. UW-Madison's most recent business sponsored awards were \$36 million and research expenditures (NSF 2015) were \$24 million.

I do not know the rationale for not wanting to execute master agreements, but it appears to be an area worth investigating.

Apparent unwillingness to respond to new models, trends and company feedback

Over the past several years, many companies have started "open innovation challenges" that, in return for a relatively small amount of funding (\$100-200K or so) upfront, give them varying degrees of rights to develop or evaluate an idea. This approach is very common among pharmaceutical companies. The company assumes virtually all the risk to see if the idea is viable. In many cases, especially in pharmaceuticals/therapeutics, the company only receives a right of first refusal to the new drug. There is no upfront discussion about or transfer of IP. The average pharmaceutical product has only a 1: 10,000 chance of reaching the market, so this type of risk-shifting model makes sense—it provides the PI/researcher with immediate funding for their lab and graduate students, shifts the risk to the company, and allows the university to enjoy royalties if the drug is a success.

The deal SMPH struck with Orion through Wi2 is similar to this model. COE explored establishing a non-profit to provide similar research flexibility but eventually went with the MWERC model. WARF is interested in structuring similar deals for some of their technologies and human therapeutics. The university itself does not appear to be willing to move away from past models.

The reasons/themes give for not being more flexible include

- We're not like other universities
- The University of XXX gives away their IP
- Our IP portfolio is worth much more than University of XXX

The head of university contracting at Ford told us directly that they consider all top tier universities to be the same and they will work with whoever is easiest to work with. They can get high quality research from many universities. He also said this is a common belief among other companies. We have a reputation of being difficult to work with, but internally we dismiss that feedback as simply a negotiating tactic.

I am not naïve or unfamiliar with negotiations. I have personally negotiated licensing deals, product line acquisitions and divestments, and distribution agreements. I find the dismissal of company feedback disturbing. It seems that we adopt an adversarial and frankly outdated approach to working with companies.

The Third Way

Before the Third Way roundtable was announced or had been formed, I had a discussion with the VCRGE during which she expressed a desire to define a “third way” of working with companies, meaning an approach that was not at either extreme--giving away IP or negotiating every agreement as though it would result in highly valuable IP and royalties. The background discussions I had with faculty that led to my conversation with the VCRGE were specifically about finding an easier way to develop agreements for projects with little to no likelihood of producing IP. The hope was to create a new process that would result in faster turnaround of these agreements.

I was involved in the roundtable committee that created the final report, but not until work had already begun, so I am not sure of the specific charge given to the group.

The final report <https://research.wisc.edu/wp-content/uploads/sites/2/2016/12/Policies-and-procedures-on-academia-2.pdf> is a collection of the policies and procedures that govern how we work with companies. The report does not include any actions to make it easier for companies to work with UW, how to address processes that might be an impediment to sponsored research, or outline a “third way” when there is little or no likelihood of IP.

The VCRGE office defined the “third way” as a chart in the final report summarizing three different approaches to sponsored research. The chart is helpful in outlining the three approaches and summarizing our standard agreements, but does not represent anything new. On several occasions, I proposed that the committee talk with companies to help define the ideal process, but there was no interest.

At the last meeting of the roundtable committee, I asked how this report would make it easier for companies to do business with UW and no one said a word. My understanding of the purpose of the committee and the work product was clearly not the intention of the effort. Despite discussions about how to get buy-in on campus, who would educate PIs and administer these “rules”, and whether or not the document needed governance approval, no action was taken other than posting the final report on the VCRGE/OIP website. The OIP home page has a summary of the policies in the report, but it is lengthy and not at all business friendly. <https://research.wisc.edu/office-of-industrial-partnerships/policies-procedures-on-academia-industry-research/>

In terms of specific impact, Ford approached UW in 2014 to develop a master agreement for sponsored research. Three years later, we have a “third way” report, but still do not have an agreement with Ford. OCR has not been part of the discussions with Ford, but we heard there is one key issue that if it cannot be resolved, an agreement won’t happen. In the meantime, the major research fund that Ford has made available to its other partner schools is not available to UW. Ford does not intend to open the fund to new partner schools for 5 years. This fund is their main source of research dollars, is now the largest source of research funds at Ford, and will

fund research in the areas of greatest interest to their new CEO. Ford is not recruiting at UW for any full time positions this year and the projects we have entered into in the past with them are no longer in areas of interest or growth at Ford. This may be the right decision for UW, but Ford was able to negotiate agreements with other 20 universities including Michigan, Ohio State, Stanford and MIT, all of whom now have access to this fund.

If the third way had value, deans would not need to be exploring and implementing alternative models for sponsored research like the Orion model and MWERC.

Recommendation

The information above reflects only what OCR staff has heard or observed. It is likely that there are additional issues. There are certainly additional examples of successful contracts at UW as well additional examples of approaches at other universities.

SMPH recently engaged a consultant to review their practices in clinical trials so they can better understand how to increase the number of trials they run. To date, the consultant has completed interviews with 100 staff, is working on an assessment of their processes against industry best practices and a comparison of their practices relative to other major research institutions. The final report, including specific recommendations, is due in late January.

There would be value in UW taking the same approach for sponsored research not covered by the clinical trials project. An outside perspective and comparison against research universities who are actively and successfully expanding their sponsored research programs would provide information and perspective that an internal review or task force will not be able to identify.

After I shared peer university information, one dean told me that even if we doubled our sponsored research expenditures, it would not be a significant amount of money. We have to view our relationships with companies holistically and understand that there is a greater potential opportunity as well as potential cost involved. It is not just about research dollars. Research is just one part of the approach companies are taking to their relationships with universities. Recruiting, philanthropy and other interactions with a university are part of the overall relationship for companies who are pursuing sponsored research. I think our lack of strong research relationships with key companies is, at least in part, the reason L+S is having challenges finding companies willing to fund the new chemistry building. UW either needs to determine that sponsored research is important and take concrete steps to change the way we work with companies or acknowledge that sponsored research is not a primary focus for this university.

This is a multifaceted issue and there is no quick fix.