

**Senate Higher Education Subcommittee**  
**Senate Finance Higher Education Subcommittee**

**Senator Judith Zaffirini, Chair**

**July 23, 2008**

**Guy Diedrich**  
**Vice Chancellor**  
**Federal Relations & Technology Commercialization**  
**Texas A&M University System**

**Madame Chair Zaffirini and members - my name is Guy Diedrich and I serve as Vice Chancellor for federal relations and technology commercialization for the Texas A&M University System. Thank you for this opportunity to provide testimony on ways to improve technology commercialization in Texas universities.**

**Let me begin by saying that we have some of the top researchers in the world at the universities, health science centers and institutes right here in Texas. We are considered a top tier research state and our reputation for cutting edge innovation is well established. We are now poised to leverage this outstanding research and become a top tier commercialization state as well. When I say top tier commercialization state, I am referring to those states such as California, Wisconsin and Massachusetts that have built entire economic ecosystems around their research institutions, complete with venture capital firms, deep executive talent and a culture that integrates commercialization into the research process. It is this last characteristic (building a commercialization culture) that I would like to address today - as it is a catalyst for attracting venture investment, executive talent, and innovative faculty.**

**Faculty members at major research universities are rewarded for research, publishing, teaching and participating in the community of scholars. The rewards can include promotion, tenure, and distinguished faculty recognition among others. On the surface, it could be perceived (wrongly in my judgment) that the**

research culture is in conflict with commercialization. When researchers publish patentable and commercially useful discoveries in academic journals without first seeking to protect the intellectual property, the discovery becomes part of the public domain. This means that protection is time-limited in the U.S. and the technology is no longer eligible for patent protection abroad. In short, due to the fact that most academic research is supported with public funding, the researcher has likely used taxpayer money to perform research ostensibly to benefit society, but by publishing and not also protecting discoveries, the faculty member may have inadvertently ensured that the discovery will be of value only to the select few that read the journal in which the research was published. Rarely if ever will a business invest in a product for which no intellectual property can be protected and owned in the world's largest markets. So what happens to these discoveries? They are added to the collection of scholarly literature – an important contribution to be sure – but they will more than likely not become products or services available in the marketplace to benefit the very taxpayers that invested in the research. Herein lies the critical cultural distinction between research “purists” and those that believe commercialization is part of the research process. The research purist believes in research for the sake of research – that is, all research has some value and the only necessary output is a paper that contributes to the literature. In other words, the researcher's obligation ends with an attempt to publish. The commercialization-oriented researcher believes that there is an obligation, where appropriate, to provide a return-on-investment to the taxpayer in the form of protected intellectual property

that could one day become the building block for a new product or service that benefits society. In theory, the difference in perception between these two cultures can be vast. In simple practice, it is the difference between disclosing the invention to the commercialization office prior to publishing, thus optimizing its chance for commercial value, and not disclosing prior to publishing, thereby hindering its chance for commercialization. It is this fundamental research culture shift that must be catalyzed in order for the citizens of the State of Texas to realize the full value of research conducted among its academic centers. Please note that I am not suggesting doing away with basic research or somehow trying to define what research is valuable and what research is not. Experts in their fields define value, and the necessity for basic research will never lose its critical role in this country. In fact many of our most commercially valuable discoveries from university laboratories come from basic research. What I am talking about is the integration of commercialization as a normal and routine part of the research process itself, not an isolated event set apart as an afterthought. This can be accomplished by simply engaging the commercialization office early in the process of discovery so the trained tech transfer professionals with a foot in academia and a foot in industry can consider the potential market value of research endeavors. If a discovery is ready for disclosure, it may mean delaying publication for a few days while a provisional patent is prepared and filed. This is not an either/or proposition – it is a logical extension to the research process that needs to be incorporated, and we need to continue being proactive as a state to promote this integration.

Recently several universities in Texas took the bold step of including commercialization of research discoveries as a consideration in tenure decisions – adding to the established criteria of teaching and research. At Texas A&M, this has resulted in a 27% increase in the number of invention disclosures to the Office of Technology Commercialization over last year. Just as important, we have seen an increase in the number of disclosures from tenure track researchers – a group that normally would not have engaged our office until tenure was earned. In addition, we will be changing our System mission statement, subject to Board of Regents approval in the coming weeks, to read, “The mission of The Texas A&M University System is to provide education, conduct research, commercialize technology, offer training, and deliver services for the people of Texas and beyond Texas through its universities, state agencies, and health science center”. These efforts, among others, are intended to provide the foundation for changing the research culture itself. Of significant importance was the creation of the Emerging Technology Fund which you funded -- and thank you for doing so -- in order to bring industry and universities together for the purpose of taking our best discoveries to market. The ETF helps bridge the gap between the lab and start-up companies hungry for innovations. For all our individual efforts, perhaps nothing has done more to catalyze the culture shift than the ETF.

So what more can we do to improve commercialization beyond what we are already doing? I will suggest one broad initiative and two specific actions, with

**the understanding that this is just a start. First, make commercialization of discoveries an expectation of every public research university in the state. Just as excellence in teaching and research is an expectation, so should excellence in commercialization be an expectation. Research and commercialization should be institutionalized as one inseparable process. When Texas universities compete for state or federal research dollars, there should be an expectation that research discoveries will make it to the marketplace. The only two constraints that should stop this are not getting the grant funded or finding that there is no market for the discovery. The process should provide for both in every case. Second, ensure that commercialization is central to the mission of the enterprise from the top down, not buried in some subsection of system policy that is easily ignored. Too much intellectual property is unnecessarily lost to a “publish without protecting” mentality and poorly written sponsored research agreements. If commercialization is a visible and important part of the mission and communicated as such at every level, the culture will change. And third, continue supporting innovative programs such as the Emerging Technology Fund that directly promote your focus on commercialization.**

**There is a unique alignment among lawmakers, system regents, chancellors, vice chancellors, university presidents, and now some deans, department heads and faculty. They have aligned in their recognition of the importance of commercialization to the future success of the teaching and research enterprise.**

**The opportunity to become a top tier commercialization state depends on these aligned groups and the innovative ideas that come from the members.**

**Thank you Madame Chair and members. I will be happy to respond to your questions.**