



The Board of Regents Committee on Economic Development and Technology Commercialization

Minutes of the Public Session

December 7, 2018

Regent Attman called the meeting to order at 12:02pm. The regents in attendance were G. Attman, R. Rauch, B. Gossett, R. Pevenstein, R. Wallace, and L. Frazier. Others in attendance included: E. Wachsman, J. Lenzer, D. Drake, J. Hughes, and K. Porter.

**Information Item: Featured Start-Up - Ion Storage Systems**

Dr. Eric Wachsman presented Ion Storage Systems, which is his third company, and his fourth is in the making. The product being developed by is a solid-state battery, which is lighter, goes further, and is safer than typical batteries. It is low cost and produced with a commercially scalable process. Applications are electric cars, consumer electronics, defense and aerospace, stationary storage, and with some optimization, electric flight. There have been multiple request from large strategic partners across various industries. The team is primarily technical at this time. The current manufacturing partner is in Maryland, TransTech. A next step is to fulfill the request to buy prototypes via the company, not the university. They are in the process of setting up a facility for the company to do this. There has been significant non-dilutive funding to date; the company is raising additional dilutive funds to accelerate commercialization.

Dr. Wachsman is also the Director of the Maryland Energy Innovation Institute (MEI<sup>2</sup>), which serves all the academic institutions in the state. It “integrates energy research, innovation, & incubation under a single organization at UMD to advance the State of Maryland Energy Economy”. They are setting up an incubator in the Technology Ventures building in the Discovery District, of which Ion Storage Systems will be one of the first tenants. Seed grants of \$100k each are one program. In 2018, 10 proposals and 4 awards were made. The institute is collaborative and addresses numerous needs, including extreme batteries and vehicle technologies. MEI<sup>2</sup> companies have overperformed in competing for large ARPA-E awards. A report is being led by Ellen Williams on the availability of funds for the development and deployment of clean energy technology in the State and the commercialization of that technology. They are engaging in various Maryland stakeholders and would like to include the USM Board of Regents.

**Information Item: UMB Economic Development Updates and UM Ventures**

Government and corporate extramural research has increased to \$667.4M for FY2018 up from \$497.5M in FY2016. UMB’s total employment is just under 7,000, with about 60% engaged in the research enterprise. For about 10 years have been reporting as a system to AUTM. There are efforts underway to get the federal government to count the research as being under one institution. VP of research for both institutions was just named. Licensing activity and startups are steadily increasing, with more startup activity in the last 4 years. Beyond the numbers, the startups are consistently more substantive, and the

number of high-potential licenses is increasing. FY2018 saw increased licensing revenue, and faculty members receiving the benefits go a long way to showing that entrepreneurship is not only encouraged but can have real payback. They want to be a good group to work with, so they've invested in building that staff. They can get to a term sheet within a couple of weeks with two willing partners and standard language due to infrastructure improvements. A dedicated lawyer from the University counsel is very helpful. The majority of the office came out of the private sector. They are seeing serial entrepreneurs and the benefits that can bring. Four recent successful outcomes were presented out of UMB, and four of many UM Ventures (UMB, UMCP collaborations) were presented.

A team of 15 people have been dedicated to corporate sponsored research. Indirect rates have been lowered as well to incentivize this work. Often, companies who license will also get involved with research. Funded agreements have seen 15% annual growth since 2009, with fewer than 1% coming in the door and not closing. They track every step of the process to bring down the overall time; it requires a lot of project management. Master agreements also help. It went from 40 weeks to prepare a clinical trial agreement, which wasn't horrible, to 15 weeks – so more work can be done.

The Center for Maryland Advanced Ventures has included the Baltimore Fund, Life Sciences IP Fund, President's Entrepreneurial Fellow, and the Graduate Research and Innovation District. This is \$1M per year to create and develop university-affiliated companies in Baltimore city. 200 jobs have been created or retained so far, at about \$5,000 per job.

#### **UMCP Economic Development Updates and UM Ventures**

Entrepreneurship at College Park is very distributed, but strides are bringing made to bring these groups together. They have created a brand called StartupUMD. It's where more than one program can come together. Anyone can walk into one of these and help them navigate to the right resources. They are also creating an online innovation gateway. Other branding initiatives are underway. It has also been a building year, bringing on talent to help put everything together.

Some areas of strength such as digital technologies are seeing a changing IP landscape. Another piece of the puzzle is entrepreneurial talent for the faculty and students that are passionate but need help to take it to the next step. The new IP policy has been foundational to some of the shifts that have been made. Ken Porter of Innovate Calgary, present at the meeting, is a disruptor in tech transfer and now leading College Park's Office of Technology Commercialization. They are working on and succeeding in getting easier to work with, as Jim mentioned. With limited resources they must focus. Other pieces to the puzzle are the TechPort incubator in Saint Mary's County. UMCP is also rethinking the model of the international incubator, moving into a virtual model. The first WeWork in Maryland and the first on a college campus is at UMCP, and UMCP is in the process of mapping out where startups can go on the continuum of office facilities.

One of the most underutilized resources at College Park are alumni. There have been events in NYC and other cities, which received great interest. They will launch the group formally at an event at the We Work in College Park. 2018 Innovate Maryland showcased UMCP technology and had a lot of energy. The next event will be April 11 at the Hotel at UMCP.

MAVRIC is a regional effort, and a conference in the fall went very well. It was funded by the US Dept. of Commerce, with 2 more years of funding.

UMCP recently signed master research agreements. This is one of the areas of most potential for growth. This is completely distributed at the moment, too. They are looking at the University of Michigan customer service-oriented business service model.

**Information Item: USM Office of Economic Development Update**

Momentum Fund is going well; there is no specific industry sector focus. In workforce development, there is a new technology entrepreneurship credentialing project underway at USM, and Towson University received a Cybersecurity Designation. The ARL "Army Artificial Intelligence Institute" effort is also underway with USM as the academic partner. Progress is being made with the Performance Metrics/ Dashboard as well.

**Action Item: Report in Response to a Resolution on November 9, 2017 to study the protection of USM institutional patents against patent assertion entities**

On November 9, 2017, a resolution was made by the Committee on Economic Development and Technology Commercialization to review current practices that monitor and protect USM Institutional patents in an aim to ensure that USM is not vulnerable to patent trolling by unrelated third parties. It was found that current safeguards are up to or beyond standards, especially since the risks of misuse of university licenses is relatively low and has dramatically declined in the last several years. Recommendations were to revisit the topic as needed at the System-wide SRAG group and ensure the Institutions in addition to UMCP, UMB, and UMBC incorporate the same best practices if they increase patenting and licensing activities. The Committee accepted the report and its recommendations and further recommended the development of an official USM policy whereby all USM institutions shall ensure proper tracking and protection measures are taken to prevent nefarious use of USM intellectual property by patent assertion entities.

The public session was adjourned at 2:04 p.m.

Respectfully submitted,

Gary L. Attman, Chair  
Committee on Economic Development  
and Technology Commercialization