

Meeting Minutes Research and Commercialization Council

Friday, June 15, 2018
10:00 AM – 5:00 PM CST
GOED Building
Pierre, SD

Members Present	Jaret Heise Liza Clark Dave Link Jim Morgan	Aaron Scheibe Paul Batcheller Brad Wheeler
<u>Staff</u>	Charles Lamb (BHSU) Jim Doolittle (SDSU) Kerri Richards (SDBOR) Nathan Lukkes (SDBOR)	Jan Puszyński (SDSMT) Mary Berry (USD) Mel Ustad (EPSCoR)

Brad Wheeler called the meeting to order at 10:00 am.

Dave Link moved approval of the minutes of the last meeting and Aaron Scheibe seconded. Motion passed unanimously.

Center for Fluorinated Functional Materials

Horan Sun presented information about the Center for Fluorinated Functional Materials. Sun highlighted the recent funding they received from the National Institute of Justice, the partner company they have begun working with, Secure Marking, and other additional funding CFFM has earned. Dr. Sun explained the advantage to law enforcement using this technology is that you don't see the background of the fluorescent paper and you can extract DNA sample with this technology which makes it much easier for the law enforcement agency to do the work. The advisory board recommended they increase visibility nationwide and to attend the National Meeting. CFFM is proceeding as recommended and recently started putting together a center website.

The center has had discussions with state agencies regarding their technology, as well as FBI and CIA, which has aided in obtaining extramural funding. The challenge will be that they not only have to trust the validity of the technology, but also get them willing to be the test case.

Dr. Sun also noted they have also filed a provisional patent for a battery technology in October 2016 and a regular patent in 2017.

Center for Biologics Research and Commercialization

Dr. Jane Christopher Hennings presented an update on the Center for Biologics Research and Commercialization. She highlighted the accomplishments of their first year, including establishing the microbiome core ahead of schedule, screening human and swine gut library, applying culturomics pipeline to poultry and established a chicken microbiome library and conducting a national probiotic survey to identify consumer preferences. Additionally, they have partnered with Cambridge Technologies which resulted in a USDA/NIFA SBIR Phase 1 grant on universal swine influenza vaccine and have a number of emerging viruses they are working on vaccines for. CBRC has also acquired the

germ free mouse facility before anticipated. They are actively looking for gaps that we can get to market and are also wanting to do a lot more probiotics since so many are wanting to antibiotic free. There were some suggestions to grow the External Advisory Board to garner additional feedback. Dr. Hennings noted there are currently 5-6 very active faculty at the center and should be able to continue the trend of grant applications in future years.

The main issue that was discussed with the CBRC was having adequate computing capabilities. However, CBRC is anticipating moving forward as planned. They aren't anticipating having to re-allocate resources to make these issues work. This shouldn't be an issue when the new system through SDSU takes effect, but they are still waiting for that to happen.

One issue we have had is that so many partner are open to South Dakota for agriculture research because of South Dakota's strong historical agriculture background. However, they typically have to go the extra mile to convince folks about human research and capabilities.

BioSystems Networks / Translational Research

Adam Hoppe discussed the great accomplishments of BioSNTR. They have hired 12 faculty across 4 campuses, trained 61 undergraduate, 25 graduate students, and 8 postdocs. They have had 138 publications in high-impact journals and earned over \$15 million in grant and industry sponsorships to BioSNTR. RCC noted that is is great that BioSNTR has taken the \$10 million of State funding and garnered another \$23 million from other sources.

The BioSNTR is going after a NIH COBRE. South Dakota is the only state in the nation that does not currently have a public institution with a COBRE. They have had meetings with Sanford who has three CORBE to discuss methods of increasing their odds. Additionally, the great thing about a COBRE is that it is \$11 Million over 5 years and is a renewable program up to 20 years.

NSF EPSCoR Proposal Update

During lunch Mel Ustad, State EPSCoR Director, provided a brief update to RCC, as the executive committee for the REACH Committee, on the status of the pending NSF EPSCoR RII Track-1 proposal. Dr. Ustad explained the timeline for, and status of, the pending submission, with the letter of intent due to NSF on July 3rd and the full proposal due on July 31st. Dr. Ustad and Kevin Chu will continue working with Robb Winter and his team in the weeks to come to finalize the proposal for a timely BOR submission.

Center for Genetics and Behavioral Health

Lee Baugh presented an updated on the Center for Genetics and Behavior Health. He discussed the major research highlights including 30 published articles, 16 presentations, 3 interviews and the training of 15+ students at the undergraduate, graduate and MD/PhD Levels as well as increasing their grant success and industry visibility.

Dr. Baugh mentioned that during their first year, they ran into some issues with the reporting requirements and trying to maintain the confidentiality of their participants. They are working to resolve this issue by obtaining a certificate of confidentiality that will allow them to get back on track with their research.

It was suggested that the group be sure to look at the state level as well. If the certificate of confidentiality allows them to not have to report certain cases, and protects them from being subpoenaed at the federal level, they will want to make sure they have their bases covered at the state level as well.

It was asked what their strategy was moving forward to increase the number of researchers. Dr. Baugh mentioned that they have in their budget to allow for a new hire for a tenure track faculty with their staff. They also are in talks with administration to hire two additional personnel.

Advanced Manufacturing Process Technology Transition and Training Center

Dr. Christian A. Widener discussed the many recent accomplishments of the Advanced Manufacturing Process Technology Transition and Training Center (AMPTECH) including SDSM&T and VRC being recognized as leaders in Cold Spray, VRC Metal Systems and HF Webster reaching nearly \$11M in sales in 2017, and are on track to exceed \$15M in sales in 2018, cold spray patents total license revenues to date being nearly \$200,000, named "Best University Startup" in 2017 by NCET2, Air Force Change Evaluation Team (CET) approved cold spray repair of FEB Panels – two more parts now being evaluated, and VRC Metal Systems made the Inc. 500 list in 2017.

A discussion was also held by Widener and the group concerning the future of the center and Dr. Widener's role with the center. RCC noted they are very impressed with the accomplishments of Dr. Widener and his center over the last five years and they look forward to great things to come as the center graduates from RCC funding.

Composite and Nanocomposite Advanced Manufacturing Center

Dr. David Salem discussed the many recent accomplishments of the Composite and Nanocomposite Advanced Manufacturing Center. He discussed the Demonstration of DiFITS Truck Differential Covers and their exhibits at SPE ACCE and Ford Tech Day. Dr. Salem also discussed CNAM's new thermoplastic core material: a cellular, low density thermoplastic core that can be created using various polymers and closed cell sheet cores can be laminated with various face sheets to create lightweight sandwich structures.

As the CNAM center ends and CNAM-Bio begins, the focus is shifting to make renewable and sustainable polymers that can compete with traditional polymers. Dr. Salem shared that the mission of CNAM-Bio is to eliminate barriers to low-cost, commercial production of high-performance biopolymers and bio-composites from renewable feedstocks, work with industrial partners to establish competitive advantage of biopolymers and bio-composites in the global marketplace and to use South Dakota's natural resources and technical strengths to drive an emerging bio-based value chain and bio-based product industry, regionally and globally. Dr. Salem also presented CNAM-Bios FY19 budget.

Following the center presentations, Paul Batcheller moved to move into executive session, Aaron Schiebe – Seconded. Roll Call vote passed unanimously.

Executive Session

Aaron Scheibe moved to approve the Chairman's Report from executive session, Seconded by Dave Link. Roll call vote passed unanimously.

Liza Clark moved to approve FY19 funding for CFFM, CBRC, BioSNTR, CGBH, CNAM-Bio and carryover requests as presented, seconded by Aaron Scheibe. Roll call vote passed unanimously.

Brad Wheeler declared the meeting adjourned at 4:40 pm.