

total of \$12 million in impacted research in FY17, approximately 75% of the \$68 million planned submissions for FY17 have been completed, and a total of \$78 million has been reported. The Center received 17 proposals for seed grants, 4 have been selected for funding, and 4 new BioSNTR members have been added. The Center is supporting 19 undergraduates, 33 graduates, and 38.35 researchers which total 90.25 staff. The Center requested a budget of \$1,821,818 for FY2018 and that a short no cost extension in to FY18 may be needed to process approximately \$362,000 of expenditures occurring in late FY17.

Brad Wheeler said the Center having more federal funding than state funding is a positive indication of growth.

“Advanced Manufacturing Process Technology Transition & Training Center” presented by Christian Widener

Major research highlights include SDSM&T and VRC Metal Systems are recognized leaders in Cold Spray. The Center had 12 presentations, 4 journal articles, 1 conference paper, and 2 book chapters. In 2016, VRC Metal Systems reached \$5.2 million in sales and is on track to exceed \$10 million in sales in 2017. The total license revenue for Cold Spray is \$175,507. The Center has 4 technologies in development.

The Center has collaborations with 24 companies and universities. The Center has 9 pending awards and received 9 awards in FY17. The 9 awards totaled \$1,130,699. Industrial research of \$537k with 20 different companies was completed in FY17. The Center has 8.5 undergraduates, 6.5 graduates, 10 researchers, and 45 industrial staff. The Center requests a budget of \$400,000 for FY2018.

“Composite and Nanocomposite Advanced Manufacturing Center” presented by David Salem

Some of the major research highlights for FY17 include industrial scale-ups and engineered structures. The Center has collaborations with 18 companies and universities. The Center has 5 pending awards and has received 12 awards 12 in FY17. The 12 awards totaled \$752,624. Membership fees from CNAM Consortium and contract research totaled \$1,326,772 for FY17. The Center has 9 faculty members, 9 research scientists and research engineers, 1 technician, 22 graduates, and 15 undergraduates. The Center requests a budget of \$400,000 for FY2018 and a carryover request of \$48,879 to support faculty, staff, and graduate and undergraduate students over the summer months.

Brad Wheeler complimented Dr. Salem on the use of biweekly team meetings with SDSMT, SDSU, and USD to review and align activities.

Governor’s Research Center Proposals

Five Center principal investigators began presenting proposals for new Centers detailing a project description, proposed activities, R&D and commercialization activities, a detailed plan for long-term sustainability, a description of the management plan, and budget request and justification.

“Composite and Nanocomposite Advanced Manufacturing Center – Biomaterials” presented by David Salem

The Center is another area of research Dr. Salem wishes to pursue to expand the current CNAM Center. The Center focus would be to use renewable feedstocks to produce and commercialize high-performance biopolymers and biocomposites at low-cost. A competitive advantage of biopolymers and biocomposites in the global marketplace would be established by working with industrial partners. Bio-based value chains and bio-based product industries would be developed by using the natural resources and technical strengths of South Dakota.

The Center has collaborations with 16 companies and universities.

The Center requests a five year budget of \$3,599,975 for personnel, equipment, travel, materials and supplies, publications, consultant services, computer services, subawards, and other.

Nathan Lukkes asked if there is enough space at Dr. Salem’s current Center to support the new research Center. Dr. Salem said the new research will be conducted in a different lab.

Jaret Heise asked about the relationship between the two Centers. Dr. Salem said the composite and nanocomposite research will be conducted separately from the biomaterials research.

“Precision Agriculture Center” presented by Sharon Clay

Dr. Sharon Clay began presenting on the Precision Agriculture Center. The Center’s mission is to link sensors and data analytics to make production management decisions.

The Center requests a five year budget of \$4.3 million for scientists, graduate students, fringe benefits, equipment, travel, publications, materials and supplies, contractual, and tuition remission.

Dave Link asked what new research will result from funding. Dr. Clay said it will give the Center a new capacity for research and will help them go after bigger programs.

“Center for Fluorinated Functional Materials: From Discovery to Commercialization” presented by Dr. Haoran Sun

Dr. Haoran Sun began presenting on the Center for Fluorinated Functional Materials: From Discovery to Commercialization. By commercializing fluorinated functional materials in the

areas of materials and advanced manufacturing, energy, and environment, and human health and nutrition, South Dakota's economy would grow.

The Center requests a five year budget of \$3.19 million for personnel, equipment, travel, materials and supplies, consulting and advisory board travel, and marketing.

Brad Wheeler asked Dr. Sun if he plans to increase personnel overtime. Dr. Sun said he does through external funding.

Nathan Lukkes asked why there aren't any Centers like this. Dr. Sun said there are industry Centers, but not university based.

"SD Center for Biologics Research and Commercialization" presented by Dr. Jane Christopher Hennings

Dr. Christopher Hennings began presenting on the SD Center for Biologics Research and Commercialization. Industry partners will license and commercialize the technologies developed by the Center through their translational research in nutraceuticals, probiotics, vaccines and diagnostics.

The Center requests a five year budget of \$4,300,000 for personnel, fringe benefits, tuition, materials and supplies, contractual, travel, publications, sub-awards, and equipment.

Brad Wheeler asked if the Center will increase the number in researchers in five years. Dr. Christopher Hennings said it depends on the external funding.

Dave Link asked how the Center will work on the projects at the same time or determine which ones are more important. Dr. Hennings said they will be prioritized based on the risk level.

"Center for Genetics and Behavioral Health" presented by Dr. Gina Forster & Matthew Fox

Dr. Gina Forster began presenting on the Center for Genetics and Behavioral Health. The Center will partner with the University of South Dakota Center for Brain and Behavior Research and the Avera Institute for Human Genetics to enable the study of genetic and environmental influences that interact with other biological, psychological, and behavioral factors to impact Post Traumatic Stress Disorder. The Center will improve mental and physical health of individuals exposed to traumatic events.

The Center requests a five year budget of \$3,948,697 for personnel, fringe benefits, equipment, travel, participant support costs, materials and supplies, consultants, and other costs.

Executive Session

Dave Link moved to enter in to executive session to discuss the research proposals. Eddie Sullivan seconded the motion. Motion passed unanimously.

Executive session began at 3:30pm.

Executive session ended at 4:20pm.

Other Business

Eddie Sullivan moved to approve the budgets as requested for FY18 for the following Centers:

- BioSystems Networks and Translational Research
- Advanced Manufacturing Process Technology Transition and Training Center
- Composite and Nanocomposite Advance Manufacturing Center

Jaret Heise seconded the motion. Motion passed unanimously.

Dave Link moved to approve funding for Centers for FY18 – FY22 at the following levels and to direct staff to finalize the annual award numbers for each of the centers, issue award letters, and work with the PIs to obtain revised budgets reflecting the award totals:

- Center for Fluorinated Functional Materials: From Discovery to Commercialization - \$2,710,969
- SD Center for Biologics Research & Commercialization - \$3,817,603
- Center for Genetics and Behavioral Health - \$3,466,300
- Composite and Nanocomposite Advanced Manufacturing Center – Biomaterials - \$1,806,427 beginning in FY19

Jaret Heise seconded the motion. Motion passed unanimously.

Meeting adjourned at 4:30pm.