FY21 Research & Development Innovation Grants
Request for Research Proposals

The South Dakota Board of Regents (SDBOR) hereby solicits proposals from the six campuses in the Regental System to leverage existing investments by focusing research and development activity around five key industry sectors[1] that are projected to produce the highest potential for economic development in the state. Proposals from individual researchers will not be considered, but must be submitted as part of a single, campus-wide proposal package. A total of $349,825 is available in FY21. Individual campus proposals may not exceed $150,000 in any fiscal year. As an example, if a campus received a two-year award (FY20 and FY21) for $300,000, it is ineligible to submit an individual campus proposal in FY21 because it would have exhausted the $150,000 annual award cap. If a campus received a two-year award for $250,000 ($150,000 in FY20 and $100,000 in FY21) it would be eligible to submit an individual campus proposal for up to $50,000 in FY21. Awards made for FY21 will carry over to FY22.

In addition to the individual campus proposals, each campus may participate in one multi-campus proposal. A multi-campus proposal must include at least three system institutions and may not exceed $225,000 for FY21. Multi-campus proposals are intended to address common research infrastructure needs and are not intended to fund individual projects on multiple campuses.

The *R&D Innovation Grant* program is designed to aid institutions as they make strategic investments in research and development activities that can best stimulate economic development in the five industry sectors. Additionally, it is expected that proposed activities will have some level of sustainability beyond the term of the award and will yield long-term impacts for the institution and/or the state. These research and development areas include: 1) Advanced Manufacturing & Materials; 2) Energy and Environment; 3) Human Health and Nutrition (including Medical Technology); 4) Information Technology/Cyber Security/Information Assurance; 5) Plant and Animal Bioscience; 6) Underground Science & Engineering; and 7) Visualization (from the molecular level to global systems). Allowable expenditures may include, but aren't limited to, one or a combination of any of the following activities:

1. Research laboratory upgrades that will enhance undergraduate and graduate student experiences through research in one or more of the seven research and development areas;

[1] 2020 Vision: The South Dakota Science and Innovation Strategy draws upon numerous federal data sources; projections were developed to identify industry sectors with the highest potential growth rates through 2020. From this analysis five key industry clusters were identified that are expected to produce the highest potential economic development for South Dakota over the next seven years. These five industry sectors include:

- *Value-Added Agriculture and Agribusiness:* Crop production and/or farm management with significant ties to each of the four other industry sectors.
- *Energy and Environment:* Renewable (solar, wind power, geothermal, biofuels) and non-renewable energy production (coal, and future oil and gas production).
- *Materials and Advanced Manufacturing:* Advanced material development in the area of healthcare and firearms, as well as manufacturing to leverage expansion in renewable and non-renewable energy.
- *Human Health and Nutrition:* Bioscience and biotech firms and the health care industry extending ties into pharmaceutical and medical device/instrument manufacturing.
- *Information Technology/Cyber-Security/Information Assurance:* Security needs of the banking industry and protection of electronic medical records within human health.

2. Acquisition of new scientific equipment or laboratory upgrades that will increase competitiveness for external research awards;

3. Support to facilitate research with industry partners;

4. Technology transfer activity designed to develop, expand or enhance commercialization and economic development potential for existing research; and/or

5. Funding for salary and/or start-up packages for new hires engaged in the seven R&D areas outlined above. Proposals seeking funding for new research faculty hires must comply with the following:
    a. R&D Innovation funds may be used to provide up to $50,000 a year per new hire;
    b. New hire(s) must be at least 70% research;
    c. Campus must have existing FTE available for the new hire(s);
    d. Campus must commit to maintaining the faculty position and providing annual reports for the position for five years beyond the term of the award; and
    e. New hire(s) will be expected to be productive and engaged members of the campus' research enterprise. Reporting metrics shall include, but aren't limited to: grant submissions/awards, publications, disclosures, etc. Any proposal requesting funding for new hires should include proposed metrics for the new hire(s).

6. Funding for salary support for new hires that provide direct technical support to research efforts in the seven R&D areas identified above. Proposals seeking funding for new research support hires must comply with the following:
    a. R&D Innovation funds may be used to provide up to $40,000 a year per new hire:
    b. New hire(s) must commit at least 70% of their time providing direct support to research efforts in the seven identified R&D areas;
    c. Campus must have existing FTE available for the new hire(s); and
    d. Campus must commit to maintaining the research support position and providing annual reports for the position for five years beyond the term of the award.

Additionally, institutions may use the *R&D Innovation Grant* program to pursue research and innovation projects aimed at advancing the undergraduate research mission. While this avenue is open to all institutions, its genesis is to provide a path that allows for the utilization of research and innovation to advance undergraduate research at our primarily undergraduate institutions. Engaging undergraduate students in research and innovation is a critical component to establishing a viable pipeline for South Dakota's workforce and graduate/PhD programs. The key component of these projects is to engage undergraduate students in research and innovation projects that advance the institution's undergraduate mission. Examples of projects could include, but aren't limited to, projects geared towards positioning a campus to compete for a Research Experience for Undergraduates (REU) or Research in Undergraduate Institutions (RUI) award from a federal agency, projects that parallel or supplement the REU or RUI framework, projects that engage outside entities to create research and innovation opportunities for students, while advancing and/or building relationships with outside entities. Priority will be given to projects (1) in research and innovation areas that create pathways to placement in South Dakota for students after graduation, whether it be in the workforce or enrollment in graduate/PhD programs, and (2) which have the potential to sustain themselves beyond the funding provided by the R&D Innovation Grant program, whether it be by competing for external funding or otherwise.

Initial campus level proposals should be evaluated based on merit criteria established at the institutional level to ensure that projects align with institutional research and development initiatives. Additionally, each submission, whether an individual campus proposal or a multi-campus proposal, must identify a 1:1 match[2] to ensure state dollars allocated through this program are being used to leverage external partnerships and reinforce institutional priorities. Preference may be given to proposals leveraging a cash match from institutional funds, industry collaborators, or other related external awards from non-BOR sources. Proposals will be reviewed by a panel comprised of representative from, but not limited to, the Legislature, Board of Regents, and the State EPSCoR Office. If funds remain unallocated following this first-round solicitation, a second solicitation will be issued.

Reporting

All proposals should include a section addressing the metrics that will be used in assessing the success of the project following completion. An interim report, summarizing the activity, outcomes and expenditures to date, is due December 1, 2021. A final report, documenting the research activity and outcomes attributable to the award as measured by the metrics established in the proposal, and including a detailed accounting of expenditures related to the award, is due June 15, 2022, or 60 days following total award expenditure, whichever is later. Awards for new hires will require additional annual reports due on July 31 for five years following the conclusion of the award. Templates will be provided for all reports.

Submission of Proposals

Proposals must be submitted electronically by the institution's sponsored program office in PDF format to Marcy Olson at Marcy.Olsen@sdbor.edu in the Board of Regents Office by 5:00 PM (CDT), February 26, 2021[3]. Materials must be single spaced in Times New Roman 12 point font with one-inch margins. Proposals must include a signature page with the signature of the institution's chief research officer. All proposals must contain:

1. **Executive Summary (1 page)[4]**
2. **Research & Development Project (7 pages)**
3. **A Proposed Evaluation Plan and Alignment to one or more of the Seven Research & Development areas (2 pages)**
4. **A Detailed Budget & Budget Narrative[5] (4 pages)[6]**
5. **If applicable, letters of commitment from partners indicating their commitment of funding, equipment, time, etc. to the proposed project(s) should be included. Letters of support not making specific commitments of resources should not be included.**

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[2] Matching dollars can take numerous forms including: 1) cash match from the institutional funds, industry collaborators, or other related external awards from non-BOR sources; 2) unrecovered F&A costs, limited to the Institutional F&A rate negotiated with the federal government and calculated based on the projects modified total direct costs; and 3) related supporting equipment purchases made during the same timeframe of the award period.

[3] All proposals will be initially reviewed for compliance. Incomplete proposals, or proposals that do not follow the guidelines as specified will be returned for correction and must be resubmitted within 24 hours for full consideration. Proposals failing to meet established requirements after this timeframe will not be considered.

[4] All page lengths listed are for maximum page limits.

[5] All proposals seeking funding for the acquisition of equipment must include a statement addressing the source of funding for the ongoing operation and maintenance costs associated with the equipment.

[6] All proposals containing a match from non-BOR sources must include documentation evidencing the committed match. The foregoing is in addition to, and not counted against, the four-page limit for the budget.