

March 7, 2002

**MEMORANDUM**

**To:** Mr. Dalton B. Floyd, Jr., Chairman, and Members, Commission on Higher Education

**From:** Ms. Dianne Chinnes, Chairman, Committee on Academic Affairs and Licensing

**Consideration of Report on  
South Carolina Research Initiative Grants, FY 1999-2000**

**Background**

In September 1999, the Commission held the first competition for the newly authorized South Carolina Research Initiative Grants (hereafter referred to as "SCRIG.") The *Guidelines* for the competition stated that the period of research activity for funded projects was scheduled for January 1-December 31, 2000.

The purpose of the SCRIG program is to provide small grants to faculty researchers at public institutions of higher education in South Carolina for the development of research activities with a special emphasis on research designed to lead to economic development. The program was also meant to help establish a larger number and the credibility of research faculty in South Carolina's public universities and colleges by having SCRIG funding serve as "seed money" for additional funding applications to eleemosynary, federal government, and private for-profit agencies which sponsor research grant programs. Likewise, interinstitutional cooperation was noted as a priority in the *Guidelines* for the SCRIG program.

The legislative proviso for the SCRIG competition included \$2.5 million, of which \$40,000 was set aside for administration, specifically contracting for an external professional evaluation by a panel of experts whose work was directed by the Experimental Program to Stimulate Competitive Research (EPSCoR) office. By the terms of the legislative proviso and Commission policy, 90% of all grant funds were reserved for proposals emanating from the research institutions and 10% from the four-year public teaching universities in the state. For dividing the competitive funding by institutions, the Commission decided upon a formula which distributed funds to each of

the three research institutions in accord with the percentage of the most recent three-year average of the total number of research dollars expended by each of the three.

Although the principal period of research activity for SCRIG funded projects was January 1, 2000 through December 31, 2000, the *Guidelines* also contained a provision for an automatic extension for a six-month period through June 30, 2001, for any researcher who requested it. For SCRIG projects which received automatic extensions, final reports on the outcomes and impact of the SCRIG projects were due on July 31, 2001. In fact, all but two researchers did request and were granted the extension.

The outline for the final report, developed by the Commission's staff in communication with several institutionally-based Sponsored Programs and Research (SPAR) officials and Principal Investigators (PIs), had two required parts: 1) a narrative report on the outcomes and assessments of impact of the funded proposal; and 2) a close-out fiscal analysis showing how the funds for each project were expended and whether any funds remained at the conclusion of the project. The report was designed to be analytical, and data-rich, while remaining very short in length. In the end, the vast majority, but not all, SCRIG recipients chose to follow the suggested format for the follow-up report. The summary narrative and financial data aggregated through this effort has proved useful in understanding the outcomes of the funded SCRIG projects during the program's first year of operations.

This report on the measurable outcomes of the SCRIG-funded projects is divided into several sections, as follows:

- Number of proposals received and funded.
- Amount of funding per proposal requested and received by institution and sector.
- Funded proposals categorized by disciplinary area.
- Number and types of additional funding requested and received per proposal and by type of proposal.
- Number of projects which have created new incubator or "spin off" industry as a result of their SCRIG funding.

### **Proposals Received and Projects Funded for SCRIG 1999**

A total of 94 proposals were received from nine public four-year institutions. Of these a total of 30 proposals were funded. Table 1 shows the number of full proposals received and the number funded by institution and sector.

**Table 1**  
**Proposals Received and Funded by Institution and Sector**  
**for the SCRIG 1999 Competition**

Institution	Proposals Received	Proposals Funded
<b>Research Institutions</b>		
Clemson	18	8
MUSC	21	9
USC-Columbia	41	9
<b><i>Sector Subtotal</i></b>	<b>80</b>	<b>26</b>
<b>Teaching Universities</b>		
The Citadel	1	1
College of Charleston	2	2
Coastal Carolina University	5	1
South Carolina State University	2	-
USC-Aiken	2	-
Winthrop University	2	-
<b><i>Sector Subtotal</i></b>	<b>14</b>	<b>4</b>

**Grant Funding Requested and Received**

The following table shows for those grants which were funded through SCRIG the amount of funding which had been initially requested for them and the actual amount awarded. The data is aggregated by institution and by sector.

**Table 2**  
**Amount Requested and Actual Amount Funded**  
**For SCRIG 1999 Funded Projects**  
**Per Institution And Per Sector**

	Amount Requested	Amount Funded
<b>Research Sector</b>		
Clemson University	\$879,146	\$580,732
Medical University of SC	\$1,440,506	\$808,996
USC-Columbia	\$1,239,400	\$824,272
<b><i>Sector Subtotal</i></b>	<b>\$3,559,052</b>	<b>\$2,214,000</b>
<b>Teaching Universities</b>		
The Citadel	\$64,800	\$62,300
Coastal Carolina University	\$91,800	\$91,800
College of Charleston	\$91,900	\$91,900
<b><i>Sector Subtotal</i></b>	<b>\$248,500</b>	<b>\$246,000</b>

## **Funded Projects by Discipline**

Since the *Guidelines* were explicit about the purposes of the grants, the principal interests of the external panel were to assure that the proposal showed rigor and promise for having the capacity to promote the state's economic development and/or to serve as "seed money" for capturing additional grant funding for these research projects. Therefore, there was no criterion to seek "balance" by discipline in the funding of proposals.

As might be expected at a health sciences research institution, all the projects funded at MUSC were in the life sciences, principally in biochemistry and biophysics, and one in bioinformatics. At USC chemistry, biochemistry, and biology were the principal funded areas of research. One project was also funded in each of the following areas: geology, information technology, and bioinformatics. At Clemson, three projects were funded in engineering, three in biochemistry, and one in transportation. At the teaching universities, the four funded projects were in biochemistry, chemistry, geochemistry, and biology. In summary, a majority of the projects funded were found in the life sciences, not only at MUSC but throughout the rest of the institutions viewed as a unit.

## **Number and Type of Additional Funding Requested and Received Per Proposal and by Type of Proposal**

The promise of the SCRIG-funded projects was in part predicated on the idea that SCRIG would become a springboard for additional grants which were external to state public funds for the support of the same or cognate research. Examination of the final reports suggests that this promise has been met in some cases and is still pending in others. By the time of the submission of all final reports in August 2001, the following information was already available about the 'multiplier effect' of the SCRIG program.

**Table 3**

	Clemson	USC-Cola	MUSC	Teaching U's
Total number of SCRIG Grants:	8	9	9	4
Total number of requests For additional Funding	16	22	13	7
Additional funding received By time of final report	0	0	3	1

### **Additional spin-off “products”**

In addition to the funding applications submitted and/or already granted which SCRIG-funding generated, there have been other important, positive “spin-offs” from the first round of SCRIG-funded grants. These include the following, by institution:

Clemson University: One patent has been granted. Two ‘public relations’ articles (i.e., in non-technical journals) have been published. One technical/professional journal article has also been published.

USC-Columbia: One professional journal article has been published. Two professional journal articles are in the process of being published. Four professional conference presentations have been given.

MUSC: Three professional articles have been published. Two professional articles are in the process of being published.

### **Number of New ‘Out-linkages’ to Private Sector or New Projects Which Have Been Created as Spin-offs as a Result of Their SCRIG Funding**

At the time that the final reports were due there had been some developments for out-linkages from the universities research efforts into the private sector. Given the complexities of research and the complexities of the legal and business operations necessary for implementing direct participation of private industry in using the scientific output of research efforts from a university, it is noteworthy that these developments had already begun to occur. Although no actual agreements had been signed, two types of out-linkages were referred to by several researchers at the research universities. These are: 1) large-scale private for-profit funding of the research in progress; and 2) collaborative efforts in licensing the patented products of the university research in question. Two of the grant proposals which grew from the SCRIG research are listed as having been addressed to a “private for-profit” group as the grantor agency. Patentable products of research under licensing to private-for-profit corporations are the second area of collaboration—and something which appears likely to grow out of a likely estimate of five SCRIG projects.

In several other reports, mention is made about setting up private-for-profit “spin-off” corporations from the university research efforts. In one case, so far, an independent cost center is reported to have been developed. In several others—depending upon the outcome of patent efforts and independent appraisal of the potential for saleable products—the establishment of independent corporations spawned with venture capital are discussed as a vehicle for promoting private enterprise affiliation with the research effort.

## **Summary**

All the projects for the SCRIG 1999 competition were finished within 18 months, showing clearly that the “year-long and an automatic extension of six months” (allowable under the *Guidelines*) was feasible.

The legacy of the SCRIG 1999 competition is an advancement of research infrastructures in our public universities and an increased number of relationships between South Carolina’s public universities and existing (and recently incubated) private enterprise interested in cutting-edge research. The emphasis on life sciences research in this first round of SCRIG funding also suggests the possibility of increased health and environmental quality for the citizens of the state.

It is too early to be able to quantify any lasting significance that might accrue to the state from the follow-up activities for which the SCRIG funding served as a catalyst. To develop follow-up grant proposals, to get them funded, to do more extensive research, and to have that research analyzed and published—or implemented in society as a public service or in the private marketplace as a service or product—all take significant time. Therefore, revisiting this issue after a decent interval is important. A follow-up report in 2002 would be useful in this regard to chart further the accrual of gains to the state which might be related to initial SCRIG funding.

## **Recommendation**

The Committee recommends that a follow-up report on the first round of SCRIG grants be prepared in a year to assess the further significance which SCRIG-funded projects might have had for both economic development in the state and for bringing additional grant funding to the state.