

**REPORT TO THE
LOUISIANA BOARD OF REGENTS**

**REVIEW OF THE RESEARCH COMMERCIALIZATION AND EDUCATIONAL
ENHANCEMENT PROGRAM (RC/EEP)**

Report of the Final Panel

June 21-23, 2007

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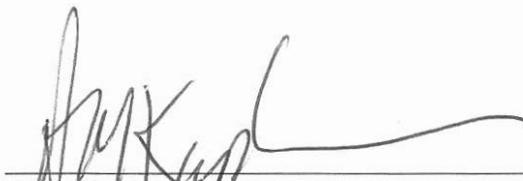
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TABLE OF CONTENTS

I. INTRODUCTORY COMMENTS	2-4
II. TABLES I-III – FUNDING RECOMMENDATIONS	5
III. TABLE I – HIGHLY RECOMMENDED FOR FUNDING (PRIORITY I)	6
A. Alan M. Miller & Steve Nelson – TUHSC/LSUHSC-NO with Tulane.....	7
B. Stephen A. Harrison – LSU Ag Center.....	9
C. Robert F. Garry – TUHSC with LSUHSC-NO/Xavier/UNO/Loyola	11
D. Paul L. Fidel – LSUHSC-NO with TUHSC.....	14
E. Vijay T. John – Tulane with Xavier/Nunez	17
F. Nikos Kiritsis – McNeese with SOWELA.....	20
G. Kevin McLin – Dillard with Delgado.....	23
H. Patricia L. Dorn – Loyola with TUHSC/LSU School of Vet Med.....	25
I. Maureen Shuh – Loyola with Xavier	27
J. John Snyder – Loyola with Dillard/UNO/Delgado.....	29
K. Tarun K. Mandal – Xavier.....	31
IV. TABLE II – RECOMMENDED FOR FUNDING IF ADDITIONAL MONIES BECOME AVAILABLE (PRIORITY II)	34
A. Jeffrey Tasker – Tulane with TUHSC/Tulane Primate Center/UNO/LSUHSC- NO/DEKK-TEC, Inc.	35
B. Gary McPherson & Scott L. Whittenburg – Tulane/UNO with Loyola/Dillard.....	38
C. Darwin J. Prockop – TUHSC with LSUHSC-NO	40
D. Nicolas G. Bazan – LSUHSC-NO with UNO/Xavier/LSU Ag Center	42
E. Kathleen Kennedy – Xavier.....	44
V. TABLE III – NOT RECOMMENDED FOR FUNDING	47
A. Zujia Xu – Dillard with Tulane/UNO/Xavier.....	48
B. P.S. Penland – UNO with LSU Ag Center/LSU-BR.....	50
C. William S. Vorus – UNO.....	52

INTRODUCTORY COMMENTS

AUTHORIZATION AND REVIEW PROCESS

The RC/EEP final review panel commends the Louisiana Recovery Authority, the Board of Regents, the Governor, the Legislature, and the U.S. Department of Housing and Urban Development (HUD) for their wisdom in allocating funds for research commercialization and educational enhancement at the campuses most severely impacted by Hurricanes Katrina and Rita. In addition, the panel offers special high praise to the Board of Regents for its administration of the program through the two-stage proposal review process. In the first stage, subject-area panels reviewed proposals and provided preliminary findings that were transmitted to project participants for review and response, and to the final panel for consideration. The final panel, in the second stage, held individual interviews with principal investigators and institutional representatives of each proposal. The interviews focused on campus responses to the first-stage reviews as well as programmatic and budgetary issues. This process ensured that all proposals received a thorough and fair evaluation, and allowed the final panel to comparatively assess all proposals before making funding recommendations.

BACKGROUND INFORMATION

Proposals were solicited from campuses in the eight (8) parishes designated by HUD as most severely impacted by the 2005 hurricanes. Nineteen (19) proposals requesting a total of \$88,612,446 were submitted for multi-year funding consideration. As required by the request for proposals (RFP), projects addressed issues of primary importance to the severely impacted campuses, including faculty recruitment and retention, student development and support, development of core facilities, and technology commercialization.

THE REVIEW PROCESS

The review process focused first on in-depth reviews by five (5) subject-area panels. This was followed by the final panel's interviews of project representatives and review of proposals.

Phase I – In-Depth Review by Subject-Area Panel

In Phase I of the review process, the nineteen (19) proposals were distributed among five (5) subject-area panels corresponding to the disciplinary areas of the proposals submitted. Each panel was comprised of two to four out-of-state experts with broad expertise in the disciplines represented by the proposals as well as familiarity with similar competitive grant programs. Using the criteria set forth in the RC/EEP Request for Proposals, members of each panel worked individually and then collaboratively by telephone and e-mail to evaluate all proposals in their assigned subject area(s). Through a telephone conference, the subject-area panel members discussed the relative merits and shortcomings of each proposal and then ranked their assigned proposals. The subject-area

review process proved highly valuable to the final panel, identifying meritorious projects within each discipline and providing detailed evaluations.

Phase II: Final Panel Review and Funding Recommendations

A six-person final panel comprised of five senior out-of-state professionals whose expertise spans the disciplines of proposals submitted, as well as one individual with broad expertise in economic development and technology transfer, convened in Baton Rouge on June 21-23, 2007. This panel interviewed representatives of all proposals in individual forty-five minute sessions on June 21-22, then discussed and compared the proposals. Ultimately, the final panel considered the overall rankings of proposals across the subject areas and formulated final funding recommendations to the Board of Regents. These recommendations are contained in this report.

The four (4) principal criteria for review as published in the RFP and used by the final panel in making its funding recommendations, are as follows: (1) key science, technology and/or educational opportunities; (2) human capital resources; (3) project impact and strategic implications; and (4) leveraging of resources. The final panel also considered appropriateness of budget requests in making final funding recommendations.

The final panel was informed that \$27,605,424 would be available in the RC/EEP to support projects over three years. Using the criteria described previously, the final panel recommended eleven (11) proposals which it strongly believed were worthy of support and placed them in the Priority I category, provided in **Table I**. From the total available in the RC/EEP, the panel recommends that proposals ranked 1 through 11 be funded at the levels indicated.

Table II lists those proposals that were ranked as Priority II. Though funds are available to support only the eleven (11) highest ranked proposals, the final panel strongly urges the Board of Regents and the Louisiana Recovery Authority to seek supplementary resources to provide support for as many additional proposals as possible. Should supplementary resources become available, the panel recommends that additional Priority II proposals be funded in descending rank order.

Table III lists proposals not recommended for funding by the panel.

Following the tables are in-depth evaluations of each proposal, provided in numerical order by proposal number.

RECOMMENDED PORTFOLIO

The panel's recommendations include a diversified portfolio of projects which reflect the broad objectives of the RFP. Support is recommended for projects which address the recovery needs of institutions affected by the 2005 storms, and for innovative initiatives which focus on collaborations among the region's academic institutions. These include faculty recruitment and retention, student development and support, development of core facilities and technology commercialization.

The proposals were generally well conceptualized and decisions were difficult to make. While adhering to the mission of the RC/EEP and considering quality as the primary factor, ultimately all eligible and participating institutions received some funding, including the three community colleges which have key programs that educate technicians for the process technology and film industries.

CONSISTENCY WITH CDBG NATIONAL OBJECTIVES

It is important to note that all of the projects recommended for funding are urgently needed for the recovery and advancement of severely impacted Louisiana Gulf Coast post-secondary institutions and the communities in which they are located. In addition, several of the recommended projects target broad and long-range benefits to low- to moderate-income individuals and families.

**TABLE I
HIGHLY RECOMMENDED FOR FUNDING (PRIORITY I) (11)**

Rank/ Score	Proposal #	Lead Institution	Principal Investigator	Total Amount Requested	Total Amount Recommended
1/97	014	TUHSC/LSUHSC-NO	Alan M. Miller; Steve Nelson	\$7,500,000	\$5,950,000
2/96	003	LSU Ag Center	Stephen A. Harrison	\$915,146	\$915,146
3/93	013	TUHSC	Robert F. Garry	\$7,500,000	\$5,800,000
4/92	005	LSUHSC-NO	Paul L. Fidel, Jr.	\$5,000,000	\$3,350,000
4/92	010	Tulane	Vijay T. John	\$7,500,000	\$3,900,000
6/86	009	McNeese	Nikos Kiritsis	\$4,995,897	\$2,700,000
7/81	001	Dillard	Kevin McLin	\$2,619,978	\$1,500,000
7/81	006	Loyola	Patricia L. Dorn	\$3,800,543	\$498,000
7/81	007	Loyola	Maureen Shuh	\$678,749	\$500,000
7/81	008	Loyola	John Snyder	\$7,498,990	\$992,278
7/81	019	Xavier	Tarun K. Mandal	\$2,485,861	\$1,500,000
TOTAL				\$50,495,164	\$27,605,424

**TABLE II
RECOMMENDED FOR FUNDING IF ADDITIONAL MONIES BECOME
AVAILABLE
(PRIORITY II) (5)**

Rank/ Score	Proposal #	Lead Institution	Principal Investigator	Total Amount Requested	Total Amount Recommended
12/78	012	Tulane	Jeffrey Tasker	\$7,500,000	\$5,500,000
13/77	011	Tulane/UNO	Gary McPherson; Scott L. Whittenburg	\$6,500,000	\$4,500,000
14/76	015	TUHSC	Darwin J. Prockop	\$4,931,484	\$4,000,000
15/72	004	LSUHSC-NO	Nicolas G. Bazan	\$7,363,750	\$5,000,000
16/70	018	Xavier	Kathleen Kennedy	\$4,265,888	\$3,200,000
TOTAL				\$30,561,122	\$22,200,000

**TABLE III
NOT RECOMMENDED FOR FUNDING (3)**

002 (Xu)	016 (Penland)	017 (Vorus)
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**RC/EEP PROPOSAL EVALUATIONS
HIGHLY RECOMMENDED FOR FUNDING
(PRIORITY I)**

Rank/ Score	Proposal #	Lead Institution	Principal Investigator	Total Amount Requested	Total Amount Recommended
1/97	014	TUHSC/LSUHSC- NO	Alan M. Miller; Steve Nelson	\$7,500,000	\$5,950,000
2/96	003	LSU Ag Center	Stephen A. Harrison	\$915,146	\$915,146
3/93	013	TUHSC	Robert F. Garry	\$7,500,000	\$5,800,000
4/92	005	LSUHSC-NO	Paul L. Fidel, Jr.	\$5,000,000	\$3,350,000
4/92	010	Tulane	Vijay T. John	\$7,500,000	\$3,900,000
6/86	009	McNeese	Nikos Kiritsis	\$4,995,897	\$2,700,000
7/81	001	Dillard	Kevin McLin	\$2,619,978	\$1,500,000
7/81	006	Loyola	Patricia L. Dorn	\$3,800,543	\$498,000
7/81	007	Loyola	Maureen Shuh	\$678,749	\$500,000
7/81	008	Loyola	John Snyder	\$7,498,990	\$992,278
7/81	019	Xavier	Tarun K. Mandal	\$2,485,861	\$1,500,000
TOTAL				\$50,495,164	\$27,605,424

RANK 1

Proposal Number	014RCEEP-07
Proposal Title	Clinical and Translational Research Education and Commercialization Program (CTRECP) at Tulane University and Louisiana State University Health Sciences Centers
Submitting Institution/PI	TUHSC-LSUHSC-NO/Alan M. Miller & Steve Nelson
Amount Requested	\$7,500,000

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 29

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: This is an outstanding joint proposal between TUHSC and LSUHSC to support clinical and translational research. The project would bridge the LSUHSC General Clinical Research Center (GCRC), which is being discontinued, and ultimately a successful Clinical and Translational Science Award (CTSA). The GCRC/CTSA is a crucial component of clinical and translational research and it is realistic to suggest that the inability to support this initiative would be a serious blow to research at the two institutions. The past track record is excellent – current projects using the GCRC have garnered over \$50 million and the training program has been highly productive. Conceptualization of the proposal is excellent. The educational component for training physicians for clinical research is innovative and likely to be successful in increasing the numbers of trained clinical scientists. The use of a navigator for clinical researchers to guide the development of a clinical research protocol from conception to patient accrual is an excellent idea and should provide the type of mentoring that is crucial for effective faculty development. The proposed commercialization core is solid and demonstrates a good institutional track record in this area. The investigators correctly state that “no other single research enterprise is more essential to the recovery and growth of both medical schools than the proposed Tulane/LSU Research Core.” The panel agrees. Nonetheless, the funding request is somewhat excessive given the remaining no-cost extension on their current GCRC grant.

Human Capital Resources (25%) SCORE: 25

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: Extension of the GCRC will result in improved retention of current clinical scientists and enhanced recruitment of additional clinical scientists. Failure to maintain the GCRC would almost certainly result in an exodus of existing personnel at both faculty and staff levels. Over the longer term, the failure to get a CTSA grant will seriously compromise these institutions' ability to recruit new clinical research faculty. The CTSA, and the current proposal on an interim basis, are essential to LSUHSC and TUHSC continuing to train clinical and translational researchers.

Project Impact and Strategic Implications (30%)

SCORE: 28

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?
- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

Comments: This project should have profound strategic implications for the medical schools. Without a CTSA, TUHSC and LSUHSC will not be competitive in clinical and translational research. Furthermore, the loss of the GCRC would make it less likely that a CTSA application would be successful. Therefore, this application is essential to maintain and expand clinical research initiatives, as well as the training of additional clinical scientists, both crucial elements in today's translational world.

Leveraging of Resources (15%)

SCORE: 15

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

Comments: Substantial existing institutional commitments as well as NIH and industrial grants strongly support these initiatives.

TOTAL SCORE: 97

BASES OF RATING

This is an outstanding proposal that is absolutely essential to the future of clinical and translational research in south Louisiana. It will support the infrastructure that is the backbone of clinical research and the training of future clinical and translational scientists. Given the substantial impact of Hurricane Katrina on this program and the excellent track records of the faculty involved, support is essential and highly likely to bear fruit both in terms of an improved workforce and enhanced commercialization. It is recommended that the budget be reduced by \$1 million, consistent with the remaining GCRC money, that Facility Space Charges be deleted (\$471,000) and that IAC travel be reduced to \$15,000 per year (\$30,000). Additional reductions should be made at the PI's discretion. Total funding of \$5.95 million is recommended.

RANK 2

Proposal Number	003RCEEP-07
Proposal Title	Coastal Area Research Enhancement in Support of Genetic Improvement of Native Coastal Wetlands Creation and Restoration
Submitting Institution/PI	LSU Ag Center/Stephen A. Harrison
Amount Requested	\$915,146

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 29

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: The loss of protective wetlands along the Gulf Coast is considered to be the most significant environmental problem in the Gulf region. The development and evaluation of salt tolerant varieties of coastal marsh plants and methods of efficient planting (e.g., aerial seeding) are priorities identified in the RC/EEP RFP. Genetics and genomics involve selection and breeding desirable traits in wetland plants, and re-vegetation techniques are classified under environmental engineering and the niche areas of ecology and plant sciences. This project is well positioned to make significant contributions in these areas, and to address some of the most serious environmental problems facing Louisiana.

Human Capital Resources (25%) SCORE: 23

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: The transition of the former Citrus Research Station to the Coastal Area Research Center by the LSU Agricultural Center will allow scientists and students adequate space/facilities, access to salt, brackish and fresh water, and ready access to adjacent wetlands. This facility is located south of New Orleans in an area devastated by Katrina. The transition to the Coastal Area Research Center was prioritized in the LSU Ag Center Master Plan and will provide a unique opportunity for scientists/students to learn and evaluate through field research. This project will include scientists and students from several disciplines at LSU, cooperating federal and state agencies, as well as visiting scholars from outside the State. The reconstruction of the Center will enable research to take place. Activities including pond construction, development of greenhouse facilities, establishment of student housing and the addition of faculty will provide jobs as well as encouragement to local residents who have long supported the operation of the Research Center.

Project Impact and Strategic Implications (30%) SCORE: 29

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?

- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?
- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

Comments: The re-designation of a land-grant college experiment station from one of growing specific agricultural commodities to an environmental center has major strategic implications and assures LSU a greater and more significant national and international role in wetlands research. The construction of wetland plant research facilities will be completed early in the project and significant research effort is expected by the summer of 2008. Research under the Coastal Plants Program has been underway at various locations since 1990; this facility offers a focal point and dedicated facilities for intensive wetland research.

Leveraging of Resources (15%)

SCORE: 15

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

Comments: The proposal indicates matching on a 1:1 basis, including start-up funds, supplies, current construction of administrative offices and outbuildings, and graduate student assistantships. The realignment of the goals of this facility by the LSU Ag Center Master Plan assures the long-term existence of this facility, which was first established in 1949. Scientists in the Coastal Plants program at LSU have a history of obtaining outside funding for their research; this facility will provide for additional opportunities and collaboration with State and federal entities.

The review panel notes no mention in the proposal of student training other than graduate student opportunities. While this may be a remote location, some consideration should be given to the development of wetland educational opportunities for K-12 students and/or biology teachers under the LSU Coastal Roots Program and other State environmental educational initiatives. These types of programs may be possible as the Center is developed and programs put in place over time.

TOTAL SCORE: 96

BASES OF RATING

This modest proposal is aligned with the RC/EEP program priorities, is highly sustainable, and, given its location and access to affected wetlands, should develop into a major research center. The need for wetland restoration is well recognized by the public and new technologies need to be developed for efficient, effective restoration for the protection of Louisiana coastlines. The panel recommends full funding of \$915,146.

RANK 3

Proposal Number	013RCEEP-07
Proposal Title	DESIGN, DELIVERY AND DEVELOPMENT OF THERAPEUTIC PEPTIDES
Submitting Institution/PI	TUHSC/Robert F. Garry
Amount Requested	\$7,500,000

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 27

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: This is an exciting proposal by Dr. Garry and the Louisiana Peptide Translational Research Consortium (LPTRC) to identify, produce, test and commercialize peptide-based therapeutics for a wide array of diseases. The central core of the project is to combine the broad expertise within the Consortium to create the necessary support, animal models, peptide chemistry, pharmacology, peptide delivery, etc., increasing the likelihood that one or more useful peptides will emerge and lead to commercial products and biotech spin-offs. The projects include infectious diseases (anti-viral peptides, anti-bacterial peptides, anti-sepsis peptides and anti-HIV peptides), hypertension, autoimmunity/transplantation and multiple myeloma, the common thread being the development of therapeutic peptides. While it would have been helpful to have more information to assess the program, the participants clearly have the ability to identify and develop peptides and in most cases already have lead candidates. There is little discussion of educational goals in the proposal; however, since these projects would involve students at all levels, a positive educational outcome is expected. In response to criticism of their educational component, the investigators added a training program for technicians and were convincing in their pledges to support it. There is not extensive discussion of a commercialization plan, but based on the strong track record of these investigators, successful commercialization is clearly a likely outcome. This project is consistent with the RFP and the investigators are experienced and, in some areas, superb. Despite the high quality of the proposal, the budget in many areas is excessive.

Human Capital Resources (25%) SCORE: 24

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: This project will help stabilize LPTRC and likely help in the retention of key faculty members currently being recruited by others. Beyond faculty retention issues, there is little discussion regarding the interface of the program with human capital resources, though the substantial programmatic expansion to be achieved by this proposal certainly will have a positive impact on hiring staff and faculty support. In addition, in response to subject-area reviewers' criticism, a training program for technicians was added. If the group is successful in starting any biotech spin-offs, employment opportunities will be expanded.

Project Impact and Strategic Implications (30%)

SCORE: 28

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?
- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

Comments: Drug development is a high-risk venture, and whether or not a therapeutic peptide emerges is anyone's guess; however, these are excellent investigators with good track records and even if no new drugs emerge, the LPTRC will be strengthened, additional support from other sources will be more likely, and the overall impact on peptide science and research in therapeutic peptides will be advanced. The team's excellent track record argues well for the project's stability and likely impact.

Leveraging of Resources (15%)

SCORE: 14

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

Comments: RC/EEP funding will be well leveraged with existing infrastructure, existing grants and other unrestricted funds.

TOTAL SCORE: 93

BASES OF RATING

Overall, this is a well-considered, highly coordinated proposal by a group of excellent investigators. The initiative will aid in faculty retention and solidify the development of therapeutic peptides within the LPTRC, and may bring one or more candidate peptides to development through existing or new biotech companies. The program has a technician training component that would be strengthened by interfacing with the community colleges. Though the project is strong, the budget is excessive. It is recommended that the budget be cut in the following manner: Project 1-reduce one graduate student (\$77,273), Project 2-reduce one postdoc (\$144,173), Project 3-reduce one postdoc (\$122,438), Project 5-reduce one postdoc (\$138,869), Project 7-reduce one postdoc (\$122,438). In the administrative core, eliminate the faculty salaries (\$181,341) and the development grants (\$240,000); in the animal core reduce Christopher LeBlanc to 50% (\$87,000), remove the microarray tech (\$84,000), and remove 10% from supportive expenses (\$307,000). Additional reductions may be made at the discretion of the PI. The faculty in the core are not well justified and the development projects are excessive in an already ambitious program. The overall supportive expenses are also excessive. Funding of \$5.8 million is recommended.

RANK 4

Proposal Number	005RCEEP-07
Proposal Title	South Louisiana Institute for Infectious Disease Research
Submitting Institution/PI	LSUHSC-NO/Paul L. Fidel, Jr.
Amount Requested	\$5,000,000

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 27

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: This application proposes to integrate programs in vaccine development, fungal diseases, sexually transmitted diseases, biodefense/emerging infectious diseases, oral diseases, respiratory diseases, HIV, tropical medicine and ocular diseases into the South Louisiana Institute for Infectious Disease Research. The infectious diseases research faculty, located at TUHSC and LSUHSC, is well established and already exhibits a fair degree of cohesion. This project will augment the infrastructure with the goal of providing support for core facilities, a new educational component to provide one-year practical experience in the core facilities for B.S. and Associate’s-level students and increased research commercialization. The educational component is interesting and may succeed in providing additional qualified technical personnel to support the biologic/infectious diseases enterprise in the South Louisiana area. Support of core facilities is always a good idea; however, the amount of money proposed for administrative support is excessive, as is the request for additional graduate student and postdoctoral support. The proposed activities to help bolster communication and interaction are routine – seminars, mentoring, internal grant review, etc. – but should help engender in the group a higher level of interaction. The discussion of commercialization is centered on a facilitator who would be responsible for educating faculty and promoting commercialization to a large degree by making the core facilities available to groups outside the two universities. While this is worthwhile, it is not a particularly imaginative approach to commercialization; however, the approach of having the facilitator work directly with the faculty to identify research ideas that could be commercialized may have a better chance of success. The research areas are consistent with the RFP. **Most important is the promise of Dr. Joseph Moerschbaeche, Vice-President of Research at LSUHSC-NO, Dr. Paul Fidel, PI, and Dr. John Clements, Co-PI, that use of the Core Facilities at LSUHSC and TUHSC will be made accessible to the faculty of both institutions in a transparent manner.**

Human Capital Resources (25%) SCORE: 23

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: In the short term the proposal should bolster recruitment and retention efforts by providing support for students, postdocs, faculty pilot projects, and start-up packages. Recruitment will also be augmented by the improved core facilities. The educational component is needed and should have a very positive impact on the availability of technical personnel to support the expansion of research in south Louisiana.

Project Impact and Strategic Implications (30%)

SCORE: 28

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?
- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

Comments: The proposed activities, particularly the educational and core facilities components, are consistent with RC/EEP objectives. The timeline is reasonable, as is the plan to equalize graduate student stipends. The impacts of both core facility expansion and the Bioscience Education and Training program should be both short-term and sustained. Transparent availability of the core facilities to faculty at both institutions will have a dramatic effect on cohesion between the two campuses. Success of this Institute could have a powerful impact on project support and commercialization over the long term.

Leveraging of Resources (15%)

SCORE: 14

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

Comments: Reasonable sources from existing funding will leverage RC/EEP support.

TOTAL SCORE: 92

BASES OF RATING

The strengths of this proposal are the high scientific quality and the significant amount of independent funding of the infectious diseases faculty, the value of improving the core facilities and the proposal of a worthwhile educational program that should provide a better stream of technical personnel for south Louisiana. **Most important is the promise of Dr. Joseph Moerschbaecher, Vice-President of Research at LSUHSC-NO, Dr. Paul Fidel, PI, and Dr. John Clements, Co-PI, that use of the Core Facilities at LSUHSC and TUHSC will be made accessible to the faculty of both institutions in a transparent manner.** Success of this Institute could have a powerful impact on grant support and commercialization in the long term. Despite the strength of this program, the budget is excessive and there is overlap in equipment due to the recent award to the Center for Vaccine Development through the P-KSFI and the recommendation for funding of the Clinical and Translational Research proposal through RC/EEP. Total funding of \$3.35 million is recommended. Further, the panel recommends that the following items be deleted or reduced in this project: Business Manager in years 1-3 (\$195,000), Information Management Specialist in years 1-3 (\$157,000), support for 20 additional graduate students at TUHSC and LSUHSC in years 2 & 3 (\$240,000), 50% reduction in collaborative research project support in years 1-3 (\$450,000), bioinformatics support in years 2 & 3 (\$70,000), postdoctoral support in years 2 & 3 (\$200,000), Rebecca Clark-Clinical trials in years 1-3 (\$40,812), Rodrigo Hasbun-Clinical Trials in years 1-3 (\$37,500), Access Grid in year 1 (\$120,000), Bioreactor and Biorad Chromatography equipment in year 1 (\$125,000). Additional reductions may be made at the discretion of the PI.

RANK 4

Proposal Number	010RCEEP-07
Proposal Title	Development of a Nationally Recognized Model in Research Commercialization, Education and Workforce Development in Chemical Engineering and the Chemical Sciences through University and Community College Collaborations
Submitting Institution/PI	Tulane/Vijay T. John
Amount Requested	\$7,500,000

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 28

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: Tulane's Chemical and Biomolecular Engineering and Chemistry Departments, Xavier's Departments of Chemistry and Mathematics, and Nunez's Industrial Technology program proposed to collaborate on discoveries that have commercialization potential and develop a skilled workforce in chemical sciences at the undergraduate and technician levels. The research focuses on health, energy and environment. Some of the PIs and research activities appear to overlap those in other RC/EEP proposals. Thus it is recommended that the research activities at Tulane and the chemistry research at Xavier be reduced and only those activities that are likely to lead to commercialization be funded. The panel was enthusiastic about the innovative proposal to enable Tulane's chemical engineering students to work with process technology students and equipment at Nunez. This interchange will provide hands-on practical experience to future chemical engineers and role models and tutoring for the Nunez students. The developmental mathematics program at Xavier has the potential to increase the number of minority students who pursue science and technology careers. The panel recommends that some of the mentoring being done by Tulane students also be done at Xavier. The results of the mathematics program should be evaluated by an external evaluator who is experienced in mathematics education. It is recommended that the faculty portion of the Nunez component be funded, as well as half of the equipment request. There is little reason to expect substantial increases in commercialization from this project, though the additional equipment, facilities and students should increase the number of qualified employees available to the chemical industry so important in the region.

Human Capital Resources (25%) SCORE: 23

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: The project's goal is to produce more research-ready undergraduates, particularly African-Americans. Most of the work at Xavier centers around revising courses to meet student needs – especially in mathematics, but also in chemistry. The proposal identifies the negative effects of poor performance in mathematics and indicates that a new course is being developed to remediate this situation. There is little discussion of what this should look like, but its importance suggests that it should be funded. The process technology program is cognizant of the Gulf Coast Chemical Process Technician Association, but not the Center for Process Technology at the College of the Mainlands. Tulane's chemical engineers will have a much stronger background in practical applications in process technology. Support for recruitment should improve competitiveness, and the support should improve student retention and morale, and result in a better product. The overall impact will be substantial.

Project Impact and Strategic Implications (30%)

SCORE: 28

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?
- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

Comments: The new equipment and facilities, combined with recruitment efforts, should have a lasting effect and may generate resources to be self-sustaining. Of concern to the panel is what will happen to the extensive tutoring and the faculty's intensive effort to upgrade teaching and remediation at Xavier after three years. The overall project impact is consistent with the RC/EEP's mission related to educational enhancement.

The leadership is by committee – one representative from each institution. The supervisory committee is likewise composed of senior individuals from each school. Advisors are mentioned, but not named; their duties need to be described. The timelines, while reasonable for accomplishing goals, could be more ambitious. The proposal utilizes existing support and facilities effectively. While integration of programs is stressed, it is to some extent superficial except in the case of Nunez and Tulane. This partnership could be of great benefit to both institutions if the educational experience is integrated as proposed. The collaboration, especially with Nunez and the mathematics program, should receive evaluation at least annually to determine whether goals are being met.

Leveraging of Resources (15%)

SCORE: 13

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

Comments: The institutions are each contributing significant resources. There are private contributions as well.

TOTAL SCORE: 92

BASES OF RATING

The overall project will clearly benefit each institution in a manner consistent with goals of the RC/EEP. The teaching and remediation enhancements at Xavier could be profound. The integration of chemical engineering at Tulane with process technology at Nunez should have meaningful benefits. The proposal is less clearly poised to achieve improvements in research, research integration, or commercialization, but this is more than offset by the educational impacts. It is thus recommended that the proposal be funded at \$3.9 million. Tulane should receive \$1.2 million, to support 1 faculty member, 2 graduate students, 4 undergraduates, and 1 postdoc, along with the chemical engineering equipment. Xavier should receive \$1.2 million - \$800,000 for the mathematics program and \$400,000 for the chemistry program. Nunez should receive a total of \$1.5 million – \$500,000 for personnel and \$1 million for PTEC equipment.

RANK 6

Proposal Number	009RCEEP-07
Proposal Title	Support for Educational and Economic Development in Southwest Louisiana (SEEDS-LA)
Submitting Institution/PI	McNeese/Nikos Kiritsis
Amount Requested	\$4,995,897

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 27

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: The project seeks to support significant collaboration between the principal four-year campus and the principal two-year campus in southwest Louisiana. Major projected outcomes are the expected Southern Association of Colleges and Schools (SACS) accreditation of SOWELA and the restoration of critical laboratory equipment at McNeese.

The panel expressed some reservations regarding the assertion made in the proposal and interview that the effort to recruit high school students to scientific and technical careers requires a Mobile STEM Laboratory and major related expenses. The effectiveness of this approach is not documented and is not consistent with the findings of the National Research Council's study, *America's Lab Report*. There are methods using combinations of hands-on laboratories and simulations that can provide better instruction and at less cost. In addition, this item, a motorized vehicle, is specifically disallowed in the RFP. The panel's funding recommendation, therefore, does not include costs for the Mobile Laboratory.

The Alligator serum research appears to be unique and some funds should be used toward commercialization of outcomes.

Human Capital Resources (25%) SCORE: 22

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: The proposal will have a significant impact on the education of technicians at the two-year degree level, and on the improvement of science education at McNeese. An important outcome should also be easing the transition of students from SOWELA to McNeese.

Many of the goals are described in percentages, with no supporting numbers. In such cases, a stronger argument could be made by including whole numbers.

The Center for Innovation and Excellence in Teaching and Learning could be a good idea, but insufficient details are provided regarding its operation. Who has the expertise to run the Center? What are the models? Mentoring could have a positive impact, but who has the time and who has the expertise? Is Writing Across the Curriculum the greatest need? Who manages the Freshman Foundation Course? What are the models?

Project Impact and Strategic Implications (30%)

SCORE: 25

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?
- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

Comments: The project will have a direct impact on local high schools and produce students who are better qualified to undertake college-level work. It will also help facilitate transition from SOWELA to McNeese. To maximize the benefits of these connections, however, projects need to collaborate effectively. The stipends for students are very small. An evaluation plan needs to address a few key issues and should be undertaken by external consultants.

Leveraging of Resources (15%)

SCORE: 12

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

Comments: Leveraging is adequate for the proposed activities, and largely includes grant support and the promise of increased space.

TOTAL SCORE: 86

BASES OF RATING

The panel recommends that RC/EEP funds be used to advance the efforts of SOWELA to achieve SACS accreditation and to enable engineering programs at McNeese to meet needs of the local process technology industry. The panel recommends no funding for the Mobile Laboratory. Expenditures for laboratory equipment and supplies in first-year teaching laboratories should be kept to a minimum. For McNeese, the panel recommends \$1.5 million, divided as follows: approximately \$600,000 for personnel, \$700,000 for equipment, and \$200,000 for support. Some of the funds provided to McNeese should be used to support commercialization activities. For SOWELA, a total of \$1.2 million is recommended: approximately \$500,000 for personnel and \$700,000 for process technology equipment.

RANK 7

Proposal Number	001RCEEP-07
Proposal Title	Multi-Media Intercollegiate, Interdisciplinary Technological Research
Submitting Institution/PI	Dillard University/Kevin McLin
Amount Requested	\$2,619,978

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 25

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: This proposal primarily addresses opportunities in the Louisiana film industry and is directed toward training students for jobs in this industry that are typically contracted to non-locals. Curricula of specific courses, faculty credentials, and a list of equipment needed for training to provide suitable preparation for entering the film industry were provided in the proposal. Funding was also requested for Delgado Community College to upgrade its film technology to provide better educational opportunities for its students. This is an excellent goal that will allow both institutions to improve the quality of film education in the region and provide students with the training necessary to work in Louisiana's growing film industry.

Human Capital Resources (25%)

SCORE: 21

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: The proposed activities have the potential to attract a large number of students and faculty. When the Multimedia Intercollegiate, Interdisciplinary Technological Research Community (MITRC) acquires the funded equipment, it will immediately establish itself as a primary center of practice-oriented film studies. It will also attract existing industry professionals who will be able to upgrade and improve their skill sets.

Project Impact and Strategic Implications (30%)

SCORE: 25

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?
- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

Comments: The panel recognizes the film industry as an important current and future growth area in Louisiana. RC/EEP funding will enable the partners to establish a pipeline from Delgado and Dillard directly into the film industry.

The equipment will be purchased in the first year and incorporated immediately into Dillard's and Delgado's curricula. Shortly thereafter, students trained in its use should become competitive for some categories of employment in the industry. Following the completion of the revised curricula to be designed through this award, students will be highly competitive in a wide range of industry specialties.

Over the long term, a successful, operational program will provide a continuous supply of skilled employees to the targeted industry.

Leveraging of Resources (15%)

SCORE: 10

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

Comments: The support provided by this award will be leveraged with facilities currently available on the Dillard campus. The equipment to be purchased by Delgado will be integrated into existing and new curricula offered by both Delgado and Dillard.

The funded project will establish a tightly integrated pipeline from a two-year to a four-year institution and is designed to minimize redundancy at the participating campuses. The panel believes that the proposal presents an effective plan that will lead to sustainability and the long-term success of the funded activities.

TOTAL SCORE: 81

BASES OF RATING

The rise of the film industry in Louisiana was a success prior to the 2005 storms and is one of the highlights of post-Katrina recovery. According to published data, Louisiana is third only to California and New York in film production activities. Moreover, according to a report by the Entergy Louisiana Economic Development staff, the value of film production in the State grew from \$10 million in 2002 to \$640 million in 2005. RC/EEP support will fund the establishment of an intercollegiate multimedia educational consortium to prepare students for jobs in many areas of the film industry, most notably those involving sound and video editing, camera operations, film and music business operations, and film and stage acting. The workforce development component of the proposal presents an attractive goal.

The panel encourages the funded institutions to explore possibilities for research in the film and sound-for-film fields. It also recommends that the campuses provide educational assistance in relevant areas beyond major motion picture production, such as video games, and TV, Web and other broadcast areas.

The panel recommends total funding of \$1.5 million, of which \$444,333 should support the request for equipment from Delgado. The remainder should be used to support the Dillard equipment request. The panel encourages collaborative use of the equipment by all institutions in the Music Industry Consortium that is also recommended for RC/EEP funding.

RANK 7

Proposal Number	006RCEEP-07
Proposal Title	Chagas Disease in Southeastern Louisiana
Submitting Institution/PI	Loyola New Orleans/Patricia L. Dorn
Amount Requested	\$3,800,543

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 25

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: The overall goals of the proposal are to expand research, commercialization and education in Chagas disease. While the disease is of major importance in South and Central America, it is not a problem in North America at the present time. Despite the recent identification of a single case in Louisiana and the influx of workers/immigrants from Central and South America, it is not clear that Chagas disease will become a serious, emerging infectious disease. Nonetheless, the proposed program builds on an existing strength, outlining a reasonable plan for an extensive epidemiology study and development of diagnostic tests with existing companies. It is not clear, however, that the program presents extensive opportunities for commercialization unless Chagas disease emerges as a significant infectious disease in Louisiana and other parts of the U.S.

The development of the Tropical Medicine Research Scholars Program is reasonable, well defined and likely to provide an excellent undergraduate opportunity for students. Its strengths are that it captures undergraduates early, has a base in research, and integrates the undergraduates with graduate students and faculty. Its weakness is that it encompasses a small number of students. However, the review panel was enthusiastic about the program and recommends that Dr. Dorn receive \$166,000 per year to oversee the Scholars Program in the biology department.

The proposal requests that a Geographical Information System (GIS) be established at Loyola University with upgrades to the GIS at Tulane, with the goal of enhancing capacities to respond to future threats, including Chagas disease. It is not clear that two independent systems are needed or that the program has taken into account other such systems in the region or the role of other institutions in teaching GIS.

Human Capital Resources (25%)

SCORE: 21

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: The faculty involved in this program are for the most part successful and the proposed collaboration should increase their competitiveness. It is not clear that funding the proposal will have immediate impact on faculty retention, but over the long term should have a positive effect on the environment, thus improving both retention and recruitment. The student research program is an excellent approach to training students in laboratory science and research, and only this portion of the project is recommended for support. It should attract excellent students and, if successful, could have substantial impact.

Project Impact and Strategic Implications (30%)

SCORE: 23

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?
- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

Comments: The narrow impact of Chagas disease in Louisiana and the uncertainty that it will increase its presence reduces the overall strategic importance of the proposal. However, the GIS center could achieve a broader impact by extending its research beyond Chagas. The training program for students is impressive and may well expand to have a significant impact on the availability of trained laboratory scientists.

Leveraging of Resources (15%)

SCORE: 12

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

Comments: The proposal will leverage RC/EEP funds with institutional support, development of new grant proposals, and partnerships with companies. Of concern is how the program will be sustained after the grant ends, since many of the proposed personnel will be difficult to support through normal institutional mechanisms and individual research grants.

TOTAL SCORE: 81

BASES OF RATING

This is a very good proposal to study the prevalence of Chagas disease in Southern Louisiana. The narrow impact of human Chagas disease in Louisiana and the uncertainty that it will establish itself in the area reduces the overall strategic importance of the proposal. Unless human Chagas disease becomes a significant problem, it is unlikely that there will be major commercialization emerging from this project. The student research program is an appropriate approach to training students in laboratory science. It should attract outstanding students and could have a substantive impact. It is thus recommended that the student research program be supported in the biology department at approximately \$166,000 for three years. Total funding of \$498,000 is recommended.

RANK 7

Proposal Number	007RCEEP-07
Proposal Title	Enhancement of Undergraduate Research in Cancer Biology
Submitting Institution/PI	Loyola New Orleans/Maureen Shuh
Amount Requested	\$678,749

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 25

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: This application is submitted by two primarily undergraduate institutions. The funding requested will be used primarily for summer support for research collaborators, a full-time technician, three undergraduate thesis students in biology, and supplies. The research focus is a form of cancer that is the result of a viral infection by HTLV-1. RC/EEP funding will help both to maintain the research project of Dr. Maureen Shuh, the PI, whose research was adversely affected by the two hurricanes and to retain this promising young investigator.

This project proposes research into an infectious agent and thus targets the highest priority research areas identified in the RFP. It was not clear from the application how the work described will lead to a structure-based drug design, but studies of Tax could lead to a better understanding of how virally encoded transcription factors are capable of leading to cell transformation. The year-1 studies will standardize a new method to purify the protein, generating a native untagged protein preferable for the type of structural analysis planned for year-2 that may be patentable. In year-2, Tax-protein and Tax-DNA interactions using this protein will be studied. The studies described will contribute significantly to the field of cancer research.

Human Capital Resources (25%) SCORE: 21

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: The proposed activity will help to retain a talented investigator, Dr. Shuh, and attract and train undergraduate students in research. A strength of the project is the demonstrated high level of mentoring achieved by Dr. Shuh in the past, placing students in NIH fellowships and guiding them to entry into medical school.

Project Impact and Strategic Implications (30%) SCORE: 25

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?
- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

This is a modest proposal between two collaborating eligible institutions that will impact the immediate goals of the RC/EEP. The ability to rescue some of the advances made pre-hurricane in this line of research (lines, reagents, personnel recruitment) will restore this project and retain a promising investigator, Dr. Shuh. A reasonable timeline has been described.

Leveraging of Resources (15%)

SCORE: 10

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

The budgeted funds will support research activities and travel of students, the collaborators and the PI. There is evidence of significant cost sharing with the purchase of a Nuclear Magnetic Resonance instrument at Xavier and funds to maintain this equipment in Dr. Robert Blake's lab. Institutional matching is also provided. The project will support the recruitment, retention and training of three undergraduate students and a technician for the research team. It will provide bridge funds during a funding gap for the PI. The donation by Novartis of a Fast Protein Liquid Chromotography system for the described work is a real benefit to the proposal.

TOTAL SCORE: 81

BASES OF RATING

The proposal activities are among the high priority areas of the RFP. The funding specifically addresses the need for four-year colleges in the area to restore their capacity to train workers in biotechnology.

The proposal has several strengths, including the focus on undergraduate training, and on infectious disease and cancer research, and the demonstrated training ability of the primary mentor, Dr. Shuh. Prior trainees in Dr. Shuh's lab competitively received fellowships at NIH and entry to medical schools. The application's extensive institutional matching for start-up costs, equipment and subcontract funding is excellent. The panel recommends that funding be reduced from the requested level of \$678,749 to \$500,000.

RANK 7

Proposal Number	008RCEEP-07
Proposal Title	New Orleans Music, Entertainment and Educational Consortium
Submitting Institution/PI	Loyola New Orleans/John Snyder
Amount Requested	\$7,498,990

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 20

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: The proposal identifies a large number of objectives that span numerous disciplines, technologies and methodologies. Many of these involve creating or enhancing educational opportunities for local university music students, non-student professional musicians, and K-12 students. Some research activities are mentioned, for example in the area of intellectual property rights management, but no clear methodology or goals are provided for these activities.

Human Capital Resources (25%) SCORE: 21

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: Once the activities recommended for funding are undertaken, the consortium will become distinguished as a major national center for professional development in the entertainment industries. This will be a strong incentive for retention of current students and faculty and will also assist in attracting new students and faculty to the region.

Project Impact and Strategic Implications (30%) SCORE: 30

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?
- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

Comments: The activities recommended for funding address multiple goals and objectives consistent with the RC/EEP and RFP. Primary among these is providing long-term benefits to the workforce of the entertainment industries in Louisiana through enhanced professional development.

The proposal includes a timeline for the activities planned during the three-year grant period. The panel recommends that BoR staff request a more detailed work plan for those activities that are recommended for funding.

The activities recommended for funding will have a clear long-term impact on the region and will be sustainable both through revenues to be generated by the services to be provided and through committed support from the partnering institutions.

Leveraging of Resources (15%)

SCORE: 10

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

Comments: RC/EEP support will be leveraged by considerable resources provided by the host institutions. In addition, the well-established and industry-leading program in Music Industry Studies at Loyola will serve as an outstanding “umbrella” for the funded activities.

The institutions participating in the proposal are geographically proximate and have a history of collaboration. The panel believes these attributes strengthen the proposal and will assist in the long-term sustainability of the funded activities.

TOTAL SCORE: 81

BASES OF RATING

This proposal was submitted by several eligible institutions and addresses a vast range of activities intended to rebuild and enhance the music industry infrastructure of southeast Louisiana. Though the panel recognizes the enormous and disruptive impact Hurricanes Katrina and Rita had on the region, due to budgetary limitations it is unable to support the entire range of activities proposed. However, the panel strongly supports the formation of a consortium of institutions to explore novel approaches to developing the career and professional (i.e., business) skills of local musicians and to prepare students to work in the music industry. It encourages the institutions to establish new curricula, workshops, training centers and other creative programs, especially those that use cutting-edge technology, that will be of direct benefit to musicians in the region.

The panel recommends funding of \$992,278 for the development of such a consortium and requests that the PI submit a plan of action to the Board of Regents outlining how the consortium will fulfill the recommendations.

The panel also encourages members of the consortium, where appropriate, to employ the film and audio technology provided at Dillard through the RC/EEP (Proposal 001RCEEP-07).

RANK 7

Proposal Number	019RCEEP-07
Proposal Title	CENTER FOR NANOMEDICINE AND DRUG DELIVERY
Submitting Institution/PI	Xavier of Louisiana/Tarun K. Mandal
Amount Requested	\$2,485,861

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 25

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

RC/EEP funding is requested to support a new Center for Nanomedicine and Drug Delivery and related research activities at Xavier University. A major strength of the application is that the focus of the proposed work is in nanomedicine, one of the high priority areas of research defined in the RFP. Several investigators at Xavier have NIH and NASA funding in the area of drug delivery and the Center will build on an existing focus at the university. The Xavier researchers have demonstrated expertise in the area of drug delivery systems using nanoparticles, microspheres and biologically compatible polymers. Xavier was severely impacted by the hurricane, suffering damage to buildings and loss of equipment, supplies, faculty, staff and students; thus there is high assurance of need. The proposed work will support established research programs to retain faculty and trained staff, and solicit new pilot project ideas for funding which could help to recruit new faculty or collaborators to this already strong discipline at Xavier.

The proposal will explore formulations that include oral, cutaneous, colonic, parenteral, pulmonary and vaginal modes of delivery of drugs/therapeutic agents. The loads for the various nanodevices are also over a wide range of therapeutics, including protein/peptides, DNA/siRNA, and chemotherapeutics. The commitment to engaging an external consultant will in part address the project's need for infrastructure to assist in the translational aspects of this applied research area. The educational component will include practical training and laboratory research experiences for students.

Human Capital Resources (25%) SCORE: 20

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

A strength of the proposal is the core of outstanding key investigators with extensive experience in developing drug delivery systems. For example, Dr. Tarun Mandal (PI) has published in the area of hydrogels, microcapsules, and biodegradable polymeric controlled release systems. He currently has five separate ongoing grants, all in nanosciences. In addition, the establishment of an external advisory board with outstanding members will be a great asset to the Center. For example, Dr. Hamid Ghandehari is a member of the American Academy of Nanomedicine and a leader in the field of nanotubes and the use of chemotherapeutic-loaded polymers. Another strength of the application is the location of the proposed Center at Xavier. Xavier has an established reputation for excellence in undergraduate education and a strong tradition in STEM disciplines and undergraduate research experiences. Thus a new population of students would be exposed to this new and exciting biomedical field.

Project Impact and Strategic Implications (30%)

SCORE: 25

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?
- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

The project has the potential to create a Center for an under-represented field, nanomedicine, in the New Orleans area which will build on the experience and expertise of two established investigators at Xavier with experience in drug delivery systems. The project will create the opportunity for an under-served population of students to be trained in this highly biotechnical area of research. The Center will also expose pharmacy undergraduate students to nanoscience and technology, which could have a tremendous impact on the economic growth and sustainability of biotechnology in the region.

Leveraging of Resources (15%)

SCORE: 11

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

A number of Xavier investigators have collaborators on nanomedicine projects at Tulane, Columbia, and LSU; there thus is a core of investigators with established collaborations to build the program as one approach to resource leveraging. Xavier has also received private funds in excess of \$15 million to reconstruct laboratory space and classrooms, has obtained a new field emission microscope for studying surfaces of nanoparticles and associated imaging and detectors, and has strong institutional support and evidence of cost sharing. A joint Xavier/Tulane Center for Nanomedicine will attract and retain faculty with expertise in this area. The Center will also train a new workforce of scientists at both the upper levels (graduate and postdocs at Tulane), and undergraduate level (at both institutions).

A weakness is that nanomedicine has very special requirements. The proposal includes no details about safety training for students or faculty in the use or production of nanostructures, or a standard of practice for the detection of defects and cleaning of nanostructures beyond general good laboratory practices. Another weakness in leveraging of resources was the lack of engagement of two regional facilities for Nanomaterials: the J. Bennett Johnston, Sr., Center for Advanced Microstructures and Devices (CAMD), and the Louisiana Tech Institute for Micromanufacturing.

TOTAL SCORE: 81

BASES OF RATING

The principal strength of the application is the expertise and experience of the PI and the co-PI in the areas of nanomedicine. Also an asset is the external advisory board and its outstanding membership. The focus on nanoscience, a high priority research area specified in the RFP, is an excellent fit for Xavier, which has a high degree of need, a tradition of excellent science education, and a focus on undergraduate STEM disciplines. The strong institutional support and cost sharing in the form of rebuilding and equipment replacement that includes a high performance electron microscope for this nanomaterials effort demonstrate a high level of commitment to this project.

The panel recommends funding of \$1.5 million.

**RC/EEP PROPOSAL EVALUATIONS
RECOMMENDED FOR FUNDING IF ADDITIONAL
MONIES BECOME AVAILABLE
(PRIORITY II)**

Rank/ Score	Proposal #	Lead Institution	Principal Investigator	Total Amount Requested	Total Amount Recommended
12/78	012	Tulane	Jeffrey Tasker	\$7,500,000	\$5,500,000
13/77	011	Tulane/UNO	Gary McPherson; Scott L. Whittenburg	\$6,500,000	\$4,500,000
14/76	015	TUHSC	Darwin J. Prockop	\$4,931,484	\$4,000,000
15/72	004	LSUHSC-NO	Nicolas G. Bazan	\$7,363,750	\$5,000,000
16/70	018	Xavier	Kathleen Kennedy	\$4,265,888	\$3,200,000
TOTAL				\$30,561,122	\$22,200,000

RANK 12

Proposal Number	012RCEEP-07
Proposal Title	The Neuroscience of Stress and Stress-Related Disorders
Submitting Institution/PI	Tulane/Jeffrey Tasker
Amount Requested	\$7,354,606

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 22

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: The long-term goal of this project is to create an internationally visible and sustainable Center for the Study of Stress and Stress Disorders that will bring together researchers, students and clinicians from multiple New Orleans' institutions of higher education in an environment that fosters scientific advancement and creativity and facilitates the channeling of intellectual resources into discovery and economic development. The program consists of six projects that range from basic research into the molecular biology and psychology of rodent stress models, to stress models in non-human primates, to clinical studies on stress in post-hurricane areas. The immunomodulator project did not appear to be well integrated into the project theme. Many of the investigators are well known experts in their areas though the information provided to evaluate each of the six projects was minimal and for the most part lacked preliminary data. This situation made it difficult to adequately assess the likely success of the projects. The proposal also failed in most instances to provide a clear plan as to how the projects would interact and information flow from the basic to the clinical. The proposal includes the formation of a walk-in clinic to treat stress disorders. While it might be needed, its linkage and relationship to the proposal is not as clear as it could be. While there is no commercialization plan *per se*, certain areas with potential for commercialization have been identified. For example, Dr. Zadina has identified endomorphins that are analgesic as well as able to reduce anxiety without the side effects of morphine. While the parent endorphin has a short half-life, cyclized analogs with an increased half-life have been developed and licensed to Cytogel, Inc. In addition, a New Orleans biotech company, DEKK-TEC, Inc., will provide commercialization expertise as well as experience in SBIR/STTR applications as part of the Consortium. A final aspect of commercialization outlines plans to develop jointly with Zygote, Inc., a 3D virtual neurosciences textbook(s) for use from high school through graduate school. Marketing of the textbook is planned, with revenue providing income to support research and development if the endeavor is successful. An interesting educational component was presented to enhance neurosciences from the high school level through graduate school. There was little information as to how this would be accomplished at the high school level. At undergraduate through graduate levels the plan consisted mostly of improved and new course offerings in stress-related neurosciences, improved laboratory experiences at the undergraduate level and expanded course work at the graduate level. This program should improve the teaching of stress-related neurosciences; however, its overall effect on the work force and production of technician-level individuals and neuroscientists will probably be modest.

Human Capital Resources (25%)

SCORE: 20

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: This is a strong, timely program that should have a positive effect on faculty retention and recruitment in New Orleans. The \$250,000 request for start-up costs, to be matched by \$250,000 from the Medical School, should help in recruiting the two faculty lines requested. It would have been useful to have some understanding of the type of individuals to be recruited. Finally, the proposed improvements to teaching in the neurosciences should have a positive impact on the overall neurosciences program's retention and recruitment. Given that the program currently has 25 students, the request for support of an additional 16-18 students for this stress-related program seems excessive.

Project Impact and Strategic Implications (30%)

SCORE: 22

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?
- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

Comments: In addition to short-term retention effects, the proposal should result in modest increases in the work force in neurophysiology and related disciplines. If successful, commercialization of existing or proposed drugs could result in the expansion of existing or the spin-off of new biotech enterprises. Finally, if the stress-related hypotheses prove to be correct and drug development is successful, a long-term effect on the health of the population of Louisiana is possible. There is some concern as to how the staff and students recruited through this program will be sustained after the conclusion of the RC/EEP support.

Leveraging of Resources (15%)

SCORE: 14

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

Comments: The program is leveraged with strong institutional support.

TOTAL SCORE: 78

BASES OF RATING

The proposal will utilize RC/EEP funds to form the Consortium for the Neuroscience of Stress and Stress-Related Disorders. While many of the investigators are well-known experts in their areas, the information provided to evaluate each of the six projects was minimal and for the most part lacked preliminary data. At undergraduate through graduate levels, the plan consists principally of improved and new course offerings in stress-related neuroscience, improved laboratory experiences at the undergraduate level, and expanded course work at the graduate level. This program should improve the teaching of stress-related neurosciences; however, the overall effect on the work force and production of technical individuals in the neurosciences and neuroscientists will probably be modest. In addition to short-term retention effects, the proposal should result in modest increases in the work force in the area of neurophysiology and related disciplines. In addition, successful commercialization of drugs or proposed drugs could result in the expansion of existing or the spin-off of new biotech enterprises. Despite its flaws, this is a high-quality proposal. Should additional monies become available, funding of \$5.5 million is recommended.

RANK 13

Proposal Number	011RCEEP-07
Proposal Title	NOMaC: New Orleans Materials Consortium
Submitting Institution/PI	Tulane-UNO/Gary McPherson
Amount Requested	\$6,500,000

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 25

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: The New Orleans Materials Consortium will include four institutions and 25 professors in physics, chemistry and materials science. Most of the laboratories are fully functional, with the exception of work at Dillard. There are well-funded research groups at each institution that interact on specific topics, but there is no overall goal for the Consortium. The Consortium is built around four areas: Sensors and Biotechnology, which has four faculty from Tulane, five from UNO, and one from Loyola; Energy Conversion and Storage Technologies, involving four faculty from Tulane and one from UNO; Quantum Computing, with one faculty from Tulane and two from UNO; and Polymer Science and Technology, with two faculty from Tulane along with laser-based materials collaborations with faculty from Tulane, Loyola, and Dillard. A handful of spin-off companies have been developed.

Human Capital Resources (25%) SCORE: 20

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: The research projects are strong and well funded and the collaborations within specific areas are well developed, but there appears to be little synergy between areas. There are project goals, but no overarching aspirations for the Center to take it to the next level. The faculty are individually very competent and the research is strong. An environment is needed that would develop synergy around one or two topics to enable the Center to find and exploit a strong focus.

Project Impact and Strategic Implications (30%) SCORE: 22

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?

- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

Comments: The evaluation plan should include measures of effectiveness in addition to tracking the level at which activities are carried out and reporting numbers of students, papers, proposals, etc. Agreed-upon goals and strong management would ensure that the materials science effort in New Orleans is highly regarded and meets the needs of local industry.

Leveraging of Resources (15%)

SCORE: 10

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

Comments: The proposal would create some synergistic research among groups of materials scientists. The needs of industry in the area are not clear.

TOTAL SCORE: 77

BASES OF RATING

This proposal builds on very strong existing materials science projects and collaborations, but does not bring materials science in New Orleans to a new level. There is no common issue that organizes the consortium arrangement, as described in several other projects, especially those from the medical schools. The group is strong and additional funding, if available, would serve to bring researchers together around common research issues. The Advanced Materials Research Institute at the University of New Orleans recently received a \$5 million grant from the Post-Katrina Support Fund Initiative that provides support for some of the same areas and investigators, and includes equipment purchases. If additional funding would become available, the panel recommends that this project be supported at \$4.5 million, with activities targeted to the needs of the industry in the Gulf Coast region.

RANK 14

Proposal Number	015RCEEP-07
Proposal Title	Centers for Therapy of Neurological Diseases with Adult Stem Cells
Submitting Institution/PI	TUHSC/Darwin J. Prockop
Amount Requested	\$4,931,484

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 23

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: This program focuses on the initiation of clinical trials with Mesenchymal stem cells (MSC), initially in spinal cord injury, stroke and multiple sclerosis, and preclinical studies to establish the efficacy of MSC in the therapy of Alzheimer's disease, lysosomal storage diseases and spinal muscular atrophy. This is a proposal from an outstanding group of scientists who have made seminal contributions in the use of MSC and have developed a GMP facility for preparation of up to 200 MSC samples per year for clinical trials. Trials were initially planned for New Orleans Charity Hospital but were changed to the Shepherd Center for Catastrophic Care in Atlanta as a consequence of the closure of Charity Hospital after Hurricane Katrina. The proposed financial impact of this application relates to three possible outcomes: the preparation of MSC at \$50,000 per preparation, the financial benefit to New Orleans hospitals if the therapies are successful and result in expanded patient populations, and the possibility of venture capital/new start-ups if the therapies are successful. While they have achieved promising results regarding the use of MSC, the advantages of this group are not such that they would necessarily have a substantial edge on the competition from other major medical centers. In addition, a phase-three trial has yet to show the efficacy of MSC treatment.

Concerns that the application does not have an educational component associated with the studies were corrected during the interview. There are no efforts to expand the workforce in areas relevant to the studies and no discussion of recruitment of students for the projects. Without a doubt, the proposal would have a positive impact on the teaching of graduate and medical students at basic sciences, clinical and translational levels, but it is left for the panel to assume these benefits.

Human Capital Resources (25%)

SCORE: 17

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: The program is almost completely directed toward research and, as such, would likely have a positive effect on faculty retention and recruitment. It would also help in the retention of technicians and in increasing the number needed to support the program. Except for a few additions of technical support staff, minor numbers of graduate students and recruitment of several administrative individuals, a substantial short-term effect on the work force is unlikely. If the project were successful, there would likely be longer-term work force impacts.

Project Impact and Strategic Implications (30%)

SCORE: 23

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?
- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

Comments: Initially the proposal will have little impact beyond the science and clinical trials, though this impact is outstanding. Over a longer term, if the project is successful, the impact of the program on stem cell research in New Orleans and the positive feedback on the New Orleans health care industry could be substantial. This is a first-rate group of researchers who have considered the long-term possibilities of the project and could be highly successful.

Leveraging of Resources (15%)

SCORE: 13

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

Comments: The Tulane Center for Gene Therapy has provided and will continue to provide substantial financial resources for this program. The proposal will also leverage support through indirect costs from grants that deal with MSC. In addition, LSUHSC will provide a match of indirect costs from other grants. These funds plus support from other resources result in substantial leveraging of resources.

TOTAL SCORE: 76

BASES OF RATING

The strengths of this proposal are the exceptional quality of the investigators, the quality of the science and the potential high-value impact if they are successful. This is leading-edge science, and success could make New Orleans a major center in the area of MSC. This could result in an increased work force, commercialization opportunities, and an expanded patient population. Should additional funding become available, \$4 million is recommended to support this project.

RANK 15

Proposal Number	004RCEEP-07
Proposal Title	Creating a Culture of Innovation and Entrepreneurship in Neurobiotechnology
Submitting Institution/PI	LSUHSC-New Orleans/Nicolas Bazan
Amount Requested	\$7,363,750

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 20

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: The PI has assembled a group of neuroscientists having varied disciplinary expertise to carry out an extensive and diffuse program based on two major strategies: neuroprotection, including the identification of new signaling to activate stem cells of the adult brain, and promotion of neurosciences education and commercialization. The program is extensive, including studies on neuroprotection in Alzheimer's and Parkinson's disease, anti-inflammatory effects of endocannabinoids, development of models to assay synaptic plasticity in chronic neuroinflammation, creation of transgenic (Tg) pigs as models for Alzheimer's disease, agrin and neuropathic pain, development of therapeutics for neuropathic pain, analysis of remyelination by prolactin, and biomarker discovery in Tg pigs.

It is difficult to assess much of the proposal since most of the seven projects and five cores are described in less than a page. For example, project two asks for almost \$1 million to address two specific aims, but is developed in less than one page. The biomarker program asks for \$1.5 million without carefully describing how the program will be run and without effectively justifying the Tg pig model. It is not clear why the biomarker studies should be done in pigs rather than humans.

The education program largely involves training research associates for technical positions and training doctoral students in the neurosciences, but does not include significant innovation. The commercialization program merely proposes to bring in a consultant to work with the PI in identifying developable products/ideas. The complex process of product development is described in a single sentence.

Overall, there is little detail or information with which to assess the likelihood that this program will be successful and have a substantive impact on research, teaching or commercialization.

Human Capital Resources (25%) SCORE: 18

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: Clearly an infusion of funds of the magnitude requested will have a positive effect on faculty retention. The funds will also be helpful in recruiting the six new faculty the PI requests. It would have been helpful to have a carefully described plan for recruitment of this magnitude. Little new money is actually requested for the educational initiative or the training of research associates.

Project Impact and Strategic Implications (30%)

SCORE: 20

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?
- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

Comments: While the directions of the proposal are consistent with RC/EEP goals and the RFP, the diffuse nature of the proposal and the lack of clarity do not engender confidence that the purpose will be achieved. Should the goals be fulfilled as described, the proposal would have considerable impact. The suggested outcomes of the program in term of grants, program projects, patents, companies formed, etc. seem unrealistic to the panel and are not supported by the evidence presented.

Leveraging of Resources (15%)

SCORE: 14

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

Comments: Leveraging of non-RC/EEP funds is reasonable.

TOTAL SCORE: 72

BASES OF RATING

This is an extremely ambitious program in the neurosciences. The quality of the faculty is mixed and the programs are diffused. It is disappointing that the education program appears to be limited. Details regarding commercialization plans are lacking. Some of the research components of the project are worthwhile, however, and likely to succeed. Should additional monies become available, the panel recommends funding of \$5 million.

RANK 16

Proposal Number	018RCEEP-07
Proposal Title	Recovering from Katrina and Promoting Enhanced Economic Development Through a Stronger Research/Commercialization Base and a Better Trained Biosciences Workforce
Submitting Institution/PI	Xavier of Louisiana/Kathleen Kennedy
Amount Requested	\$4,265,888

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 20

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: This is a well-written proposal to restore and expand the cancer research program at Xavier University. The current funding request will be used to provide start-up funds for five young faculty, seed funding for six established faculty, bridge funds for three current faculty, and support for three new postdoctoral positions and a newly created clinical oncologist position. Several of the projects will involve collaborators at Tulane. A major weakness is that the proposed projects are not well integrated. The primary goals are to continue to build up a core of research-intensive faculty, provide funds to start-up projects, and accumulate preliminary data to continue the pre-Katrina growth of Xavier in acquiring competitive federal funds for undergraduate education and funding in cancer research. By using state-of-the-art techniques to prepare Xavier students, they will be more efficiently trained to participate in the workforce. Xavier was one of the institutions hardest hit by Katrina and was profoundly negatively impacted by the federal freezing of funds following the hurricane. Xavier has a tradition of excellence in undergraduate education in STEM disciplines and is known nationally for its undergraduate health programs. Consistent with the mission of the RC/EEP, this proposal would restore and enhance educational opportunities at an institution with a track record of excellence and will provide availability of STEM education to under-served undergraduates.

Human Capital Resources (25%)

SCORE: 15

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

A strength of the proposal is that the funding request will retain a subset of trained and experienced faculty, already active and funded, to perform research and teach in the area of cancer biology. The funding will also support ongoing collaborations and training programs established between investigators at Xavier and Tulane universities.

A weakness of the proposal is that a subset of the faculty to be supported has either small amounts of funding (<\$100,000), no additional funding, and/or no previously demonstrated interest or expertise in cancer research. It is not clear how these disparate groups will be integrated within the cancer center. There is a core of prostate cancer researchers and a core of breast cancer researchers. How will these two teams synergize? In addition, there are projects in imaging, plant-derived anti-oxidants, annelid biosensors and nicotine analogs that do not fit into the project's cancer focus. It is unclear how the investigators in these projects will be integrated into the center. The management plan to elucidate the integration of the various projects and promote interactions, collaborations and synergy between the projects is not well developed. The oversight to coordinate the progress of the projects is not described.

Project Impact and Strategic Implications (30%)

SCORE: 25

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?
- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

This funding would help to support the retention and recruitment of a highly committed faculty with a track record of excellence in research and in undergraduate education. There is evidence of institutional commitment and cost sharing through the purchase of state-of-the-art equipment and restoration of the physical plant and facilities that will support the research and training. A strength of the application is the university vision statement. Xavier has been and will continue to be committed to providing scholarship funds to African-Americans seeking higher education. Financial aid is offered to targeted areas, including the STEM areas of study and business. The University seeks to prepare not only scientists but also teachers in these disciplines, an important strategic impact. The management plan for the project is weak. Performance measures are not detailed, and the evaluation plan in the form of annual progress reports reviewed by an undefined advisory board is inadequate.

Leveraging of Resources (15%)

SCORE: 10

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

The current funding request will leverage resources with several substantial ongoing funded programs such as an NIH P20 award (held by Dr. Kathleen Kennedy), which supports course development in cancer biology; an MBRS-SCORE training grant; and a DoD Prostate Cancer training grant. Other resources include a rebuilding plan and replacement of critical equipment by the University. This proposal does not describe the mechanisms of interaction between the two institutions (Xavier and Tulane) to promote collaboration and resource sharing.

TOTAL SCORE: 70

BASES OF RATING

Xavier University has a high demonstrated need, an excellent history of providing outstanding educational and research experiences to underserved undergraduate populations, and an established track record and mission to train the future work force of teachers and researchers in STEM disciplines. A major weakness, however, is that some projects for which support is requested are either not integrated with the focus areas or have no clear relevance to the other projects or cancer research in general. Another significant weakness is the management plan, which has a lack of milestones, undefined advisory board functions, a lack of predicted outcomes, and an unclear overall impact.

If additional funds should become available, the panel recommends funding at a level of \$3.2 million.

**RC/EEP PROPOSAL EVALUATIONS
NOT RECOMMENDED FOR FUNDING**

002 (Xu)	016 (Penland)	017 (Vorus)
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Proposal Number	002RCEEP-07
Proposal Title	Establishing Computational Science and Informatics Center
Submitting Institution/PI	Dillard University/Zujia Xu
Amount Requested	\$2,427,730

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 23

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: This project, presented by three very competent computer scientists, proposes to develop capacity for parallel processing at Dillard. The three proposed projects include computational chemical engineering and environmental science using Lattice Boltzmann methods, and computational genomics and proteomics that might be useful in some of the projects proposed by other investigators; however, no interaction was proposed. The third project involves new algorithms in data mining. The three projects are computationally intensive and very difficult for undergraduates. Moreover, it is not clear that the computer codes can be commercialized. A Silicon Graphics Incorporated (SGI) refurbished server is requested for the project and for general use at Dillard. There is no confirmation that Dillard will provide funds for the operation and maintenance of the server. While this equipment may increase the capacity for computing at Dillard, the possibility of using existing facilities at other institutions in New Orleans did not seem to have been considered. With the amount of research ongoing in nearby institutions, a centralized computation facility would be an excellent way to avoid duplication of expensive equipment.

Human Capital Resources (25%) SCORE: 18

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: Funds are requested for faculty release time and travel, as well as 10 specially selected undergraduate students to work with the PIs. Four postdocs are requested, but they are to work on unspecified projects at Tulane and UNO. There is no indication of interaction with computational scientists at other institutions. Through the facility, computing is to be integrated into about 25 courses at Dillard. It is a serious concern, however, that no indication is given that faculty members are willing and able to include more computing in their courses or that student learning would improve as a result of this activity.

Project Impact and Strategic Implications (30%) SCORE: 22

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?

- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?
- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

Comments: The job market for the students is not described. How many students will be educated and where will they be employed after graduation? The evaluation plan described emphasizes numbers of students, publications, etc., but does not include indicators of effectiveness. The evaluation plan should include a component to determine effectiveness of the intervention. Who performs the evaluation? There is an advisory board, though with only a few representatives from industry.

Leveraging of Resources (15%)

SCORE: 5

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

Comments: There is little leveraging beyond donated faculty time and possible maintenance costs.

TOTAL SCORE: 68

BASES OF RATING

This project primarily requests support for extensive computing at Dillard and postdocs and summer students at Tulane and UNO. The PIs need to more effectively integrate themselves into other collaborative projects in computer science and also to think about how best to establish a centralized computing center for the area. The PIs are very accomplished and dedicated, and are deserving of support. The proposal does not, however, meet the commercialization and educational enhancement missions of the RC/EEP solicitation, so funding is not recommended.

Proposal Number	016RCEEP-07
Proposal Title	Development of a Coastal Science and Education Center in the Lake Pontchartrain Basin
Submitting Institution/PI	UNO/P. S. Penland
Amount Requested	\$2,208,824

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 20

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: The UNO/Pontchartrain Institute for Environmental Studies emphasizes educational programs for K-12 students and biology teachers and, to a lesser extent, provides facilities for university research. These activities do not seem to promote the goals of the RC/EEP as well as those envisioned in other proposals. Support would, however, provide for improved efficiency of environmental research among participating groups. The rental and development of the research station would serve faculty and students in a diverse range of programs, but the proposal does not indicate specifically how project coordination and interaction of the groups will occur.

Human Capital Resources (25%) SCORE: 20

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: Most of the Katrina-affected programs (four of seven) are currently in operation on the UNO campus. The proposal indicates that most faculty and several students are currently in place. The proposal (page 17) includes support for three assistant managers for the operation of the educational center whose positions are not sufficiently justified. The proposal also requests support for three assistantships for graduate students already in place and four unnamed undergraduate students. The lease or rental of this laboratory facility seems simply to allow existing staff/students to relocate their fieldwork to this location.

Project Impact and Strategic Implications (30%) SCORE: 20

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?

- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

Comments: The review panel has noted that, while certainly important, the education of secondary school students in the Coastal Roots and other educational programs is not a priority for the RC/EEP. The proposed education of commercial fishermen and research in value-added fisheries products may lead to increased commercialization, but the proposal did not describe clearly how these objectives would be accomplished. No food science expertise was evident in the proposal.

Leveraging of Resources (15%)

SCORE: 5

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

Comments: There is no leveraging of resources beyond that of foregone indirect costs. In addition, the review panel was very concerned about the sustainability of the annual rental charges beyond the three-year scope of this grant.

TOTAL SCORE: 65

BASES OF RATING

The panel has two major concerns with this proposed project. First, the rental of the facility is likely not sustainable. The proposal in fact has several figures for rental and is very confusing. On page 24, rental values are \$100,000 per year, on page 27 a value of \$500 per month plus rental of additional land and boat slips is listed, and on page 29, \$6,000/year is listed for sewage costs and rental. The final page of the proposal lists \$4,000 per month lease plus costs of increased taxes and insurance. These diverse figures suggest to the panel that this site is likely not sustainable in the long term. Second, RC/EEP support is requested for release time and research resources for several faculty in several research labs. The types of research and diverse nature of the research make it appear uncoordinated, and the subject areas do not fit the priorities of the RC/EEP. Consequently, in view of the higher priorities established for the RC/EEP program, the panel does not recommend funding of this project.

Proposal Number	017RCEEP-07
Proposal Title	Teaching, Research, and Commercialization of Friction Stir Welding for Assembly of Ships
Submitting Institution/PI	UNO/William S. Vorus
Amount Requested	\$3,065,000

Key Science, Technology and/or Educational Opportunities (30%) SCORE: 20

- To what extent and how will proposed activities provide achievable plans for capitalizing on opportunities available in research and technology development, research commercialization, and educational enhancement?
- To what extent and how will project activities and focuses relate to research areas identified on page 5 of the RFP and/or to broader STEM educational enhancement opportunities?

Comments: Friction stir welding is a new technique that can be used to weld aluminum and titanium at lower expense. The welds are strong and smooth. These properties make it possible to build ship hulls that have greater durability and are more efficient in the water. The proposal is to develop a facility for friction stir welding that can handle small parts to study the microstructure of the joint. Testing will be done to determine a way to weld titanium ship hulls. The project builds on perceived needs not on capacity. The disciplinary reviews raised several issues about the capacity to develop and study the efficacy of joints made by friction stir welding. These were partly addressed in the interview, but some uncertainties remain. The process could lead to commercialization and the interview indicates that there are entrepreneurs waiting to see the results.

Human Capital Resources (25%) SCORE: 18

- To what extent and how will the proposed activities help to immediately retain, attract, and/or develop key science, technology, and educational personnel, especially faculty, students and research staff?

Comments: None of the PIs are expert in the area of friction stir welding. Who will guide the four graduate students and the undergraduates requested? There was no discussion of recruiting more students. This is a one-department project with a leader, and as such its impact would seem to be limited. The project could benefit from more interaction with the University of New Orleans Materials Consortium.

Project Impact and Strategic Implications (30%) SCORE: 20

- To what extent and how will the proposed activities have impacts consistent with the goals and objectives of the RC/EEP and the RFP beyond the research and/or educational programs involved directly in project work?
- Has a reasonable timeline been proposed for activities to achieve a discernable impact on science, technology, workforce development, educational enhancement, and other issues related to the RC/EEP's mission?

- To what extent and how will the proposed activities have broad, sustainable strategic impacts as contrasted with more focused, discrete and short-term impacts?

Comments: The job market for students is not described. While it was not clear from the proposal that the shipyards want this technology, the interview identified at least one entrepreneur with a strong interest in the technology. The proposal described annual goals, most of which depend heavily on the welding machine and the hiring of individuals who know how to use it.

Leveraging of Resources (15%)

SCORE: 8

- To what extent and how will RC/EEP support be leveraged with other resources?
- As applicable, to what extent and how will resources of partnering departments, units, and/or institutions be combined effectively to support and sustain project activities?

Comments: There is little leveraging for the project.

TOTAL SCORE: 66

BASES OF RATING

Summarize briefly the notable features of the proposal which influenced most decisively the rating given. Views of the entire review panel will be summarized in the general report.

This would be a very high-risk but possibly high-gain project. It suffers from a lack of personnel who are familiar with the new process and its application to the shipping industry. While the panel does not recommend funding for this project, it recognizes that, with the right combination of engineers and interactions with other projects, the idea inspiring this proposal might have a major impact on the economy of Louisiana.